

NATIONAL INSTITUTE OF FUNDAMENTAL STUDIES

ANNUAL
RESEARCH REVIEW
2023

Ministry of Education

**WE ARE THE PREMIER INSTITUTE FOR
ADVANCING FUNDAMENTAL SCIENCES**

OUR VISION

TO BE A WORLD RENOWNED CENTER OF EXCELLENCE FOR RESEARCH
IN FUNDAMENTAL STUDIES

OUR MISSION

INITIATE, PROMOTE AND ENGAGE IN ADVANCED RESEARCH IN
FUNDAMENTAL STUDIES FOR THE ENHANCEMENT OF SCIENTIFIC
KNOWLEDGE AND DEVELOPMENT OF HUMAN RESOURCES
CONTRIBUTING TO NATIONAL DEVELOPMENT.



Message from the Chairman

I am delighted to provide this message to the Annual Research Review 2023 in my capacity as the Chairman of the National Institute of Fundamental Studies. The Annual Research Review 2023 is of critical importance as it leads us to reflect on what we have been doing for the past year, identify and consolidate our strengths, and minimise our weaknesses or limitations. It also provides us with a good platform to revise our strategies and direction. A strategy is capturing opportunity; it is not static but a dynamic process.

We are undertaking this annual review for 2023 at a time we are also reflecting and celebrating on 40th anniversary of the NIFS. The visionaries behind the establishment of NIFS (IFS at that time) wanted to ensure a research institute that will have a significant impact on the research landscape of Sri Lanka.

NIFS had undertaken that challenge in a successful manner and we have a long march especially considering the recent challenges we had to face as a nation. In the back drop of an unprecedented global pandemic, COVID-19, followed by the socio-economic crisis in Sri Lanka, the challenges we have to face has increased exponentially.

This demands us not only to produce excellent researchers and research but research leaders of global level. What will that encompass?

This goes beyond leading and managing research teams, supervising postgraduate researchers, securing research grants for funding, generating research outputs, liaising with stakeholders and building your own research area and expertise. It's about aligning your research with strategic goals, building and managing a diverse and collaborative research team, delivering high-quality and impactful research outputs, implementing and monitoring research ethics and integrity and demonstrating continuous improvement and learning. As a research leader, you are responsible for setting the direction with a clear strategy, and maintaining a culture of team work and organization. Besides this, you may have to balance the needs and expectations of the stakeholders, namely funders, collaborators, users, and beneficiaries. Hence, a good leader should ensure integrity, self-awareness, courage, respect, compassion, and resilience. They should also be learning agile and flex their influence while communicating the vision, showing gratitude, and collaborating effectively.

We will have to think about shaping future research leaders for our nation that just conducting research, which are needed for the nation.

I would like to thank the organising committee for asking me to share my thoughts. I would also like to propose new dimensions for Annual Reviews in the years to come to review science and the process.

I congratulate the Organising Committee for the spirit and courage shown in organising this event.

Professor Athula Sumathipala
MBBS, DF.MD, FRCGP (Sri Lanka), FRCPsych, CCST(UK) PhD (Lon)
Chairman
National Institute of Fundamental Studies, Sri Lanka

Message from the Director

It is a great pleasure to issue this message on the occasion of the 2023 Annual Research Review (ARR 2023). The Institute of Fundamental Studies (IFS) was established in 1981 and later renamed the National Institute of Fundamental Studies (NIFS) Sri Lanka in 2014. NIFS is the only national institute with the mandate of engaging in scientific research to facilitate fundamental and advanced studies with an emphasis on basic and applied research for national development and the advancement of science.

Annual Research Review is the most important event on the NIFS calendar as it is held to review the progress of scientific research carried out by the NIFS during the year 2023. At the research review, we review the progress of the scientists as well as the research programmes conducted in 2023.

Five senior research professors, two research professors, three associate research professors, two senior research fellows, and a research fellow serves the institute. In addition, forty-one research assistants, two visiting research professors, and several adjunct professors work with our scientists. NIFS scientists published 86 research papers in referred journals, including SCI/SCI Expanded journals, and 64 conference papers/abstracts in 2023. Not only that 13 book and book chapters were contributed by our scientists in 2023. Fifteen research assistants obtained their PhD/M.Phil. degrees. In addition, 34 M.Sc. students and undergraduate students completed their research projects at NIFS. Our scientists have been ranked among the prestigious World's Top 2% scientists list. We spent twenty million LKR from our budget for 18 ongoing research projects. Science Education and Dissemination Unit (SEDU) completed a successful year by conducting several science popularization programmes. Among them, NIFS School Science Programme was well accepted by the students who earned 9 As at the G.C.E (O/L) examination, and about 100 students, witnessed the event. Our scientists contributed to national development by participating in many activities/programmes as consultants and committee members.

During 2023 NIFS was able to improve the infrastructure facilities enabling conducive environment for conducting research and training activities.

Research, administrative, technical, and other staff members of the institute contributed to the success of the event. I should thank all the members of the NIFS for their commitment and dedication. Finally, I wish all the success for ARR 2023.

Professor. S. R. Kodituwakku
Director & CEO/ NIFS
National Institute of Fundamental Studies, Sri Lanka

Contents

SECTION I – RESEARCH PROGRAMMES

	Page No.
BIOLOGICAL SCIENCES DIVISION	
▪ <i>Evolution, Ecology & Biodiversity Research Programme</i>	02
▪ <i>Food Chemistry Research Programme</i>	03
▪ <i>Microbial Biotechnology Research Programme</i>	04
▪ <i>Microbiology & Soil Ecosystems Research Programme</i>	05
▪ <i>Molecular Microbiology & Human Diseases Research Programme</i>	06
▪ <i>Nutritional Biochemistry Research Programme</i>	07
▪ <i>Plant Taxonomy & Conservation Research Programme</i>	08
▪ <i>Primate Biology Research Programme</i>	09
▪ <i>Rhizobium Project</i>	10
CHEMICAL AND PHYSICAL SCIENCES DIVISION	
▪ <i>Condensed Matter Physics & Solid-State Chemistry Research Programme</i>	11
▪ <i>Energy & Advanced Material Chemistry Research Programme</i>	12
▪ <i>Material Processing & Device Fabrication Research Programme</i>	13
▪ <i>Nanotechnology & Advanced Materials Research Programme</i>	14
▪ <i>Natural Products Research Programme</i>	15
MATHEMATICS AND COMPUTER SCIENCE	
▪ <i>Computer Science, Mathematics & Statistics Research Programme</i>	16
EARTH AND SPACE SCIENCES DIVISION	
▪ <i>Earth Resources & Renewable Energy Research Programme</i>	17
ENVIRONMENT SCIENCES DIVISION	
▪ <i>Water Quality Research Programme</i>	18
▪ <i>Material Development and Pollutant Remediation</i>	19

SECTION II– RESEARCH PERFORMANCE

21 - 95

▪ <i>Publications in Journals</i>	21
▪ <i>Patents</i>	31
▪ <i>Abstracts</i>	32
▪ <i>Conference Proceedings</i>	39
▪ <i>Books & Book Chapters</i>	40
▪ <i>Grants</i>	42
▪ <i>Research Collaborations</i>	44
▪ <i>Research Supervision</i>	54
▪ <i>Awards & Recognitions</i>	70
▪ <i>Training & Participation</i>	83
▪ <i>Dissemination of Science</i>	89
▪ <i>Young Scientists Forum</i>	95

▪ <i>Organizational Chart</i>	97
▪ <i>Board of Governors</i>	98
▪ <i>Research Council</i>	99
▪ <i>Staff List</i>	100
▪ <i>Director</i>	106
▪ <i>Secretary</i>	106
▪ <i>Office of the Director</i>	107
▪ <i>Accounts Division</i>	107
▪ <i>Administration Division</i>	107
▪ <i>Computer Division</i>	108
▪ <i>Instrument & Maintenance Division</i>	108
▪ <i>Internal Audit Division</i>	108
▪ <i>Library</i>	108
▪ <i>Procurement & Laboratory Stores Division</i>	109
▪ <i>Research Office</i>	109
▪ <i>Science Education & Dissemination Unit</i>	109

Editorial Board

Chairman

Prof. J.M.N. Marikkar

Members

Prof. Rohan Weerasooriya

Prof. D.N. Magana-Arachchi

Prof. R.R. Ratnayake

Ms. Savani Ulpathakumbura

Ms. Indrani Samarakoon

Cover Design & Photography

Mr. Gayan Bandara

Research Information reviewer

Ms. T.C.P. Tilakaratne

Compiled by Science Education & Dissemination Unit

National Institute of Fundamental Studies

Hantana Road

Kandy 20000

Sri Lanka

Tel: +94 812 232 002

Fax: +94 812 232 131

E-mail: info@nifs.ac.lk

Web site: www.nifs.ac.lk

SECTION I – RESEARCH PROGRAMMES

	Page No.
BIOLOGICAL SCIENCES DIVISION	
▪ Evolution, Ecology & Biodiversity Research Programme	02
▪ Food Chemistry Research Programme	03
▪ Microbial Biotechnology Research Programme	04
▪ Microbiology & Soil Ecosystems Research Programme	05
▪ Molecular Microbiology & Human Diseases Research Programme	06
▪ Nutritional Biochemistry Research Programme	07
▪ Plant Taxonomy & Conservation Research Programme	08
▪ Primate Biology Research Programme	09
▪ Rhizobium Project	10
CHEMICAL AND PHYSICAL SCIENCES DIVISION	
▪ Condensed Matter Physics & Solid-State Chemistry Research Programme	11
▪ Energy & Advanced Material Chemistry Research Programme	12
▪ Material Processing & Device Fabrication Research Programme	13
▪ Nanotechnology & Advanced Materials Research Programme	14
▪ Natural Products Research Programme	15
MATHEMATICS AND COMPUTER SCIENCE DIVISION	
▪ Computer Science, Mathematics & Statistics Research Programme	16
EARTH AND SPACE SCIENCES DIVISION	
▪ Earth Resources & Renewable Energy Research Programme	17
ENVIRONMENT SCIENCES DIVISION	
▪ Water Quality Research Programme	18
▪ Material Development and Pollutant Remediation	19

Project leaders are responsible for the authenticity of the reports they have submitted

Evolution, Ecology & Biodiversity Research Programme

Prof. Suresh P. Benjamin
Suresh.be@nifs.ac.lk

Research Professor
<https://orcid.org/0000-0003-4666-0330>

Research Project Introduction:

Basic research in biodiversity covers every aspect of ecosystem function with a special focus on the Western Ghats-Sri Lanka biodiversity hotspot. Tropical mountains have high numbers of endemic species. The central highlands of Sri Lanka are no exception. We estimate that more than 90% of the invertebrate species are still unknown to science, remaining to be discovered. Many species are endemic to single mountain peaks. They also might be endangered due to the changing climate.

Research Activities:

1. Diversity of selected ground spider genera of Sri Lanka based on morphology and DNA barcodes. The taxonomy and the phylogenetic relationships of the genera *Oedignatha*, *Koppe*, and *Sphingius* were studied.
2. Evolution of jumping spiders of Sri Lanka based on morphology and target gene analysis (Araneae: Salticidae) from Sri Lanka. Salticidae is the largest family of spiders and currently includes around 6183 species placed in 646 genera, distributed worldwide. The genera *Ballus*, *Colaxes*, *Marengo Carrhotus*, *Epidelaxia*, *Telamonina* and *Thyene* were revised.
3. Molecular phylogenetic relationships of selected crab spider genera (Araneae: Thomisidae) from Sri Lanka. Objectives of this project are to gain a comprehensive understanding of the crab spider biodiversity of the island, re-circumscribe genera in phylogenetic terms, and placement of these genera in the thomisid tree of life.
4. Comparative analysis of nocturnal and ground-dwelling beetle diversity in selected sites in Sri Lanka (Coleoptera) was initiated.

Results/Key findings:

We show that multiple species delimitation approaches with COI barcodes poorly fit each other and morphospecies. The beetle-spider genus *Ballus* was revised using DNA barcodes. Molecular and morphological species delimitation suggested that only a single species of *Ballus* is present in Sri Lanka. The high degree of endemism in many phytophagous chafers, particularly in Sericini of Sri Lanka is documented. show that proper species boundaries should be the ultimate goal of biodiversity assessments to lend an enduring meaning to biodiversity research and its sustainable application. Several new taxa have been discovered.



From L to R: Ms. W.M.H.U. Wijerathna, Dr. U.G.S.L. Ranasinghe, Mr. D.N.G. Dayananda, Prof. S.P. Benjamin, Ms. K.M.R.K.T. Herath, Mr. N.P. Athukorale

Food Chemistry Research Programme

Prof. Nazrim Marikkar
nazrim.ma@nifs.ac.lk

Associate Research Professor
<http://orcid.org/0000-0002-6926-2071>

Research Project Introduction:

Food chemistry focuses on the general area of antioxidants and associated health, with a particular emphasis on the role of dietary phytochemicals, functional foods and their potential role in the management and prevention of oxidative-related conditions, including non-insulin dependent diabetes mellitus. At present, we explore the biochemistry of selected under-utilized plant resources in the country to develop functional foods. The programme also involved with food authentication studies to develop analytical methods to detect food frauds and safeguard the general public from health risks associated with food systems.

Research Activities:

During the year 2023, attention was focused on three sub-themes; food authentication of coconut testa oil, nutritional evaluation of under-utilized agro-bio resources, and evaluation of steavi *rebaudiana* leaf powder as a sugar- substitute in food formulations. Under food authentication, a study was carried out in collaboration with coconut research institute to produce indices for high-quality authentic coconut testa oil using various methods. A study on phytochemical exploration was also undertaken to isolate and purify the phyto-nutrients present in the edible leaves of Yaki naran (*Atlantia ceylanica*) and their therapeutic potential as anti-hyperglycaemic agent. Investigations were also undertaken to develop applications for steavi *rebaudiana* leaf powder as a sugar- substitute.

Results/Key findings:

Under food authentication sub-project, edible grade, high quality CTO, which complies with the Sri Lanka Standard were successfully developed. Under the phytochemical sub-project, it was possible to isolate six pure compounds from the leaves of Yaki naran (*Atlantia ceylanica*). Nutritional evaluation of the fruit kernel of *Terminalia catappa* tree showed that it is a potential source of alpha-linoleic acid, which is used as a supplement beneficial to those suffering from chronic diseases. Under *Stevia* sub-project, the sensory evaluation results indicated the feasibility of incorporating *Stevia* leaf powder as a substitute for fermentable sugar in low-calorie kajoor for diabetic patients.



From L to R: Ms. H.F. Fahmidha, Prof. J.M.N. Marikkar, Ms. B.S.K. Ulpathakumbura

Microbial Biotechnology Research Programme

Prof. Gamini Seneviratne
gamini.se@nifs.ac.lk

Senior Research Professor
<https://orcid.org/0000-0003-1562-4097>

Research Project Introduction:

We have developed Biofilm biofertilizers (BFBF) and evaluated its potential as a microbial ameliorator in agroecosystems and the environment. Our current focus is on the agricultural, health, and environmental benefits of using developed microbial biofilms (DMB) including biofilm nutraceuticals (BFN) as next-generation medicine, and several industrially important applications.

Research Activities:

In 2003, we invented the BFBF for non-legumes. The BFBF was patented in 2013 and commercialized in 2014. After extensive, research station and farmers' field trials with success, the Cabinet approved the BFBF to promote in paddy cultivation Island-wide. The BFBF has been tested for paddy in 232 trials in 13 districts in collaboration with the Department of Agriculture, Mahaweli Authority and Irrigation Management Division. Research was conducted to examine the effect of BFBF in reducing fertilizer application, improved grain yield, soil quality, soil carbon sequestration and subsequent stabilization, and grain quality. Economic feasibility of the BFBF practice over the farmers' chemical fertilizers (CF) alone practice was also evaluated. In addition, research was conducted to examine the potential of DMB in reinstating gut microbiota for developing BFN.

Results/Key findings:

In the study of soil C sequestering network in paddy cultivation, higher number of interactions were observed in the of the BFBF practice implying the strengthening of the network interactions. Complex network interactions in soil C sequestration indicated the need of careful management of the nutrients for soil C storage. Increased density of soil labile C along the elongated rooting depths in the BFBF practice contributed to increased nutrient cycling and soil microbial C immobilization. Moreover, the BFBF increased soil stable carbon (C) stock while reducing soil respiration. In another study, biofilm biochemicals increased the growth and possibly the dormancy breaking of the test gut microbes.



From L to R: Mr. H. Premarathna, Ms. H. Senevirathna, Ms. A. Epa, Ms. C. Gunawardhana, Ms. V. Amarasinghe, Mr. S. Ekanayake, Mr. A. Pathirana, Dr. M. Premarathna, Prof. G. Seneviratne, Mr. R. Pathirana, Mrs. S. Jayasekara, Ms. D. Sathsarani, Ms. P. Jayasinghe, Ms P. Upekshika, Mr. A. Naik

Microbiology & Soil Ecosystems Research Programme

Prof. Renuka Ratnayake
renuka.ra@nifs.ac.lk

Associate Research Professor
<http://orcid.org/0000-0002-7667-1447>

Research Project Introduction:

Microbiology project focuses on the value addition of native microalgae for nutrient applications, biodiesel production, bioplastic applications, and wastewater bioremediation integrating successive production of value-added products. The soil ecosystems project aims to determine soil carbon sequestration potential, its dynamics, and the methods of improvement in different major vegetation types of Sri Lanka.

Research Activities:

A project was initiated for optimizing growth conditions in large-scale culturing of efficient native cyanobacteria for food and biodiesel applications. Potential of freshwater cyanobacteria in bioplastic production was also investigated. A project was initiated to bioremediate industrial wastewater integrating successive production of value-added products targeting sustainable circular economy. Studies continue on short-term and long-term preservation of isolates through sub-culturing and cryopreservation. Further improvement of cyanobacteria specific culture collection and its maintenance. The potentiality of blue carbon ecosystems was studied in the Northwestern and northern coastal belt. A study was completed to assess the present status and farmer's attitudes toward organic agriculture in Jaffna peninsula. A study on soil carbon sequestration and nutrient retention was continued in the Muthurajawela wetlands. A study was initiated to assess soil carbon sequestration, nutrient retention, and heavy metal distribution in different components of a Tank Cascade System and associated vegetation types in the dry zone of Sri Lanka.

Results/Key findings:

Two locally isolated *Spirulina* were recommended as food grade. A low-cost culture medium was developed for *Spirulina* mass culturing. CO₂ concentration was optimized to achieve optimal growth and quality harvest of *Oscillatoria*, while lipid content and fatty acid profile of *Chlorella* sp. were analyzed for biodiesel production. *Spirulina*, *Synechocystis*, *Synechococcus*, and *Oscillatoria* were identified as promising biodegradable plastic producers. Digital soil carbon maps have been developed to show mangroves and salt marshes in the Northwestern and northern coastal belt. The findings suggest that there is a growing concern among farmers in the Jaffna peninsula towards organic farming. Soil carbon sequestration potential was studied in different land use types in the Muthurajawela wetland complex.



From L to R: Mr. N.S. Wijewardhana, Ms. H.P. Dayananda, Ms. J.M.H. Jayasekara, Ms. S. Ariyachandra, Ms. T.M. Paranavithana, Prof. R.R. Ratnayake, Ms. T.K. Bowange, Ms. S.M.D.C. Bandara, Ms. W.A.B.M. Samarajeewa, Mr. D.M.N.B. Dissanayake

Molecular Microbiology & Human Diseases Research Programme

Prof D.N. Magana-Arachchi
dhammika.ma@nifs.ac.lk

Associate Research Professor
<http://orcid.org/0000-0001-5825-4626>

Research Project Introduction:

Molecular Microbiology & Human Diseases Project aims to understand the genetics, physiological processes and the diversity of microbes in air, water and soil, and the human body. This includes gene expressions, genetic transfers, enzymes and bioactive compounds, cell to cell communications and also the molecular aspects of pathogenicity and virulence.

Research Activities:

The main research activities were based on three areas, human diseases, cyanobacterial toxin production and screening microbes for commercial utility, which spread into 09 sub projects. Transcriptome analysis of mycobacteria in serum/serum exosomes of latent tuberculosis patients for candidate biomarker identification, characterization of antibiotic resistance in geothermal springs of Sri Lanka, determination of the variability of microcystin producing gene cluster in selected cyanobacteria using molecular characterization, molecular screening purification, characterization of secreted enzymes from isolated bacterial species in Mahapellassa hot spring and Ussangoda coast, identification of urinary biomarkers for diabetic and hypertensive Chronic Kidney Disease (CKD) in Sri Lanka and enrichment mechanisms of Chronic Kidney Disease of unknown aetiology (CKDu)- risk factors in ground waters, their uptake pathways, and potential remedies. The other three sub projects were about identifying microorganisms associated with micro plastics, transcriptome analysis of serum of latent tuberculosis patients and to detect possible ingress of cometary microorganisms & particulate matter.

Results/Key findings:

- The pathway analysis of whole-blood and exosomes revealed that the majority of the whole-blood-associated pathways were involved with the host's immune response, and the exosomal pathways were involved in manipulating the host's cellular responses and Mtb survival.
- Identified a panel of genes (NGAL, ANXA3 and OLFM4) as potential diagnostic biomarkers for diabetic nephropathy (DN) in CKD patients in Sri Lanka.
- Microcystin was detected in dug-well waters and rice samples from both CKDu endemic and non-endemic areas. CKDu-affected individuals' well waters had a 5-fold higher concentration of cylindrospermopsin (cyanotoxin) compared to non-affected areas.



From L to R: Ms. W.M.S.N. Bandara, Ms. R.H.W.M.I.C. Ratnayake, Prof. D.N. Magana-Arachchi, Ms. H.M.S.A.T. Gunathilaka, Ms. I.S. Karunathilaka

Nutritional Biochemistry Research Programme

Prof. Ruvini Liyanage
ruvini.li@nifs.ac.lk

Associate Research Professor
<http://orcid.org/0000-0002-6349-0284>

Research Project Introduction:

Child malnutrition and non-communicable diseases present significant health challenges to Sri Lanka. Income disparities, poor dietary habits, and low nutrition literacy might have contributed to these issues. Nutritional Biochemistry program explores the potential of underutilized fruits and vegetables to enhance nutrition while also investigating hidden causes behind these nutritional disorders.

Research Activities:

This research program is dedicated to enhancing the nutritional status of individuals in Sri Lanka. Several studies have been conducted to assess the nutritional and functional properties of certain underutilized fruits and vegetables, aiming to identify their potential for improving nutritional status. Another study has focused on establishing the association between early childhood caries (ECC) and nutritional status, oral health status, and oral health-related quality of life in a sample of Sri Lankan children aged 4-5 years. Furthermore, a collaborative study has investigated the role of genetic makeup in various dietary phenotypes, including energy and macronutrient intakes, dietary patterns, and specific food group intakes. This research utilized the Sri Lankan twin cohort established in 1996.

Results/Key findings:

Our investigations showed that there are positive correlations (0.212-0.527) in dietary habits, food choices, dietary biomarkers, and nutrient intakes between mothers and offspring in the Sri Lankan population. Four duckweed species were studied for extracting proteins and other bioactive compounds. Among them, *Spirodela polyrhiza* exhibited higher antioxidant activity, while *Lemna perpusilla* demonstrated a faster growth rate compared to other examined duckweed species.



From L to R: Ms. M.A.D.M. Fernando, Ms. H.A.C. Dias, Ms. M.A. Wickramasinghe, Ms. R.H.W.M.I.C. Ratnayake, Dr. N.L.B.R. Liyanage, R.G.S.D. Rambodagedara, Ms. S.M.N.S. Nirmani, Ms. H.R.P. Prasadini

Plant Taxonomy & Conservation Research Programme

Prof. D.S.A. Wijesundara
siril.wi@nifs.ac.lk

Research Professor
<https://orcid.org/0000-0002-6754-8201>

Research Project Introduction:

The Plant Taxonomy and Conservation project focuses on: a) Studying the flora of Sri Lanka, b) Restoration ecology, c) Promoting sustainable use of Sri Lankan plants, d) Investigating factors influencing plant conservation, and e) Mycological studies. It also manages the NIFS-Sam Popham Arboretum, a premier site for Assisted Natural Regeneration.

Research Activities:

The NIFS Popham Arboretum underwent a comprehensive upgrade, introducing a new entrance, ticket counter, enhanced toilet facilities, and improved indoor and outdoor study spaces. This transformation resulted in a threefold increase in the arboretum's income. A research project was conducted on the bioremediation of polluted water using local duckweed species. Another project was conducted on the recovery of two Critically endemic species, *Stemonoporus moonii* and *Khaya stylosa*, funded by the Wildlife and Nature Protection Society. Extensive mushroom collection, focusing on 150 species from the Kandy District, and ongoing systematic studies on *Strobilanthes* and *Syzygium* were undertaken. Two monographs, three papers, and four newspaper articles were published. One research paper highlighted collaborative work with the University of Peradeniya's biotechnology center, concentrating on species delimitation of Sri Lankan Cinnamon. In 2023, the arboretum hosted two workshops on Plant Identification and Ecotourism. Ten public talks addressing plant conservation were also conducted in 2023.

Results/Key findings:

Twenty-four critically endangered flowering plant species previously reported as possibly extinct were rediscovered. In addition to those, herbarium specimens were collected from 24 species categorized as Data Deficient and 63 critically endangered plant species reported in the 2012 National Red List. Over 850 herbarium specimens were deposited at the National Herbarium. The project leader participated in formulating the National Biodiversity Policy as a member of the expert panel appointed by the Ministry of Environment. He led an expert team to produce a comprehensive scientific report for the Central Environment Authority, for revising the 2010 Gazette declaring the Hantane Environmental Protection Area.



From L to R: Ms. N.K. Jinasena, Ms. H.K.G.B.M. Premarathne, Ms. S. Perera, Mr. H.D. Jayasinghe, Prof. D.S.A. Wijesundara, Mr. C. Lekamge, Mr. R. Hapukotuwa, Ms. P. G. S. M. Silva, Ms. A. R. G. T. K. Agalawela, Mr. R.S. Brahmanage

Primate Biology Research Programme

Prof. Wolfgang Dittus
woufgang.di@nifs.ac.lk

Visiting Research Professor
<https://orcid.org/0000-0001-7981-3968>

Research Project Introduction:

Research involves observations of monkeys inhabiting natural forest at Polonnaruwa. We aim to: (1) establish new knowledge concerning primate evolution; (2) provide a scientific basis for nature conservation; and (3) disseminate new knowledge through publications and documentary films. We test hypotheses of social evolution by continuous monitoring socio-ecological differences among three sympatric primate species. For example, in 2023, long-term records of lactation revealed adaptive flexibility in maternal investment among wild monkeys under different environments.

Research Activities:

Demography, behavior and range use among four primate species at Polonnaruwa: Toque macaques *Macaca sinica*, gray langurs *Semnopithecus priam*, and purple-faced langurs *S. vetulus*, and the nocturnal loris *Loris lydekkerianus*. Regular monthly census of many groups of primates from these four species is the basis for population ecology studies, comparisons among species and social groups within each species. Field observations and census were carried out in 2023 as a continuation of earlier work. The results of these studies are integrated with other data sets for publication.

Data analyses. Unique long-term records of toque macaques concerning the relationships among lactation duration, interbirth intervals, and other salient factors were integrated to test hypotheses on the costs of lactation and infant mortality under different environments.

Documentary film production. We supported a brief TV documentary (on primates) for German UFA Television (Phillip Griess producer). The film will air in 2024.

Results/Key findings:

Wild toque macaques live under harsh environments and females prolong nursing 2-3 times longer (12-22 months) than those living under benign conditions (7 months). Prolonged lactation supports infant growth and survival, but costs long interbirth intervals (fewer lifetime births) and draws heavily on maternal energy. Mothers offset high lactation costs by feeding longer to increase energy input and through catabolism, which results in loss of body weight. To safeguard their own survival and future reproduction metabolically stressed mothers cease lactation causing their infants to die and take long to recover. Successfully weaned older infants risk mortality in food competition.



From L to R: Mr. C. Pathirathne, Prof. W.P.J. Dittus, Mr. S. Rathnayaka

Rhizobium Project

Prof. Gamini Seneviratne
gamini.se@nifs.ac.lk

Senior Research Professor
<https://orcid.org/0000-0003-1562-4097>

Research Project Introduction:

The Rhizobium Inoculant Research & Production Facility (RIRPF) was affiliated with NIFS and commenced in January 2012 under the collaborative and consultative division (CCD) of the NIFS. In 2018, RIRPF was absorbed into the Microbial Biotechnology Unit (MBU) of the NIFS. The project's primary mission is to conduct research and to produce rhizobial inoculants and familiarize them with local legume cultivations to minimize the chemical nitrogen fertilizer (urea) application.

Research Activities:

Twelve on-farm filed trials were conducted in Kandy, Nuwara Eliya and Mathale districts in collaboration with Department of Provincial Agriculture, Central Province, to demonstrate the positive effects of the use of rhizobium inoculants for vegetable bean (*Phaseolus vulgaris*) cultivations. In these trials, the recommended urea application was compared with the rhizobium inoculation. The total pod yield was assessed.

Results/Key findings:

In all the trials, the highest pod yield was observed with the use of rhizobial inoculation. The inoculants were supplied to 5,637 acres of soybean, 250 acres of groundnut, 200 acres of green gram cultivations, and 100 packets for vegetable beans. Those inoculants were purchased by Plenty Foods pvt. Ltd, Department of Agriculture, Department of Provincial Agriculture and Mahaweli Authority of Sri Lanka.



From L to R: Mr. E.M.H.G.S. Ekanayake, Prof. G. Senevirathna, Mr. R.K.G.K. Kumara, Mr. A.H.M.A.K. Tennakoon

Condensed Matter Physics & Solid-State Chemistry Research Programme

Prof. M.A.K. Lakshman Dissanayake
lakshman.di@nifs.ac.lk

Research Professor
[http://orcid.org/000 0001 5488 9384](http://orcid.org/000000154889384)

Research Project Introduction:

Condensed Matter Physics and Solid-State Chemistry research programme at NIFS currently focuses on understanding the fundamental physicochemical processes in scientifically intriguing and technologically important novel materials with potential applications in dye-sensitized and thin film solar cells, Li⁺ ion and Mg⁺⁺ ion batteries, and polymer nanofilters for bacteria and heavy metal removal.

Research Activities:

1) Poly (vinylidene fluoride-co-hexafluoropropylene) (PVdF-HFP) electrospun polymer nanofibre-based gel electrolytes were prepared by trapping a liquid electrolyte within the nanofibre membrane. The maximum efficiency (η) of 6.79% was observed for the DSSC fabricated with optimized nanofibre membrane thickness, corresponding to 4 min of electrospinning time. 2) Effect of TiO₂ nanofillers on ionic conductivity enhancement in Mg(BH₄)₂:polyethylene oxide (PEO): propylene carbonate (PC), polymer gel electrolyte was studied. Three different electrolyte compositions with Mg (BH₄)₂: PEO molar ratios of 1:8, 1:10, and 1:12 were prepared and characterized. The effect of TiO₂ nanofiller on ionic conductivity was studied for the optimized polymer gel electrolyte. 3) Highly efficient dye-sensitized solar cells were fabricated with TiO₂-coated, silver nanowire-incorporated tri-layered photoanode. Silver nanowires (AgNWs) were synthesized via a rapid, scalable, and green pathway method. AgNWs were coated with titanium dioxide (TiO₂) using 2-mercaptoethanol as the binder. AgNW@TiO₂ core-shell structure was formed by the hydrothermal method and used in DSSCs.

Results/Key findings:

1) The optimized (PVdF-HFP) electrospun polymer nanofibre-based DSSC showed an efficiency of 6.79%, V_{oc} of 801.0 mV, and J_{sc} of 12.70 mA cm⁻². The efficiency of the corresponding liquid electrolyte-based cell was 7.28%. 2) The optimized electrolyte with Mg (BH₄)₂: PEO = 1:10 exhibited the highest ionic conductivity of 7.60 × 10⁻⁶ S cm⁻¹ at 30 °C. The highest ionic conductivity of 17.95 × 10⁻⁶ S cm⁻¹ at 30 °C was exhibited by the electrolyte composition with 10 wt% of TiO₂ nanofiller. 3) The efficiency of DSSC with single-layered TiO₂ photoanode increased from 6.70% to 8.87% due to AgNW@TiO₂ core-shell structured photoanode. When the tri-layered AgNWs@TiO₂ core-shell photoanode was used, the efficiency increased to 10.5%.



From L to R: Mr. R.M.S.S. Rasnayake, Ms. M.S.H. Hettiarachchi, Ms. P.U. Sandunika, Prof. G.K.R. Senadeera, Prof. M.A.K.L. Dissanayake, Ms. W.M.S.K. Weerasekara, Ms. A.K. Karunarathne, Ms. W.I. Sandamali, Mr. A.M.L.E. Bandara

Energy & Advanced Material Chemistry Research Programme

Prof. Jayasundera Bandara
jayasundera.ba@nifs.ac.lk

Senior Research Professor
<http://orcid.org/0000-0001-8530-5679>

Research Project Introduction:

The main research interests include photovoltaic technology, primarily dye-sensitized, Q-dot, and polymer solar cells that generate electricity from solar radiation; building artificial chemical devices that mimic photosynthesis to produce various forms of environmentally clean fuels such as green hydrogen via water splitting; and converting atmospheric carbon dioxide into fuels.

Research Activities:

Green hydrogen production via water splitting reaction: IR photons active catalysts such as ZrO_{2-x} and $NaNbO_{3-x}$ were synthesized under highly reducing conditions to generate oxygen vacancies and increase charge carrier densities, and photocatalytic activity for hydrogen production was investigated. Furthermore, by anodizing the porous titanium mesh, titanium/titanium dioxide Nanorod/Nanotube (Ti/TiO₂ NR/NT) array schottky junctions were fabricated, and light harvesting earth abundance materials such as AgBiS₂, BiVO₄, Sb₂S₃ nanostructures were grown on Ti/TiO₂ NR/NT junction and photoelectrochemical performances were tested. The material properties of catalysts and electrodes were investigated. Photovoltaic research: The investigation of efficiency limiting factors in thin film solar cell device FTO/TiO₂/Sb₂S₃/P3HT/Ag was continuing. In addition to Sb₂S₃, similar light harvesting materials such as AgBiS₂ and CuBiS₂ were investigated using the same device construction. This study looked into the optical and electrical properties of light harvesting materials to increase the performance of solar cells.

Results/Key findings:

By incorporating Ag⁺ ions into the TiO₂ lattice structure, a large density of surface oxygen vacancies is formed, allowing for efficient trapping of photogenerated charge carriers and facilitating charge carrier separation, hence boosting charge transfer kinetics. At a bias voltage of 0.65 V vs. RHE, the ternary photoanode achieves a maximum Applied Bias solar-to-Current Efficiency (ABPE) of 3.36%, which is 30 times more than that of pristine TNTA and 1.9 times greater than that of TNTA/Sb₂S₃ photoanodes. Investigation on thin film solar cells in the FTO/TiO₂/Sb₂S₃/P3HT/Ag configuration was continued to enhance the efficiency. Materials properties of light harvesting materials were optimized to enhance the efficiency.



From L to R: Ms. A.A.W. Tharaka, Mr. D.C. Rajapakse, Prof. J. Bandara, Mr. R.P.P.D. Rajakaruna

Material Processing & Device Fabrication Research Programme

Prof. G. R. A. Kumara
kumara.as@nifs.ac.lk

Research Professor
<http://orcid.org/0000-0001-9804-2652>

Research Project Introduction:

This research project aims to revolutionize sustainable energy systems by advancing low-cost dye-sensitized and perovskite solar cells, developing biomass-based supercapacitors, and exploring value-added applications of Sri Lankan mineral graphite. Our focus was to creating efficient, affordable, and environmentally friendly solutions for renewable energy generation and storage.

Research Activities:

This research initiative focuses on advancing solar energy conversion and storage technologies, concurrently exploring value-added applications for Sri Lankan mineral graphite. Activities encompass fabricating and optimizing low-cost dye-sensitized-thin film perovskite solar cells, involving rigorous material characterization for improved efficiency. Simultaneously, we were able to develop an energy storage supercapacitor using coconut shell-activated charcoal; key steps including synthesis, activation, prototype design, and performance testing were concluded. Our research programme also investigates Sri Lankan mineral graphite, exploring extraction techniques and innovative applications in energy-related technologies. Our interdisciplinary approach integrates the solar cell and supercapacitor findings to emphasize environmental sustainability, cost-effectiveness, and community engagement. Knowledge dissemination has been done through publications and outreach activities. This comprehensive strategy aims to significantly advance sustainable energy systems, combining cutting-edge solar conversion and storage solutions with the exploration of novel graphite applications.

Results/Key findings:

Significant advancements have been made to achieve enhanced stability and efficiency in TiO₂-based dye-sensitized solar cells through innovative MgO surface modification technique. Additionally, we've developed low-cost perovskite solar cells, leveraging an ingenious approach that incorporates expanded graphite back contact and activated carbon to facilitate efficient hole transport. Moreover, our research delves into sustainable mining practices for natural vein graphite, involving a methodical acid extraction process from waste materials adhering to rock pieces.



From L to R: Mr. R.M.A.M.B. Ratnayake, Mr. P.P.B. Gunarathne, Mr. R.R.M.M.N.B. Bambaradeniya, Prof. G.R.A. Kumara, Ms. M.I.U. Weerasinghe, Mr. A.D.T. Medagedara, Ms. M.W.M.D.U.G. Makuldeniya

Nanotechnology & Advanced Materials Research Programme

Dr. Athula Wijayasinghe
athula.wi@nifs.ac.lk

Senior Research Fellow
<http://orcid.org/0000-0003-0227-6580>

Research Project Introduction:

Nanotechnology and Advanced Materials fields have already contributed to present technological advancements through introducing novel materials derived mainly from minerals. Sri Lanka possess useful minerals but such target-oriented value addition is unfortunately lacking. Therefore, those factors inherent to the country are seriously considered, in performing our fundamental/advanced but target oriented scientific investigations.

Research Activities:

Value addition to Sri Lankan minerals and related materials for advanced/high-tech/nano-technological applications: Optimization and scaling-up of battery-grade graphite preparation from Sri Lankan vein graphite for rechargeable lithium-ion batteries were investigated at laboratory level by component fabrication, battery assembling, and electrochemical performance analysis of developed battery grade graphite. A study on Sri Lankan vein quartz was also carried out through sample collection, developing techniques for purification and performing basic purification of quartz. Structural modification of Sri Lankan vein graphite was extended aiming to come up with Na-ion and Mg-ion batteries, by employing novel techniques of structural modification of graphite:

Development of low-cost and performance-enhanced advanced materials for energy conversion by employing low-cost and nanomaterial synthesis techniques: The investigation on dopants and their mechanism in TMO semiconductors was continued by extending the study to synthesize and characterize CuO-based TMO compositions.

Results/Key findings:

Successful optimization together with scale-up of purification and surface modification processes of Sri Lankan vein graphite paves the way for further advancements in scaling up for industrial applications. It will contribute to the progress of battery-grade graphite production from local graphite. Purified Sri Lankan vein quartz revealed its high potential as a promising anode material for high energy density rechargeable lithium-ion batteries. Nevertheless, it needs further investigations to enhance the capacity and structural stability. CuO-based TMOs synthesized by simple, low-cost, non-toxic, and environmentally friendly chemical precipitation methods showed very promising electrochemical performance suitable for next-generation high-performance LIBs.



*From L to R: Mr. W.G. Jayasekara Banda, Mr. W.T.R.S. Fernando
Dr. H.W.M.A.C. Wijayasinghe, Ms. H.M.H.D.K. Naranpanawa*

Natural Products Research Programme

Prof. Lalith Jayasinghe
lalith.ja@nifs.ac.lk

Senior Research Professor
<http://orcid.org/0000-0003-1703-4154>

Research Project Introduction:

The NIFS Natural Products Project seeks to improve human life by uncovering bioactive compounds in Sri Lankan plants, fungi, and marine life. Focused on secondary metabolites, the research delves into the chemistry and bioactivity of these resources, aiming to discover potential remedies for human and plant diseases, fostering a healthier society.

Research Activities:

Research activities of the Natural Products Project of the NIFS are mainly on the following areas:

1. Investigation of extracts from plant sources to be used in agriculture and human health. LC-MS profiling of bioactive compounds in these extracts.
2. Investigation of extracts from epiphytic and endophytic fungi, which can be used in agriculture and human health
3. Identifying the cause and control of postharvest fungal diseases and disorders in edible and export-oriented fruits

Results/Key findings:

Chemical investigation of *Diaporthe melonis* (*Acylpha indica* - Euphorbiaceae) yielded; 1,8-dimethoxynaphthalene (1), 8-methoxynaphthalene-1-ol (2), methyl 4-hydroxyphenylacetate (3), 3-nitropropionic acid (4), phomonitroester (5), 4-hydroxybenzoic acid (6), 8-hydroxy-7-methoxy-1-naphthaldehyde (7), 1-(2,6-dihydroxyphenyl)butanone (8), felinone A (9) and 4-hydroxy-6-methyltetrahydro-2H-pyran-2-one (10) while *Xylaria feejeensis* yielded, patchouliguaiol B (11), 12-hydroxyeremophila-9,11(13)-dien-8-one(12) and nigriterpene D (13). Some compounds showed strong antioxidant, cytotoxic, phytotoxic, enzyme inhibitory potentials.



From L to R: Ms. W.W.M.T.R. Wekadapola, Ms. J.C. Kalinga, Ms. K.D.P.U. Siriwardhana, Mr. H.A.K.D. Premasiri, Mr. G.R.N. Rathnayake, Mr. D.S. Jayaweera, Prof. U.L.B. Jayasinghe, Prof. N.K.B. Adikaram, Mrs. H.M.S.K. Bandara, Mr. Y.G.A.D.K. Bandara, Mr. S. Poorvijeyanth, Ms. M.A.K.H Mallawa arachchi, Ms. W.M.U.H. Bandara, Ms. T.B. Withanawsam

Computer Science, Mathematics and Statistics Research Programme

Prof. S.R. Kodituwakku
director@nifs.ac.lk

Research Professor
<http://orcid.org/0000-0002-8361-5689>

Research Project Introduction:

The main aim of the Computer Science, Mathematics and Statistics research programme is to conduct research to make scientific advances in the discipline while generating advanced knowledge needed for national and global development. We also focus our research on a wide range of areas including Software Engineering, Artificial Intelligence, Image Processing, Distributed Systems, Data analytics and Data Science.

Research Activities:

Project 1: Investigation and modeling algorithms for software engineering processes with artificial intelligence and machine learning approaches. Development of a novel Artificial intelligence-based algorithm for the system analysis and design phase of software engineering to mitigate the conceptual issues that occur while modeling software. This study focused on creating a decision-support matrix to provide suggestions with discriminative AI methodologies.

Project 2: Development of a generative AI approach for user interface designing with machine learning algorithms. Investigation of a novel generative AI methodology for generating user interfaces and codes from given sketches with machine learning algorithms. This study focused on improving the efficiency of user interface designing of web and software development.

Results/Key findings:

The project 1 suggests that a hybrid approach of Generative AI algorithms and Discriminative AI algorithms would create a better framework to identify NFRs from SRS and suggests a novel Recurrent Neural Network (RNN) model to improve the accuracy and performance. In project 2, the researchers have created a dataset comprising 300 images. Each entry in the dataset consists of a wireframe image paired with its corresponding real UI design image, and each image has dimensions of 512 pixels in width and 256 pixels in height. Upon conducting an initial trial with the 300-image dataset, the output fell short of expectations. In response, the initial dataset is expanded including total of 1000 images, and currently in the final stages of this augmentation process.



From L to R: Mr. W. A. A. J. J. Weerasuriya, Mr. A.E. Gunasekaran, Prof. S. R. Kodituwakku, Mr. K.G.S.N. Samaraweera, Mr. A. K. Gamage, Ms. B. N. Madumithili

Earth Resources and Renewable Energy (ER & RE) Research Programme

Prof. N. Deepal Subasinghe
deepal.su@nifs.ac.lk

Associate Research Professor
<http://orcid.org/0000-0002-2737-7989>

Research Project Introduction:

The ER & RE project centers on advancing renewable energy in Sri Lanka, emphasizing local resource utilization. Geothermal and mineral resources, largely untapped, hold immense potential for the nation's development. Subprojects target geothermal energy, Sri Lankan rock mineralogy, petrology, and radon mapping. A groundbreaking initiative in thermoelectricity strives to enhance efficiency and innovate materials for power generation.

Research Activities:

The investigation of Sri Lanka's geothermal potential for power generation involves a comprehensive exploration encompassing geophysical, geochemical, and geological aspects. Utilizing techniques like resistivity, magnetic, and electromagnetic methods, researchers focus on unveiling subsurface structures crucial for harnessing geothermal resources. Petrological and mineralogical analyses of Sri Lankan rocks contribute to understand their origin and economic viability, leading to the advancement of scientific knowledge.

The development of thermoelectric materials capable of directly converting heat into electricity using *Seebeck* effect, that are useful in electronic and electrical applications, are carried out. Emphasis is on locally available resources such as Sri Lankan graphite and its derivatives, mica and quartz. Theoretical as well as experimental studies were conducted to understand the heat transfer dynamics and their practical effects on thermoelectric generation, especially in composite materials used in battery packs in EVs.

Results/Key findings:

- Magnetic mapping of areas around major geothermal springs of Sri Lanka to understand the flow paths and use of other complementary techniques to confirm the results.
- Study of extra-terrestrial rock and processes of meteoric weathering of minerals that are not found on the Earth.
- Contribution to the origin of Sri Lankan rocks and lithological zones of the country.
- Understanding the heat transfer mechanisms, practical limitations, and reasons for deviations from theoretical models. Improving the heat transfer in EV applications.
- Development of new materials to be used in electrical insulation applications.



*Ms. A.M.A.M Abeyasinghe, Ms. M. G. R. Shyamamala, Mr. R.M.K.C. Ratnayake, Prof. N.D Subasinghe,
Ms. M.P. Thilakarathna, Ms. D.R.T.L Harischandra*

Water Quality Research Programme

Rohan Weerasooriya
rohan.we@nifs.ac.lk

Research Professor
<http://orcid.org/0000-0002-0509-5307>

Research Project Introduction:

Global water salination, impacting over 2 billion, demands efficient ion pair separation by ab initio modeling. Swift *in situ* detection methods for drinking water quality are crucial. We assessed pollutant levels in surface water bodies during lockdowns. Automation in treatment technology eased water plant maintenance for villagers as in Sustainable Goals.

Research Activities:

Our findings reveal significant challenges in groundwater, including elevated salinity, hardness, fluoride, nitrate, sulfate, and alkalinity. The two hydrochemical types of groundwater in the NCP were mainly of the Ca-HCO₃, Na-Ca-HCO₃ types, with the main HCO₃⁻, Na⁺ and Ca²⁺ ions in both types of groundwater originating from silicate and evaporite salt dissolution and influenced by alternating cation adsorption, while the presence of NO₃⁻ was mainly anthropogenic. We synthesized controllable carbon spheres through chemical vapor deposition. For methylmercury detection, we utilized gold nanoparticle-embedded metal-organic frameworks. An electrochemical sensor, Fe₃O₄@SiO₂-Au/GCE, demonstrated rapid SARS-CoV-2 S-protein detection. The downstream water quality in the Kelani River Basin notably improved during the lockdown, underscoring the impact of restricted human activities on environmental conditions. The structure, composition, source and spatial distribution of the DOM of two kinds of groundwater samples collected from dug well and tube well in the NCP during the wet season were determined, compared and analyzed by analytical tools such as parallel factor analysis.

Results/Key findings:

Presently, evidence on carbon pentagon formation in hexagonal graphitic structures remains inconclusive. Ongoing research, utilizing NEXAFS measurements, aims to precisely examine pentagon defects, validating the proposed carbon pentagon formation mechanism. A reverse osmosis system, coupled with a CS pretreatment process, emerges as the most suitable method for treating high-salinity groundwater in numerous regions of the NCP. Additionally, a novel electrochemical sensor, Fe₃O₄@SiO₂-Au/GCE, has been developed for the rapid detection of SARS-CoV-2 S-protein, featuring a broad dynamic range (0.1 ng/mL to 10 µg/mL) and a low detection limit (4.78 pg/mL), marking a pioneering advancement.



From L to R: Prof. R. Weerasooriya, Dr. Z. Wu, Prof. Xing Chen, Prof. Yu Huang, Ms. S.P. Hemachandra, Ms. P.M.C.J. Bandara, Mr. L. Senarathne, Mr. H.M.R.R.B. Nawarathna

Environmental Science Research Program: *Material Development and Pollutant Remediation*

Dr. Lakmal Jayarathna
Lakmal.ja@nifs.ac.lk

Research Fellow
<https://orcid.org/0000-0002-9592-9183>

Research Project Introduction:

The Project's Materials Development and Fabrication Program bridges traditional and modern material technology, addressing environmental pollution caused by modern development. It emphasizes understanding natural pollutant materials through nanomaterial-based adsorbents and catalysts to detect and eliminate gases, chemicals, organic pollutants, and biological substances, promoting fundamental and applied science.

Research Activities:

The research project focuses on synthesizing boron-modified zeolites and ZnO nanostructures confined within zeolite matrices for N₂O gas sensing. The synthesis involves manipulating aluminum-to-boron ratios, studying cation intercalation effects, and employing post-synthetic confinement strategies. Morphologically controlled ZnO nanostructures, including nanorods and nanoflowers were synthesized and confined within ZSM-5 zeolites. In this, two encapsulation techniques were explored for optimal confinement. For the material characterization, SEM, PXRD, RAMAN, and FTIR were employed. A custom sensing setup for Electrochemical Impedance Spectroscopy (EIS) was also developed and samples are prepared for sensing studies. Copper-modified Zeolite Y exhibited some promising catalytic activity for phenol and chlorophenol degradation, with HT-Zeolite CuY outperforming MW-Zeolite CuY. The research contributed for the understanding of structural and catalytic properties of synthesized materials for environmental applications, demonstrating potential for advanced gas sensing and pollutant removal.

Results/Key findings:

The research achieved a successful synthesis of boron-modified zeolites by manipulating aluminum-to-boron ratios and exploring cation intercalation effects. Morphologically controlled ZnO nanostructures were synthesized in 2023 and confined within ZSM-5 zeolites for N₂O gas sensing. Post-synthetic confinement strategies were investigated, revealing that the wet impregnation technique yielded optimal results. Material characterization techniques such as SEM, PXRD, RAMAN, and FTIR confirmed the structural and morphological properties. In catalytic activity tests, HT-Zeolite CuY exhibited superior phenol degradation (79%) compared to MW-Zeolite CuY. Altering the reaction environment further enhanced degradation. The research highlights promising applications for boron-modified zeolites and confined ZnO nanostructures in environmental sensing and pollutant removal.



*Mr. U.W.A.S.B. Elkaduwa, Ms. M.D.R. Perera, Ms. A.M. Hasara, Dr. I.P.L. Jayarathne,
Mr. N. Athukorala, Ms. M.A.K. Madhumekala, Ms. U.G.T.D. Uduwellage*

SECTION 2 – RESEARCH PERFORMANCE IN YEAR 2023

	Page No.
Publications in Journals	21
Patents	31
Abstracts	32
Conference Proceedings	39
Books & Book Chapters	40
Grants	42
Research Collaborations	44
Research Supervision	54
Awards & Recognitions	70
Training & Participation	83
Dissemination of Science	89
Young Scientist Forum	95

PUBLICATIONS IN JOURNALS

BIOLOGICAL SCIENCES RESEARCH DIVISION

Evolution, Ecology and Biodiversity Research Programme

1. Ranasinghe, U.G.S.L., Thormann, J., **Benjamin, S.P.**, Bezdek, A., Eberle, J., and Ahrens, Dirk (2023). Contrasting results of multiple species delimitation approaches cause uncertainty in synecological studies: A case study on Sri Lankan chafers. *Insect Conservation and Diversity*, p.1-16. [SJQR Quartile: Q1] <http://www.doi.org/10.1111/icad.12684>
2. **Benjamin, S.P.**, and Dayananda, N. (2023). Redescription and new locality records of *Cryptothele ceylonica* O. Pickard-Cambridge, 1877 from Sri Lanka (Araneae: Zodariidae). *Zootaxa*, 5352(2), p.296-300. [SJQR Quartile: Q2] <http://www.doi.org/10.11646/zootaxa.5352.2.11>

Food Chemistry Research Programme

1. Ulpathakumbura, B.S.K., **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.**, (2023). Anti-oxidative, anti-hyperglycemic, and anti-obesity properties of selected edible leafy plants of Sri Lanka. *Food Chemistry Advances*, 2, p.1-10. [SJQR Quartile: N/A] <https://doi.org/10.1016/j.focha.2023.100208>
2. Ulpathakumbura, B.S.K., **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.**, (2023). FTIR spectral correlation with alpha-glucosidase inhibitory activities of selected leafy plants extracts. *International Journal of Plant-Based Pharmaceuticals*, 3(1), p.104-113. [SJQR Quartile: N/A] <https://doi.org/10.29228/ijpbp.22>
3. Rekasa, A.M., Abdul Majeed, U., and **Marikkar, J.M.N.** (2023). Comparison of the nutritional composition of three undervalued fish species in Sri Lanka. *Journal of Bangladesh Agricultural University*, 21(2), p.224-232. [SJQR Quartile: N/A] <https://baures.bau.edu.bd/jbau/>
4. Hewapathirana, H.P.T.D., Yalagama, L.L.W.C., and **Marikkar, J.M.N.** (2023). Nutritional properties of defatted coconut (*Cocos nucifera* L.) testa flour incorporated Sri Lanka traditional food: roti. *Cocos*, 24(1), p.43-53. [SJQR Quartile: N/A] <https://doi.org/10.4038/cocos.v24i1.5827>

Microbial Biotechnology Research Programme

1. Liu, J., Huang, T., Xu, Z., Mao, Y., Soteyome, T., Liu, G., Qu, C., Yuan, L., Ma, Q., Zhou, F., and **Seneviratne, G.** (2023). Sub-MIC streptomycin and tetracycline enhanced *Staphylococcus aureus* Guangzhou-SAU749 biofilm formation, an in-depth study on transcriptomics. *Biofilm*, 6, p.1-13. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.biofilm.2023.100156>
2. Liu, J., Yang, L., Qu, Y., **Seneviratne, G.**, Qiu, G., Tan, Y., Xu, Z., and Kjellerup, B.V. (2023). Biofilm research highlights networked globally. *Biofilm*, p.1-3. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.biofilm.2023.100148>
3. Liu, J., Huang, T., Xu, R., Xiang, Z., Soteyome, T., Chen, X., Zhang, Q., Huang, Q., Wu, Z., Huang, Y., Liu, G., Qu, C., **Seneviratne, G.**, Kjellerup, B.V., Xu, Z. (2023). A propidium monoazide-polymerase spiral reaction (PMA-PSR) designed for direct detection of *Escherichia coli* O157:H7 viable cell. *LWT - Food Science and Technology*, 186, p.1-8. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.lwt.2023.115212>

4. Liu, J., Huang, T., Soteyome, T., Mao, Y., Luo, Y., Yuan, L., Ma, Q., Liu, G., Qu, C., **Seneviratne, G.**, Kjellerup, B.V., Xu, Z. (2023). The survival and enterotoxin gene expression of *Staphylococcus aureus* planktonic and biofilm cells in quick-frozen food. *LWT- Food Science and Technology*, 187, p.1-8. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.lwt.2023.115354>
5. Premarathna, M., Jayasekara, A.P.D.A., Rathnathilaka, A.T.D., Ekanayake, S.N.B., Warnakulasooriya, W.M.K.D.S., Abeysinghe, D.C., and **Seneviratne, G.** (2023). Biofilm biofertilizer stabilizes sequestered paddy soil carbon while cutting down chemical fertilizers: Answers for climate and fertilizer Issues. *Eurasian Soil Science*, 56, p.1092-1100. [SJQR Quartile: Q2] <http://www.doi.org/10.1134/S1064229323600203>
6. Jayasekara, A.P.D.A., Premarathna, M., Abeysinghe, D.C., and **Seneviratne, G.** (2023). Network interactions of soil carbon sequestration in paddy grown soils amended with biofilm biofertilizer versus chemical fertilizers. *Journal of the Soil Science Society of Sri Lanka*, 27(1), p.13-19. [SJQR Quartile: N/A] <https://sssl.org/2023/05/22/volume-27/>
7. Jayaneththi, J.P.H.U., **Seneviratne, G.**, Madawala, H.M.S.P., Amarasekara, M.G.T.S. (2023). Biofilm enriched rock phosphate as a potential phosphorous fertilizer to replace triple super phosphate in rice cultivation: A preliminary field trial. *Ceylon Journal of Science*, 52(3), p.351-355. [SJQR Quartile: N/A] <http://www.doi.org/10.4038/cjs.v52i3.8091>
8. Premarathna, M., **Seneviratne, G.**, and Madawala, H.M.S.P. (2023). Biofilm nutraceuticals shape gut microbiota better than diet-based interventions: a novel approach to next-generation medicine. *Ceylon Journal of Science*, 52(4), p.455-463. [SJQR Quartile: N/A] <http://www.doi.org/10.4038/cjs.v52i4.8175>
9. Chandrasiri, K. P. N. K., Weerasinghe, H.A.S., and **Seneviratne, G.** (2023). Decomposition of Sugarcane Trash by Selected Microbes and their Biofilms: A Laboratory Investigation. *The Journal of the Sugarcane Research Institute (SRI) of Sri Lanka*, 4,, p.1-7. [SJQR Quartile : N/A]. <https://sugarres.lk/information/publications/major-annual-periodical/journal-of-sri/>.

Microbiology & Soil Ecosystem Research Programme

1. Paranavithana, T.M., Mohamed Anas, M.U. Karunaratne, S.B., Macdonald, B., Wimalathunge, N. Bishop, T.F.A, and **Ratnayake, R.R.** (2023). Environmental factors and spatial dependence explain half of the inherent variation in carbon pools of tropical paddy soils. *Catena*, 231, p.1-10. [SJQR Quartile: Q1] <https://doi.org/10.1016/j.catena.2023.107278>
2. Paranavithana T.M., Karunaratne N.B., Wimalathunge N., Malone B.P., Macdonald B., Bishop T.F.A., and **Ratnayake, R.R.** (2023). Unraveling spatial drivers of topsoil total carbon variability in tropical paddy soils of Sri Lanka. *Geoderma Regional*, p.1-20. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.geodrs.2023.e00745>
3. Premetilake, M.M.S.N, Perera, G.A.D., Kulasoorya, S.A., and **Ratnayake, R.R.** (2023). Variation in above and below-ground carbon storage in an *Eucalyptus grandis* plantation established in a grassland with a chronosequence of age. *Tropical Ecology*, 64, p.601-611. [SJQR Quartile: Q2] <https://doi.org/10.1007/s42965-022-00286-2>

Molecular Microbiology and Human Diseases Research Programe

1. Bandara, S., Rajapaksha, A.U., Kandasamy, A., Hettithanthri, O., **Magana-Arachchi, D.N.**, Wanigatunge, R., Jayasinghe, C., and **Vithanage, M.** (2023). Food-mediated exposure of Hofmeister ions in *Oryza sativa* (Rice) from selected CKDu endemic regions in Sri Lanka. *Environmental Geochemistry and Health*, 45, p.8417-8432. [SJR Quartile: Q1] <https://doi.org/10.1007/s10653-023-01730-5>
2. Wickramasinghe, M., Katyana, K., Sewwandi, S.M.V.K., Rathnayaka, I., **Magana-Arachchi, D.N.**, Jayawardana, B.C., and **Liyanage, R.** (2023). Exploration of antioxidant activities, microstructural properties, and fatty acid composition of three cyanobacteria species. *Biocatalysis and Agricultural Biotechnology*, 56, p.1-12. [SJR Quartile: Q1] <https://doi.org/10.1016/j.bcab.2023.103015>
3. Madamarandawala, P., Rajapakse, S., Gunasena, B., Madegedara, D., and **Magana-Arachchi, D.N.** (2023). A host blood transcriptional signature differentiates multi-drug/rifampin-resistant tuberculosis (MDR/RR-TB) from drug susceptible tuberculosis: a pilot study. *Molecular Biology Reports*, 50(2), p.1-9. [SJR Quartile: Q2] <https://doi.org/10.1007/s11033-023-08307-6>
4. **Wickramasinghe, N.C.**, Narlikar, J.V., and Tokoro, G. (2023). Cosmology and the origins of life. *Journal of Cosmology*, 30(1), p.30001 - 30013. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe.pdf>
5. **Wickramasinghe, N.C.** (2023). Life beyond the limits of our planetary system. *Journal of Cosmology*, 30(2), p.30020 - 30024. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe1.pdf>
6. **Wickramasinghe, N.C.**, Tokoro, G., Temple, R., and Schild, R. (2023). Reluctance to admit we are not alone as an intelligent lifeform in the cosmos. *Journal of Cosmology*, 30(4), p.30040 - 30053. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe4.pdf>
7. **Wickramasinghe, N.C.**, Schild, R., and Forrington, J. H. (2023). The second copernican revolution. *Journal of Cosmology*, 30(5), p.30060 - 30071. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe5.pdf>
8. **Wickramasinghe, N.C.**, and Tokoro, G. (2023). Quest for life on Jupiter and its moons. *Journal of Cosmology*, 30(3), p.30030 - 30034. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe3.pdf>
9. **Wickramasinghe, N.C.**, Schild, R., Tokoro, G., and Temple, R. (2023). Search for aliens, and UFO'S. *Journal of Cosmology*, 30(6), p.30080 - 30089. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe6.pdf>
10. **Wickramasinghe, N.C.**, and Wickramasinghe, R.C. (2023). Life and the Universe: a Final Synthesis. *Journal of Cosmology*, 30(10), p.30160 - 30174. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe10.pdf>
11. Schild, R., **Wickramasinghe, N.C.**, Forrington, J.H. (Cass), Temple, R., Tokoro, G., and Wickramasinghe, R. (2023). Search for UFOs and aliens: modern evidence and ancient traditions. *Journal of Cosmology*, 30(9), p.30135 - 30145. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe9.pdf>
12. **Wickramasinghe, N.C.** (2023). Cosmichia: A new designation for the theory of cosmic life. *Journal of Cosmology*, 30(8), p.30120 - 30128. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe8.pdf>

- Schild, R., **Wickramasinghe, N.C.**, and Forrington, J. H. (Cass) (2023). A note on a biological explanation for the ERE phenomenon. *Journal of Cosmology*, 30(7), p.30100 - 30107. [SJR Quartile: N/A] <https://thejournalofcosmology.com/Wickramasinghe7.pdf>

Nutritional Biochemistry Research Programme

- Dissanayake, L., Herath, B., Opatha, J., Jabir, S., Siriwardana, R., Sirisena, K., Wickramasinghe, M., **Liyanage, R.**, Guruge, G.N.D., Jayaweera, K., Jayawardana, R., Zavos, H.M.S., Sumathipala, A., and Rijdsdijk, F. (2023). The Colombo twin and singleton study (cotass): Piloting the feasibility of collecting nutritional data and extension of the sample to include children of twins. *Behavior Genetics*, p.1-10. [SJR Quartile: Q1] <http://www.doi.org/10.1007/s10519-023-10171-w>
- Wickramasinghe, M.A., Nadeeshani, V.H.H., Sewwandi, S.M.V.K., Rathnayaka, I., Kananke, T.C., and **Liyanage, R.** (2023). Comparison of nutritional composition, bioactivities, and FTIR-ATR microstructural properties of commercially grown four mushroom species in Sri Lanka; *Agaricus bisporus*, *Pleurotus ostreatus*, *Calocybe sp.*(MK-white), *Ganoderma lucidum*. *Food Production, Processing and Nutrition*, 5(43), p.1-16. [SJR Quartile: Q1] <http://www.doi.org/10.1186/s43014-023-00158-9>
- Gunawardana, S., Nadeeshani, V.H.H., Amarasinghe, V., and **Liyanage, R.** (2023). Bioactive properties and therapeutic aspects of fermented vegetables: a review. *Food Production, Processing and Nutrition*, p.1-16. [SJR Quartile: Q1] <http://www.doi.org/10.1186/s43014-023-00176-7>
- Wickramasinghe, M., Katyana, K., Sewwandi, S.M.V.K., Rathnayaka, I., **Magana-Arachchi, D.N.**, Jayawardana, B.C., and **Liyanage, R.** (2023). Exploration of antioxidant activities, microstructural properties, and fatty acid composition of three cyanobacteria species. *Biocatalysis and Agricultural Biotechnology*, 56, p.1-12. [SJR Quartile: Q1] <https://doi.org/10.1016/j.bcab.2023.103015>
- Nadeeshani, V.H.H., Kudagammana, S.T., Herath, C., Jayasinghe, R., and **Liyanage, R.** (2023). Early childhood caries and nutritional status of children: A Review. *Food and Nutrition Bulletin*, 44(4), p.249-264. [SJR Quartile: Q2] <http://www.doi.org/10.1177/03795721231209358>
- Sewwandi, S.M.V.K., Liyanage, R.T.P, Bangamuwage, R., Rathnayaka, I., Deen, A., Jayawardana, B.C., and **Liyanage, R.** (2023). Morphological, physicochemical, and functional properties of fifteen different dietary carbohydrate sources in Sri Lanka. *JSFA Reports*, p.-. [SJR Quartile: N/A] <http://www.doi.org/10.1002/jsf2.153>

Plant Stress Biology and Molecular Genetics Research Programme

- Cabral de Mel, S.J., **Seneweera, S.**, Dangolla, A., Weerakoon, D.K., Maraseni, T., and Allen, B.L. (2023). Attitudes towards the potential use of aversive geofencing devices to manage wild elephant movement. *Animals*, 13(16), p.1-14. [SJR Quartile: Q1] <http://www.doi.org/10.3390/ani13162657>
- De Mel, S.J.C., **Seneweera, S.**, De Mel, R.K. Dangolla, A., Weerakoon, D.K., Maraseni, T., and Allen, B.L (2023). Welfare impacts associated with using aversive geofencing devices on captive Asian elephants. *Applied Animal Behaviour Science*, 265, p.1-15. [SJR Quartile: Q1] <http://www.doi.org/10.1016/j.applanim.2023.105991>

Plant Taxonomy & Conservation Research Programme

1. Hyde, K.D., Abdel-Wahab, M.A., Abdollahzadeh, J., Abeywickrama, P.D., Absalan, S., Afshari, N., Ainsworth, A.M., Akulov, O.Y., Aleoshin, V.V., Al-Sadi, A.M., Alvarado, P., Alves, A., Alves-Silva, G., Amalfi, M., Amira, Y., Amuhenage, T.B., Anderson, J.L., Antonín, V., Aouali, S., Aptroot, A., Apurillo, C.C.S., Araújo, J.P.M., Ariyawansa, H.A., Armand, A., Arumugam, E., Asghari, R., Assis, D.M.A., Atienza, V., Avasthi, S., Azevedo, E., Bahkali, A.H., and **Wijesundara, D.S.A.** (2023). Global consortium for the classification of fungi and fungus-like taxa. *Mycosphere*, 14(1), p.1960–2012. [SJR Quartile: Q1] https://mycosphere.org/pdf/MYCOSPHERE_14_1_23-1.pdf
2. Bandaranayake, P.C.G., Naranpanawa, N., Chandrasekara, C.H.W.M.R.B., Samarakoon, H., Lokuge, S., Jayasundara, S., Bandaranayake, A.U., Pushpakumara, D.K.N.G., and **Wijesundara, D.S.A.** (2023). Chloroplast genome, nuclear ITS regions, mitogenome regions, and Skmer analysis resolved the genetic relationship among Cinnamomum species in Sri Lanka. *PLOS ONE*, 18(9), p.1-25. [SJR Quartile: Q1] <http://www.doi.org/10.1371/journal.pone.0291763>
3. Karunarathna, S.C., Priyashantha, A.K.H., Tibpromma, S., Galappaththi, M.C.A., Premarathne, B.M., Wijayawardene, N.N., Wimalasena, M.K., Jayalal, R.G.U., Wickramanayake, K.D., Dangalla, H., Jayathunga, W.H., Brahmanage, R.S., Weerakoon, G., Ariyawansa, K.G.S.U., Yapa, N., Nanayakkara, C.M., Ediriweera, S., Fan, X., Kirk, P.M., Zhang, G., Ediriweera, A., Bhat, D.J., Dawoud, T.M., Kumara, K.L.W., Deng, C.Y., Dai, D., **Wijesundara, D.S.A.**, and Madawala, S. (2023). Checklist, typification details, and nomenclature status of Basidiomycota, originally described from Sri Lanka. *Phytotaxa*, 621(1), p.001–086. [SJR Quartile: Q2] <https://doi.org/10.11646/phytotaxa.621.1.1>
4. Nilanthi, R.M.R., Gopallawa, B., Jayawardana, N., and Jayasinghe, H.D. (2023). Strobilanthes sripadensis, a new species of Acanthaceae from Sri Lanka. *Phytotaxa*, 592(2), p.127–134. [SJR Quartile: Q2] <https://doi.org/10.11646/phytotaxa.592.2.6>
5. Wijayawardene, N.N., Dai, D., Premarathne, B.M., Wimalasena, M.K., Jayalal, R.G.U., Wickramanayake, K.D., Dangalla, H., Jayathunga, W.H., Brahmanage, R.S., Karunarathna, S.C., Weerakoon, G., Ariyawansa, K.G.S.U., Yapa, P.N., Madawala, S., Nanayakkara, C.M., Fan, X., Kirk, P.M., Zhang, G., Ediriweera, A., Bhat, D.J., Dawoud, T.M., Tibpromma, S., and **Wijesundara, D.S.A.** (2023). Checklist, typification details, and nomenclature status of ascomycetous fungi originally described in Sri Lanka. *Phytotaxa*, 611(1), p.001–105. [SJR Quartile: Q2] <https://doi.org/10.11646/phytotaxa.611.1.1>
6. Brahmanage, R.S., Wijayawardene, N.N., Nanayakkara, C.M., Muthumala, C.K. **Wijesundara, D.S.A.**, Dai, D.Q., and Ariyawansa, K.G.S.U. (2023). Eucalyptus leaf spot disease caused by Coniella eucalyptorum in Sri Lanka. *Phytotaxa*, 630(1), p.040–050. [SJR Quartile: Q2] <https://doi.org/10.11646/phytotaxa.630.1.3>
7. Jayasinghe, H.D., and Gamhewa, H.T. (2023). Two new additions and one confirmation of the occurrence of Lamiaceae (Lamiales) species from Northern dry zone in Sri Lanka. *Journal of the National Science Foundation of Sri Lanka*, 51(1), p.175-181. [SJR Quartile: Q3] <http://www.doi.org/10.4038/jnsfsr.v51i1.10757>
8. Jayasinghe, H.D., **Wijesundara, D.S.A.**, Ranasinghe, R.S.A.W., and Kathriarachchi, H.S. (2023). Two new species of Syzygium (Myrtaceae) from Sri Lanka, with lectotypification and recircumscription of Syzygium assimile. *Gardens' Bulletin Singapore*, 74(2), p.275–292. [SJR Quartile: N/A] [http://www.doi.org/10.26492/gbs74\(2\).2022-12](http://www.doi.org/10.26492/gbs74(2).2022-12)

Primate Biology Research Programme

1. **Dittus, W.P.J.** Baker, Anne (2023). Maternal care in wild toque macaques (*Macaca sinica*) involves prolonged lactation and interbirth intervals as adaptations to reduce maternal depletion and infant mortality in harsh environments. *American Journal of Primatology*, p.1-21. [SJR Quartile: Q1] <https://doi.org/10.1002/ajp.23584>
2. **Dittus, W.P.J.** (2023). The biology of prolonged lactation in wild *Macaca sinica*: Interbirth intervals, maternal depletion, infant mortality. DRYAD, p. [SJR Quartile: N/A] <https://doi.org/10.5061/dryad.cc2fqz695>.

CHEMICAL AND PHYSICAL SCIENCES RESEARCH DIVISION

Computer Science, Mathematics & Statistics Research Programme

1. Abeysiriwardana, P.C., Jayasinghe-Mudalige, U.K., and **Kodituwakku, S. R.** (2023). Qualitative Inquiries by Transitioning to ‘Digital Methods’: A Case Study on Leaders’ Perspectives of Agriculture Research Management by Key Performance Indicators. *Metamorphosis- A Journal of Management Research*, p.1-15. [SJR Quartile: N/A] <https://www.doi.org/10.1177/09726225231218052>

Condensed Matter Physics & Solid-State Chemistry Research Programme

1. Bandara, T.M.W.J., Withanage, S.S., Wijayarathne, K.B., **Dissanayake, M.A.K.L.**, Bandara, K.M.S.P., Mellander, B.E., Furlani, M., and Albinsson, I. (2023). Nano structured diatom frustules incorporated into TiO₂ photoelectrodes to enhance performance of quasi-solid-state dye-sensitized solar cells. *Optical Materials*, 146, p.1-15. [SJR Quartile: Q1] <https://doi.org/10.1016/j.optmat.2023.114514>
2. Bandara, T.M.W.J., Gunathilake, S.M.S., Nishshanke, G.B.M.M.M., **Dissanayake, M.A.K.L.**, Chaure, N.B., Olusola, O.I., Mellander, B.E., Furlani, M., and Albinsson, I. (2023). Efficiency enhancement and chrono-photoelectron generation in dye-sensitized solar cells based on spin-coated TiO₂ nanoparticle multilayer photoanodes and a ternary iodide gel polymer electrolyte. *Journal of Materials Science: Materials in Electronics*, 34, p.1-22. [SJR Quartile: Q2] <https://doi.org/10.1007/s10854-023-11252-6>
3. Ukarande, A., Salve, M.V., Chaure, S., Olusola, O.I., Bandara, T.M.W.J., Furlani, M., Mellander, B.E., **Dissanayake, M.A.K.L.**, Albinsson, I., and Chaure, N.B. (2023). Investigation of electrodeposited CdTe thin films for solar cell development. *Journal of Materials Science: Materials in Electronics*, 34, p.1-10. [SJR Quartile: Q2] <https://doi.org/10.1007/s10854-023-11337-2>
4. Sarangika, H.N.M., Shashintha, H.T.G., **Dissanayake, M.A.K.L.**, and **Senadeera, G.K.R.** (2023). Effect of TiO₂ nano fillers on ionic conductivity enhancement in Mg(BH₄)₂: polyethylene oxide (PEO) polymer gel electrolyte. *Journal of Solid-State Electrochemistry*, p.1-11. [SJR Quartile: Q2] <https://doi.org/10.1007/s10008-023-05748-8>
5. **Dissanayake, M.A.K.L.**, Hettiarachchi, M.S.H., **Senadeera, G.K.R.**, Kumari, J.M.K.W., Umair, K., Bandara, T.M.W.J., Albinsson, I., Furlani, M., Mellander, B.E., Chaure, N.B., and Olusola, O.I. (2023). High-efficiency dye-sensitized solar cells fabricated with electrospun PVdF-HFP polymer nanofibre-based gel electrolytes. *Bulletin of Materials Science*, 46, p.1-10. [SJR Quartile: Q3] <https://doi.org/10.1007/s12034-023-02919-1>

6. Kankanamge, H.K.H.D, Kumari, J.M.K.W., **Dissanayake, M.A.K.L., Senadeera, G.K.R.,** Dassanayake, B.S., and Perera, H.C.S (2023). Highly efficient dye-sensitized solar cells with TiO₂-coated silver nanowire-incorporated tri-layered photoanode. *Bulletin of Materials Science*, 46, p.1-14. [SJQR Quartile: Q3] <https://doi.org/10.1007/s12034-023-02977-5>
7. Menisha, M., **Dissanayake, M.A.K.L.,** and Vignarooban, K. (2023). Quasi-solid state polymer electrolytes based on PVdF-HFP host polymer for sodium-ion secondary batteries. *Key Engineering Materials*, 950(1), p.99-104. [SJQR Quartile: Q4] <https://doi.org/10.4028/p-Obe3Dm>
8. Bandara, A. H. M. N. N., Perera, V.P.S., **Senadeera, G.K.R.,** and Bandara, K.N.D (2023). Performances of nano-structured Cu₂O thin films electrochemically deposited on ITO substrates in lactate bath as liquid petroleum gas sensors. *ECS Advances*, 2(4), p.1-8. [SJQR Quartile: N/A] <http://www.doi.org/10.1149/2754-2734/ad040a>
9. Dushyanthin, B., Perera, V.P.S., Rajendra, J.C.N., Karthikeyan, N., and **Senadeera, G.K.R.** (2023). Composite materials based on rice straw and natural rubber for thermal insulation applications. *Ceylon Journal of Science*, 51(2), p.155-161. [SJQR Quartile: N/A] <http://doi.org/10.4038/cjs.v52i2.8157>.

Energy & Advanced Material Chemistry Research Programme

1. Jayasundara, R., Tan, H.Y., Yan, C.F., and **Bandara, J.M.S.** (2023). Photocatalytic microbial disinfection under indoor conditions: Prospects and challenges of near IR-photoactive materials. *Environmental Research*, 237, p.1-13. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.envres.2023.116929>
2. **Bandara, J.M.S.,** Chathurika, R., Jayasundera, C.A., Tan, H., and Yan, C.F. (2023). Harnessing of low-energy IR photons via oxygen-vacancies in SrTiO₃ nanocrystals for photocatalytic hydrogen production. *International Journal of Hydrogen Energy*, 48(45), p.17074-17085. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.ijhydene.2023.01.146>
3. Farhana, M. A., Manjceevan, A., and **Bandara, J.M.S.** (2023). Recent advances and new research trends in Sb₂S₃ thin film based solar cells. *Journal of Science: Advanced Materials and Devices*, 8(1), p.1-25. [SJQR Quartile: Q1] <http://www.doi.org/10.1016/j.jsamd.2023.100533>
4. Farhana, M.A., Manjceevan, A., Tan, H.Y., Yan, C.F., and **Bandara, J.M.S.** (2023). A review on the device efficiency limiting factors in Sb₂S₃- based solar cells and potential solutions to optimize the efficiency. *Optical and Quantum Electronics*, 55, p.1-19. [SJQR Quartile: Q2] <http://www.doi.org/10.1007/s11082-023-04945-z>

Material Processing and Device Fabrication Research Programme

1. **Kumara, G.R.A.,** Rathnayakage, R.S.R.K.U., Bandara, T.M.W.J., Wijayarathne, K., de Silva, L.A. and Tennakone, K. (2023). Fluorine-doped tin oxide thin films with high surface conductance and low transparency for boosting performance in dye-sensitized solar cell applications. *ACS Applied Energy Materials*, 6(16), p.8336-8348. [SJQR Quartile: Q1] <https://doi.org/10.1021/acsaem.3c00058>
2. Medagedara, A.D.T, Dahanayake, P., Pitawala, H.M.T.G.A, Karunarathne, B., de Silva, K.K.H., Yoshimura, M., Walikannage, K.P., Bandara, T.M.W.J., Rajapakse, R.M.G, and **Kumara, G.R.A.** (2023). Sustainable mining of natural vein graphite via acid - extraction from waste

attached to rock pieces of vein banks. *Scientific Reports*, 13(14737), p.1-10. [SJR Quartile: Q1] <https://doi.org/10.1038/s41598-023-42074-5>

3. Karunarathne, B.C., Dunuweera, S.P. Medagedara, A.D.T, Velauthapillai, D., Punniamoorthy, R., Perera, A.G.U., De Silva, L.A. Tennakone, K., Rajapakse, R.M.G, and **Kumara, G.R.A.** (2023). Low-cost perovskite solar cell fabricated using the expanded graphite back contact and electronically conducting activated carbon as the hole transporting material. *ACS Omega*, 8(26), p.23501–23509. [SJR Quartile: Q1] <https://doi.org/10.1021/acsomega.3c00637>
4. Kumarasinghe, K. D. M. S. P. K., Rajapakse, R.M.G Tennakone, K., and **Kumara, G.R.A.** (2023). Stability and efficiency improvement of TiO₂-based dye-sensitized solar cells by surface modification of MgO. *Journal of Solid-State Electrochemistry*, 27, p.2681-2690. [SJR Quartile: Q2] <https://doi.org/10.1007/s10008-023-05566-y>

Natural Products Research Programme

1. Yang, E.F., Dai, D.Q., Bhat, J.D., Dawoud, T.M., Promputtha, I., **Adikaram, N.K.B.**, Stephenson, S.L., Karunarathna, S.C., and Tibpromma, S. (2023). Taxonomic and Phylogenetic Studies of Saprobic Fungi Associated with *Mangifera indica* in Yunnan, China. *Journal of Fungi*, 9(6), p.1-34. [SJR Quartile: Q1] <https://doi.org/10.3390/jof9060680>
2. Thanabalasingam, D, Dissanayake, D, Samarakoon, K, Kumar, N.S., **Adikaram, N.K.B.**, **Jayasinghe, U.L.B.**, Araya, H., and Fujimoto, Y. (2023). Oryzanigral: a new polyketide from an endophytic fungus *Nigrospora oryzae* isolated from *Coccinia grandis*. *Natural Product Research*, p.1-8. [SJR Quartile: Q2] <https://doi.org/10.1080/14786419.2023.2191196>
3. Bandara, H.M.S.K.H., Alakolanga, A.G.A.W., Amarasinghe, N.R., **Adikaram, N.K.B.**, **Jayasinghe, U.L.B.**, and Fujimoto, Y. (2023). Antiviral activities of some traditional medicinal plants of Sri Lanka. *Current Traditional Medicine*, 9(6), p.25-38. [SJR Quartile: Q4] <https://doi.org/10.2174/2215083809666221229112115>
4. Kurera, W.M.S., **Adikaram, N.K.B.**, Yakandawala, D.M.D., Maharachchikumbura, S.S., **Jayasinghe, U.L.B.**, and Samarakoon, K. (2023). Molecular and phenotypic characterization of *Colletotrichum plurivorum* and *Colletotrichum musae* causing banana anthracnose disease in the Central Province of Sri Lanka. *Journal of the National Science Foundation of Sri Lanka*, 51(2), p.311-326. [SJR Quartile: Q3] <http://dx.doi.org/10.4038/jnsfsr.v51i2.11217>
5. Ulpathakumbura, B.S.K., **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.**, (2023). Anti-oxidative, anti-hyperglycemic and anti-obesity properties of selected edible leafy plants of Sri Lanka. *Food Chemistry Advances*, 2, p.1-10. [SJR Quartile: N/A] <https://doi.org/10.1016/j.focha.2023.100208>
6. Kaushalya, D.B.R, Eeswara, J.P, and **Jayasinghe, U.L.B.**, (2023). Development of liquid culture system for rapid multiplication of *Gyrinops walla*. *Tropical Agricultural Research*, 34(1), p.43-51. [SJR Quartile: N/A] <http://www.doi.org/10.4038/tar.v34i1.8603>
7. Ulpathakumbura, B.S.K., **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.**, (2023). FTIR spectral correlation with alpha-glucosidase inhibitory activities of selected leafy plants extracts. *International Journal of Plant Based Pharmaceuticals*, 3(1), p.104-113. [SJR Quartile: N/A] <https://doi.org/10.29228/ijpbp.22>
8. Qader, M., Mweetwa, L., Rämä, T., Thissera, B., Milne, B., Abdelmohsen, U., Orfali, R., Tawfike, A., Esheli, M. Oluwabusola, E., **Jayasinghe, U.L.B.**, Jaspars, M., and Rateb, M. (2023). Discovery and structural assignment of (S)-sydosine from amphipod-derived *Aspergillus*

sydowii MBC15-11F through HRMS, advanced Mosher, and molecular modelling analyses. *Journal of Applied Microbiology*. p.134-146. [SJR Quartile: Q2]

EARTH AND SPACE SCIENCES RESEARCH DIVISION

Earth Resources and Renewable Energy Research Programme

1. Abeysinghe, A.M.A.M., Thilakarathna, M.P., Dissanayake, C.B., and **Subasinghe, N.D.** (2023). Application of geological, geochemical, and geophysical techniques in geothermal explorations of Sri Lanka - A review. *Journal of the Geological Society of Sri Lanka*, 23(2), p.11-22. [SJR Quartile: N/A]
<https://drive.google.com/file/d/1qCWX6dScqDNAdTu3EoqQ00idJNhOLJei/view>

ENVIRONMENTAL SCIENCE RESEARCH PROGRAMME

a. Water Quality Research

1. Wang, Q, Cui, K.P, Liu, T., Li, C.X, Liu, J., Kong, D.C, **Weerasooriya, R.** and Chen, X (2023). In situ growth of NH₂-MIL-101 metal-organic frameworks on biochar for glyphosate adsorption. *Chemosphere*, 331, p.1-12. [SJR Quartile: Q1]
<https://doi.org/10.1016/j.chemosphere.2023.138827>
2. Hu, D., Indika, S., Zhong, H., Weragoda, S.K., Jinadasa, K.B.S.N., **Weerasooriya, R.**, and Wei, Y. (2023). Fluorescence characteristics and source analysis of DOM in groundwater during the wet season in the CKDu zone of North Central Province, Sri Lanka. *Journal of Environmental Management*, 327, p.1-9. [SJR Quartile: Q1] <https://doi.org/10.1016/j.jenvman.2022.116877>
3. Hu, D., Indika, S., Makehelwala, M., Titus, C., Zhu, L., Pang, Z., Zhong, H., Weragoda, S.K., Jinadasa, K.B.S.N., **Weerasooriya, R.**, and Wei, Y (2023). Chemical characteristics and water stability evaluation of groundwater in the CKDu Zone of Sri Lanka. *Journal of Environmental Science*, p.1-14. [SJR Quartile: Q1] <https://doi.org/10.1016/j.jes.2023.05.034>
4. Liu, Y., Ding, Z., Ding, Z.G., **Weerasooriya, R.**, and Chen, X. (2023). Integrating catalytic role of gold nanoparticles with in-situ confinement effect of zirconium-based metal-organic frameworks for electrochemical determination of methylmercury. *Electrochimica Acta*, 471, p.1-10. [SJR Quartile: Q1] <https://doi.org/10.1016/j.electacta.2023.143374>
5. Deng, S., Guo, Z., Chen, Y.H., Cui, K.P., Ding, Z.G., Wang, B., **Weerasooriya, R.**, and Chen, X. (2023). Fabrication of Cu₀-composited CuFe₂O₄ magnetic nanoparticles on diatomite support for efficient degradation of tetracycline hydrochloride by a Fenton-like system. *Journal of Environmental Chemical Engineering*, 11, p.1-11. [SJR Quartile: Q1] <https://doi.org/10.1016/j.jece.2023.110045>
6. Liu, H.L., Zhang, Y., Lv, X.X., Cui, M.S., Cui, K, Dai, Z.L. Wang, B., **Weerasooriya, R.**, and Chen, X. (2023). Efficient degradation of sulfamethoxazole by diatomite-supported hydroxyl-modified UiO-66 photocatalyst after calcination. *Nanomaterials*, 13(24), p.1-16. [SJR Quartile: Q1] <https://doi.org/10.3390/nano13243116>
7. Sewwandi. B.V.N., Kumarasinghe, A.R., Wu, Z., Bandara, P.M.C.J., **Jayarathne, I.P.L.**, Bandara, A., Wijekoon, H., Chen, X, and **Weerasooriya, R.** (2023). Size-tunable graphitized carbon spheres for water defluoridation. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 670, p.1-12. [SJR Quartile: Q1] <https://doi.org/10.1016/j.colsurfa.2023.131582>

8. Yapabandara, I., Wei, Y., Ranathunga, B., Indika, S., Jinadasa, K. B. S. N., Weragoda, S.K., **Weerasooriya, R.**, and Makehelwala, M. (2023). Impact of lockdown on the surface water quality in Kelani River, Sri Lanka. *Water*, 15(21), p.1-18. [SJR Quartile: Q1] <http://www.doi.org/10.3390/w15213785>
9. Liu, X., Liu, H., Cui, K., Dai, Z., Wang, B., **Weerasooriya, R.**, and Chen, X. (2023). Adsorption-reduction of Cr(VI) with magnetic Fe-C-N composites. *Water*, 15(12), p.1-14. [SJR Quartile: Q1] <https://doi.org/10.3390/w15122290>
10. Liu, Y., Bi, C.C., Bao, Q.X., **Weerasooriya, R.** Chen, X., (2023). The morphology modulation of graphene to produce wrinkles and folds for effective electrochemical determination of Hg (II). *Electroanalysis*, 35(5), p.1-10. [SJR Quartile: Q2] <https://doi.org/10.1002/elan.202200493>
11. Thilakarathne, B.K.G, Schensul, S, Weeragoda, S.K, **Weerasooriya, R.**, and Jern, N.W (2023). Fluoride removal and its impact on oral health in Sri Lanka's dry zone: Discussion and recommendation. *Environmental Quality Management*, 1(8), p.1-8. [SJR Quartile: Q3] <http://www.doi.org/10.1002/tqem.21982>
12. Indika, S, Hu, D, Wei, Y, Yapabandara, I, Cooray, T, Makehelwala, M, Jinadasa, K. B. S. N., Weragoda, K, **Weerasooriya, R.** and Pang, Z (2023). Spatiotemporal variation of groundwater quality in North Central Province, Sri Lanka. *ACS EST Water*, 3(6), p.1687-1698. [SJR Quartile: N/A] <https://pubs.acs.org/action/showCitFormats?doi=10.1021/acsestwater.2c00490&ref=pdf>
13. You, X.H, Liu, Y., Li, Y.Y, Zhao, B, Li, Y.Y, **Weerasooriya, R.**, and Chen, X. (2023). Sensitive detection of SARS-CoV-2 spike protein based on electrochemical impedance spectroscopy of Fe₃O₄@SiO₂-Au/GCE biosensor. *Advanced Sensor and Energy Materials*, 2(3), p.1-9. [SJR Quartile: N/A] <https://doi.org/10.1016/j.asems.2023.100067>

b. Material Development and Pollutant Remediation

1. Sewwandi. B.V.N., Kumarasinghe, A.R., Wu, Z., Bandara, P.M.C.J., **Jayaratne, I.P.L.**, Bandara, A., Wijekoon, H., Chen, X, and **Weerasooriya, R.** (2023). Size-tunable graphitized carbon spheres for water defluoridation. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 670, p.1-12. [SJR Quartile: Q1] <https://doi.org/10.1016/j.colsurfa.2023.131582>

PATENTS

Patents applied:

1. National Research Council, and National Institute of Fundamental Studies. (Filing Date :2023-04-20). Remote Monitoring and control system for a water desalination facility. Application Number P/22658
2. National Research Council, and National Institute of Fundamental Studies. (Filing Date :2023-04-20). *Performance enhanced sand composite fabrication for drinking water treatment*, Sri Lanka. Application Number P/22659
3. National Research Council, and National Institute of Fundamental Studies. (Filing Date :2023-04-20). *A Performance enhanced device for soil hydraulic conductivity measurement*. Application Number P/22660

ABSTRACTS

BIOLOGICAL SCIENCES RESEARCH DIVISION

Food Chemistry Research Programme

1. Liyadipitiya, N., **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.** (2023). Determination of brine shrimp lethality of different solvent extracts of soft stems of different banana (*Musa* sp.) cultivars. *In Proceedings of the RESCON 2023, PGIS Peradeniya.*
2. Ulpathakumbura, B.S.K., **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.** (2023). Assessment of the cytotoxicity of selected edible leafy plant of Sri Lanka. *PGIS, University of Peradeniya, Proceedings of the Postgraduate Institute of Science Research.*
3. Gamaarachchi, S., Samarakoon, K., **Adikaram, N.K.B.**, **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.** (2023). Bioactivity of solvent extracts of *Piper nigrum* seeds. *University of Peradeniya, Postgraduate Institute of Science, Proceedings of the PGIS Research Congress, RESCON 2023.*
4. Ekanayaka, E.M.T.A., Siriwardhane, U., **Adikaram, N.K.B.**, **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.** (2023). Alpha- amylase, antioxidant, cytotoxicity, lipase and phytotoxicity of *Alpinia calcarata* and *Gloriosa superba* leaves extracts. *University of Peradeniya, Postgraduate Institute of Science, Proceedings of the PGIS Research Congress, RESCON 2023.*
5. Gamaarachchi, S., Samarakoon, K., **Adikaram, N.K.B.**, **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.** (2023). Bioactivity studies of *Allium sativum* and *Trigonella foenum-graecum*. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
6. Ekanayake, E.M.T.A., Siriwardhane, U., **Adikaram, N.K.B.**, **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.** (2023). Bioactivity studies of *Dolichandra unguis-cati* flowers, *Elaeocarpus serratus*, and *Justicia adhatoda* leaves. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
7. Gunathilake, A.N., Kalinga, J., **Adikaram, N.K.B.**, **Marikkar, J.M.N.**, and **Jayasinghe, U.L.B.** (2023). *In vitro* antioxidant, cytotoxic and phytotoxic potential of leaf extracts of four Sri Lankan plants. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*

Microbial Biotechnology Research Programme

1. **Seneviratne, G.** (2023). Addressing the microbial stress response in agro- and human body ecosystems: a biofilm approach. *China, International Academic Symposium on Microbial Stress Tolerance and Response.*
2. Premarathna, M., and **Seneviratne, G.** (2023). Biofilm biochemicals as the next-generation biofertilizers and medicines / nutraceuticals. *China, International Academic Symposium on Microbial Stress Tolerance and Response.*
3. Pathirana, R., Ekanayake, S., Premarathna, M., and **Seneviratne, G.** (2023). Biofilm biofertilizer can produce higher-quality rice than that of chemical or organic fertilizer alone application. *University of Peradeniya, Proceedings of Peradeniya University International Research Sessions 2023, Sri Lanka.*

4. Navodya, M.H., Premarathna, M., **Seneviratne, G.** Gunasekara, N.W., and Herath, H.M.S.K. (2023). Potential use of biofilm biofertilizers in fully organic rice cultivation of Sri Lanka. *Uva Wellassa University, 7th International Research Conference. IRCUWU2023.*
5. Gunasekara, R.D.A., Gunaratne, A.M.T.A., **Seneviratne, G.** Gunatilleke, I.A.U.N., and Gunatilleke, C.V.S. (2023). Applied nucleation affects soil restoration of degraded grasslands in the Knuckles conservation forest, Sri Lanka. *University of Ruhuna, Proceedings of 10th Ruhuna International Science & Technology Conference.*
6. Senanayake, D.M.N., **Seneviratne, G.** and Jayasinghe, J.A.W.W. (2023). Biofilm-based biofertilizers and microbial mixed cultures: are they different on plant growth? *University of Sri Jayewardenepura, Proceedings of the International Forestry and Environment Symposium Volume 27 (2023).*
7. Premarathne, B. M., Karunarathna, S. C., Ediriweera, A. N., Madawala, S., and **Wijesundara, D.S.A.** (2023). Fairy ring fungi: A review. Proceedings of the 1st International Conference on Technological Research and Innovation 2023 organized by Faculty of Technology, Eastern University, Sri Lanka.

Microbiology & Soil Ecosystem Research Programme

1. Bowange T.K., Jayasooriya K, Dissanayake D.M.N.B., and **Ratnayake, R.R.** (2023). Native cyanobacteria from Sri Lankan salt marsh ecosystem: a promising sustainable solution to the prevailing food crisis. *2023 International Research Conference of Sri Lanka Technology Campus, Colombo, Sri Lanka.*
2. Bowange T.K., Dayananada H.P., Jayasooriya K., and **Ratnayake, R.R.** (2023). Investigation of the impact of CO₂ supply on the growth rate and the yield of *oscillatoria* sp. During mass culturing. *12th Annual Science Research Session, FAS, SEUSL, Sri Lanka.*
3. Ekanayake E.M.S., Krishnarajah S.A., **Ratnayake R.R.** Ediriweera S., and Perera G.A.D. (2023). Floristic features of plant associations harbouring *Stemonoporus* species in the peak wilderness conservation area. *7th International Research Conference of Uva Wellassa University.*
4. Dayananda H.P., Bowange T.K., Rizvi E.M.J.M., and **Rathnayake, R.R.** (2023). Morphology based evaluation of long-term survival of cyanobacteria in water samples collected from selected extreme ecosystems of Sri Lanka. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
5. Anusiya M., **Rathnayake, R.R.** Mohotti A.J., and Pradheepan L. (2023). Present status and farmers' attitudes towards organic agriculture: a case study in Jaffna peninsula, Sri Lanka. *The Postgraduate Institute of Agriculture (PGIA), University of Peradeniya, Thirty-Fifth Annual Congress.*
6. Ruwanpathirana, P.S., Gnanvelrajah, N., and **Ratnayake, R.R.** (2023). Potential of *Nostoc* sp. as a biofertilizer on growth and yield of paddy - *Oryza sativa*. *11th Young Scientists Forum, National Science and Technology Commission.*

Molecular Microbiology and Human Diseases Research Programme

1. Welagedara, W.K.H., Gunathilaka, H.M.S.A.T., Lakmali, M.S., Karunathilaka, R.I.S., **Jayarathne, I.P.L.**, and **Magana-Arachchi, D.N.** (2023). Determining total bacterial load on microplastics sampled from Kandy Lake and inlets: A pilot study. *The National Aquatic Resources Research and Development Agency (NARA) Scientific Sessions 2023.*

2. Udangamuwa, R.H.M.S.Y., Hettiarachchi, H.A.H.H., Samarasinghe, D.G.S.N., Gunathilaka, H.M.S.A.T., Karunathilaka, R.I.S., and **Magana-Arachchi, D.N.** (2023). Investigation of alpha-amylase enzyme production of *Bacillus Spp.* extracted from extreme environments and their biotechnological applications. *BCAS International Conference on Multidisciplinary Research (iCMR) 2023*.
3. Gunathilaka, H.M.S.A.T., and **Magana-Arachchi, D.N.** (2023). Characterization of growth-related cyanotoxin production in selected cyanobacteria. *Sri Lanka Association for the Advancement of Science (SLAAS)-2023, Proceedings of the 79th Annual Sessions*.
4. Gunathilaka, H.M.S.A.T., Samarasinghe, D.G.S.N., and **Magana-Arachchi, D.N.** (2023). Occurrence of amikacin resistance in *Pseudomonas* sp. in selected hot springs in Sri Lanka. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023*.
5. Saseevan, S., Karunathilaka, R.I.S., Bandara W.R.U.A., Medagedara, D., and **Magana-Arachchi, D.N.** (2023) Detection of IS6110 (Insertion sequence) in serum of Tuberculosis patients reported to Kandy Chest Clinic. Faculty of Applied Sciences, South Eastern University of Sri Lanka, 12th Annual Science Research Session 2023 (ASRS 2023).
6. Saseevan, S., Nishanthi, W.A.A.G.N., Rajapakse, S., and **Magana-Arachchi, D.N.** (2023). The role of clinicopathological factors on the adoption of Lipocalin 2 (LCN2) gene as a renal biomarker for chronic kidney disease. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023*.
7. Gunathilaka, H.M.S.A.T., Wijesinghe, W.R.P., and **Magana-Arachchi, D.N.** (2023). Characterization of hydrogen peroxide-induced programmed cell death in selected microcystin producing cyanobacteria: cytotoxic effects on cellular microcystin content. *University of Peradeniya, Postgraduate Institute of Science Research Congress*.
8. Gunathilaka, H.M.S.A.T., Wijesinghe, W.R.P., and **Magana-Arachchi, D.N.** (2023). Effect of light intensities on the stress responses and toxin production of selected microcystin producing cyanobacteria. *12th Annual Conference and Scientific Sessions of Sri Lanka Society for Microbiology (SSM-2023)*.
9. Sinhapitiya, S.P.A., Herath, H.M., Bandara, W.M.S.N., Rajapaksha, A.U., **Vithanage, M., Magana-Arachchi, D.N.** and Wanigatunge, R.P. (2023). Detection of microcystins (cyanotoxin) in selected drinking water wells in the Gampaha district, Sri Lanka. *University of Kelaniya, International Conference on Applied and Pure Sciences (ICAPS 2023-Kelaniya)*.
10. Saseevan, S., Nishanthi W.A.A.G.N., Rajapakse s., and **Magana-Arachchi, D.N.** (2023). Urinary peptidase inhibitor 3 could be a potential biomarker for diabetic and hypertensive nephropathy. *136th Anniversary International Medical congress*.
11. Mallawarachchi, T.W.N., Herath, H.M., **Magana-Arachchi, D.N.** and Wanigatunge, R.P. (2023). Occurrence of microcystins in the Kelani River and a drinking water treatment plant facility in Sri Lanka. *Sabaragamuwa University of Sri Lanka, International Conference on Applied Sciences*.
12. **Magana-Arachchi, D.N.** Saseevan, S., Gunathilaka, H.M.S.A.T., Jayaweera, Y.U., and Udangamuwa, R.H.M.S.Y. (2023). Investigation of microbial quality of air during the transboundary haze in Kandy, Sri Lanka: December 2022 update. *Sabaragamuwa University of Sri Lanka, International Conference on Applied Sciences (ICAPS)-2023*.

Nutritional Biochemistry Research Programme

1. Nirmani, N.S, Jayathilake, C., **Liyanage, R.** Wickamasinghe, I, and Jayasinghe, M.A. (2023). Exploring the starch composition of underutilized flour varieties in Sri Lanka compared to refined wheat flour. *Sri Lanka Association for the Advancement of Science (SLAAS), 79th Annual Sessions.*
2. Wickramasinghe, M.A., Rambodagedara, R.G.S.D., and **Liyanage, R.** (2023). Awareness of food labels among schoolchildren in Ampara District: promoting better health choices through knowledge evaluation. *University of Peradeniya, Proceedings of the Postgraduate Institute of Science Research Congress.*
3. Rajeetha, J, Sivakanathan, S, **Liyanage, R.** and Madujith, T. (2023). Comparison of proximate composition, phenolic content and flavonoid content of raw and malted Foxtail millets grown in Northern Province of Sri Lanka. *9th International Conference on Dry Zone Agriculture 2023, Faculty of Agriculture, University of Jaffna.*

Plant taxonomy and Conservation Research Programme

1. Sewwandi, K., Ramiah, S., Alles, C.N.R.A., **Wijesundara, D.S.A.** Liyanage, R. (2023). Fatty acid and phenolic profile of raw and processed *Artocarpus nobilis* (Ceylon breadfruit) seed. *136th Anniversary International Medical Congress "Towards Humane Health care: Excellence, Equity, Community" of the Sri Lanka Medical Association-2023, at BMICH, Colombo.*
2. Premarathne, B. M., Karunarathna, S. C., Ediriweera, A. N., Madawala, S., and **Wijesundara, D.S.A.** (2023). Fairy ring fungi: A review. Proceedings of the 1st International Conference on Technological Research and Innovation 2023 organized by Faculty of Technology, Eastern University, Sri Lanka.
3. Brahmanage, R.S., **Wijesundara D.S.A.** Dai, D.Q., Nanayakkara, C.M., Muthumala, C.K., Ariyawansa, K.G.S.U. (2023). A *Eucalyptus* Foliar Pathogen Reported from Sri Lanka. *1st International Conference on Technological Research and Innovation 2023 organised by Faculty of Technology, Eastern University, Sri Lanka.*

CHEMICAL AND PHYSICAL SCIENCES RESEARCH DIVISION

Energy & Advanced Material Chemistry Research Programme

1. Wijerathna, C.N, and **Bandara, J.**, (2023). Titanium / titanium dioxide schottky junction and highly photoactive antimony sulphide photoanode for solar water splitting. *University of Peradeniya, Proceedings of the Postgraduate Institute of Science Research Congress.*

Material Processing and Device Fabrication Research Programme

1. Weerasinghe, M.I.U., Kumarage, P.M.L., Amarathunga, I.G.K.D., Bandara, T.M.W.J. and **Kumara, G.R.A.** (2023). Low-cost counter electrode prepared using activated carbon derived from rice husk for dye-sensitized solar cells. *The Postgraduate Institute of Science (PGIS), University of Peradeniya, Proceedings of the Postgraduate Institute of Science Research Congress.*
2. Medagedara, A.D.T, Weerasinghe, M.I.U., Amarathunga, I.G.K.D., Bandara, T.M.W.J., and **Kumara, G.R.A.** (2023). Enhancing supercapacitor performance through multiple

activation of coconut shell charcoal. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023*.

3. Medagedara, A.D.T, Bandara, T.M.W.J., Gardiarachchi, H.W., Karunaratne, B.C., Tennakone, K., Rajapakse, R.M.G, and **Kumara, G.R.A.** (2023). An electrical double-layer supercapacitor based on a biomass-activated charcoal electrode and ionic liquid with excellent charge-discharge cycle stability. *India, AMCEHA 2023 (Coimbatore Institute of Technology College in Coimbatore, India)*.
4. **Kumara, G.R.A.** Medagedara, A.D.T, Rajapakse, R.M.G, and Tennakone, K. (2023). The recent development of eco-friendly supercapacitors. *India, AMCEHA 2023 (Coimbatore Institute of Technology College in Coimbatore, India)*.

Nanotechnology and Advance Materials Research Programme

1. Naranpanawa, H.M.H.D.K., Amaraweera, T.H.N.G., Kumari, K.W.S.N., and **Wijayasinghe, H.W.M.A.C.** (2023). Optimization and scale-up of preparing battery-grade graphite from Sri Lankan vein graphite for rechargeable lithium-ion batteries. *The 14th International Conference on Sustainable Built Environment -2023, Kandy, Sri Lanka*.
2. Fernando, W.T.R.S., Amaraweera, T.H.N.G., and **Wijayasinghe, H.W.M.A.C.** (2023). Electrochemical performance of CuO anode material synthesized by chemical precipitation method for rechargeable lithium-ion batteries. *The 14th International Conference on Sustainable Built Environment -2023, Kandy, Sri Lanka*.
3. Fernando, W.T.R.S., Amaraweera, T.H.N.G., Wijesundara, R.P., and **Wijayasinghe, H.W.M.A.C.** (2023). Electrochemical performance of n-type Cu₂O anode material synthesized by electrodeposition method for rechargeable lithium-ion batteries. *Faculty of Graduate Studies University of Kelaniya, 23rd Conference on Postgraduate Research International Postgraduate Research Conference (IPRC) - 2023*.
4. Fernando, W.T.R.S., Amaraweera, T.H.N.G., and **Wijayasinghe, H.W.M.A.C.** (2023). Electrochemical performance of CuO anode material for rechargeable ion batteries synthesized by the hydrothermal method. *Italy, 7th world Congress on Materials science and Engineering*.
5. Fernando, W.T.R.S., Amaraweera, T.H.N.G., Wijesundera, R.P., and **Wijayasinghe, H.W.M.A.C.** (2023). Electrochemical performance of Cu₂O anode material synthesized by electrodeposition method for rechargeable lithium-ion batteries. *International Conference on Nanotechnology Research and Innovation, NTRIA, Aveiro, Portugal, November 20-24, 2023 (ICNTRI-2023)*.
6. Samarakoon, Y.M.I.B., Amaraweera, T.H.N.G., Ranatunga, R.J.K.U., and **Wijayasinghe, H.W.M.A.C.** (2023). Investigation of natural vein quartz as an anode electrode material in lithium-ion rechargeable batteries. *Italy, 7th world Congress on Materials science and Engineering*.
7. Samarakoon, Y.M.I.B., Ranatunga, R.J.K.U., Amaraweera, T.H.N.G., and **Wijayasinghe, H.W.M.A.C.** (2023). Understanding the effect of fluoroethylene carbonate addition into an electrolyte - a molecular dynamics study. *NTRIA, Aveiro, Portugal, International Conference on Nanotechnology Research and Innovation*.
8. Naranpanawa, H.M.H.D.K., Amaraweera, T.H.N.G., Balasooriya, N.W.B., and **Wijayasinghe, H.W.M.A.C.** (2023). Developing vein graphite anode materials for Li-ion batteries by optimizing and scaling up of chemically mild oxidation. *NTRIA, Aveiro, Portugal, International Conference on Nanotechnology Research and Innovation*.

9. Naranpanawa, H.M.H.D.K., Kumari, K.W.S.N., Amaraweera, T.H.N.G., Balasooriya, N.W.B., and **Wijayasinghe, H.W.M.A.C.** (2023). Predicting the purity of scaled-up HCl acid leached graphite for the anode of a lithium-ion battery using a linear regression model. *Italy, 7th world Congress on Materials science and Engineering.*

Natural Products Research Programme

1. Gamaarachchi, S., Samarakoon, K., **Adikaram, N.K.B., Marikkar, J.M.N., and Jayasinghe, U.L.B.** (2023). Bioactivity of solvent extracts of *Piper nigrum* seeds. *University of Peradeniya, Postgraduate Institute of Science, Proceedings of the PGIS Research Congress, RESCON 2023.*
2. Atapattu, N., Samarakoon, K., **Adikaram, N.K.B., Yakandawala, D., and Jayasinghe, U.L.B.** (2023). Antioxidant activity of endophytic fungi isolated from leaves of *Citrus aurantiifolia*. *University of Peradeniya, Postgraduate Institute of Science, Proceedings of the PGIS Research Congress, RESCON 2023.*
3. Ekanayaka, E.M.T.A., Siriwardhane, U., **Adikaram, N.K.B., Marikkar, J.M.N., and Jayasinghe, U.L.B.** (2023). Alpha- amylase, antioxidant, cytotoxicity, lipase and phytotoxicity of *Alpinia calcarata* and *Gloriosa superba* leaves extracts. *University of Peradeniya, Postgraduate Institute of Science, Proceedings of the PGIS Research Congress, RESCON 2023.*
4. Wijesinghe, W.A.D.S, Rodrigo, S.K., and **Jayasinghe, U.L.B.** (2023). Bioactivity of methanolic extract of *Piper longum*. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
5. Kalinga, J., Samarakoon, K., Yakandawala, D., **Adikaram, N.K.B., Jayasinghe, U.L.B.** Araya, H., and Fujimoto, Y. (2023). Isolation of secondary metabolites from an endophytic fungus in *Acalypha indica*. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
6. Wijesinghe, W.A.D.S, Kalinga, J., Rodrigo, S.K., and **Jayasinghe, U.L.B.** (2023). Phytotoxicity of leaves of *Brunfelsia pauciflora* and *Syzygium aromaticum*. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
7. Gamaraachchi, S., Samarakoon, K., **Adikaram, N.K.B., Marikkar, J.M.N., and Jayasinghe, U.L.B.** (2023). Bioactivity studies of *Allium sativum* and *Trigonella foenum-graecum*. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
8. Ekanayake, E.M.T.A., Siriwardhane, U., **Adikaram, N.K.B., Marikkar, J.M.N., and Jayasinghe, U.L.B.** (2023). Bioactivity studies of *Dolichandra unguis-cati* flowers, *Elaeocarpus serratus*, and *Justicia adhatoda* leaves. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
9. Gunathilake, A.N., Kalinga, J., **Adikaram, N.K.B., Marikkar, J.M.N., and Jayasinghe, U.L.B.** (2023). *In vitro* antioxidant, cytotoxic and phytotoxic potential of leaf extracts of four Sri Lankan plants. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*
10. Siriwardhane, U., Samarakoon, K., Yakandawala, D., **Adikaram, N.K.B., Jayasinghe, U.L.B.** Araya, H., and Fujimoto, Y. (2023). Metabolites of endophytic fungus associated with *Cardiospermum halicacabum*. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023.*

11. Atapattu, N., Samarakoon, K., Yakandawala, D., **Adikaram, N.K.B., Jayasinghe, U.L.B.** Araya, H., and Fujimoto, Y. (2023). Secondary metabolites from endophytic fungi from leaves of *Citrus aurantiifolia*. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023*.
12. Liyadipitiya, N., **Marikkar, J.M.N., and Jayasinghe, U.L.B.** (2023). Determination of brine shrimp lethality of different solvent extracts of soft stems of different banana (*Musa sp.*) cultivars. *In Proceedings of the RESCON 2023, PGIS Peradeniya*.
13. Ulpathakumbura, B.S.K., **Marikkar, J.M.N., and Jayasinghe, U.L.B.** (2023). Assessment of the cytotoxicity of selected edible leafy plant of Sri Lanka. *PGIS, University of Peradeniya, Proceedings of the Postgraduate Institute of Science Research*.

Earth Resources and Renewable Energy Research Programme

1. Abeysinghe, A.M.A.M., Dharmapriya, P.L., Thilakanayaka, V., and **Subasinghe, N.D.** (2023). Petrological and geochemical study of an extraterrestrial rock sample from Russia - A carbonaceous chondrite meteorite. *Proceedings of the 39th Technical Session of Geological Society of Sri Lanka, 2023*.
2. Abeysinghe, A.M.A.M., Thilakarathna, M.P., and **Subasinghe, N.D.** (2023). Structural framework and geothermal fluid migration in the Kapurella geothermal area: A combined study of geological characteristics and magnetic mapping. *Proceedings of the Young Scientists' Conference on Multidisciplinary Research-2023 Young Scientists' Association, National Institute of Fundamental Studies, Sri Lanka*.

Water Quality Research

1. Bandara, P.M.C.J., Balasooriya, N.W.B., Mudannayake, N, and **Weerasooriya, R.** (2023). Synthesis of stable sand composites using iron oxide and graphite oxide coated on the sand surface. *National Institute of Fundamental Studies, Young Scientists' Conference on Multidisciplinary Research - 2023*.

Material Development and Pollutant Remediation

1. Ileperuma I.A.M.P., Wasana H.M.S., Perera G.D.R.K., Abesundara H.T.K., **Jayarathna, I.P.L.** and Wei Y. (2023). Heavy Metals and Some Selected Elemental Spotlights in Serum of Milking Cows Reared in High CKDu Prevalence Areas in Sri Lanka. *9th International Conference of Sabaragamuwa University of Sri Lanka - ICSUSL 2023*.
2. Sooriarachchi, S.M., Gunatilake, S.K., Wijesekara, S.S.R.M.D.H.R., Wanniarachchi, D.N.S., **Jayarathna, I.P.L.** and Amarasena, R.A.L.R. (2023). Removal of 2,5-Dichlorophenol from the air using Zeolite based catalysts. *Sabaragamuwa University of Sri Lanka, 2nd Applied Sciences Undergraduate Research Symposium 2023*.
3. Mayandi, S., Wijesekara, S.S.R.M.D.H.R., and **Jayarathna, I.P.L.** (2023). Analysis of microplastics in inflows and outflow of Kandy Lake in Sri Lanka. *Sabaragamuwa University of Sri Lanka, 2nd Applied Sciences Undergraduate Research Symposium 2023*.
4. W.K.H. Welagedara, H.M.S.A.T. Gunathilaka, M.S. Lakmali, R.I.S. Karunathilaka, **Jayarathne I.P.L., Magana-Arachchi, D.N.** (2023), Determining total bacterial load on Microplastics sampled from Kandy Lake and inlets: A pilot study, National Aquatic Resources Research and Development Agency, Scientific Sessions 2023.

CONFERENCE PROCEEDINGS

Condensed Matter Physics & Solid-State Chemistry Research Programme

1. **Dissanayake, M.A.K.L.**, Ranasinghe, R.P.K.C.M., and Kumari, J.M.K.W. (2023). Variation in the gender composition in tertiary physics education of seven Sri Lankan universities. *International Conference on Women in Physics*, (p.050036 (1-3)), Australia (Virtual): AIP Publishing.
2. Kumari, J.M.K.W., **Dissanayake, M.A.K.L.**, and **Senadeera, G.K.R.**, (2023). Fabrication of graphite/tin oxide/polyaniline composite counter electrode for application in dye-sensitized solar cells. *International Conference on Women in Physics*, (p.070015 (1-4)), Australia (Virtual): AIP Publishing.

Nanotechnology and Advance Materials Research Programme

1. Wimalasoma, S.M.T.D., Naranpanawa, H.M.H.D.K., Amaraweera, T.H.N.G., Young S.M., and **Wijayasinghe, H.W.M.A.C.**, (2023). Synthesis of expanded vein graphite via anodic exfoliation using sulfuric acid as an electrolyte. *11th YSF symposium*, (p.368-375),: National Science and Technology Commission.

BOOKS & BOOK CHAPTERS

Books/ Monographs

1. Wijayawardene, N.N., Dai, D., Premarathne, B.M., Wimalasena, M.K., Jayalal, R.G.U., Wickramanayake, K.D., Dangalla, H., Jayathunga, W.H., Brahmanage, R.S., Karunarathna, S.C., Weerakoon, G., Ariyawansa, K.G.S.U., Yapa, P.N., Madawala, S., Nanayakkara, C.M., Fan, X., Kirk, P.M., Zhang, G., Ediriweera, A., Bhat, D.J., Dawoud, T.M., Tibpromma, S., and **Wijesundara, D.S.A.**, (2023). *Checklist, typification details, and nomenclature status of ascomycetous fungi originally described in Sri Lanka* (611). New Zealand: Magnolia Press, Auckland, New Zealand.
2. Karunarathna, S.C., Priyashantha, A.K.H., Tibpromma, S., Galappaththi, M.C.A., Premarathne, B.M., Wijayawardene, N.N., Wimalasena, M.K., Jayalal, R.G.U., Wickramanayake, K.D., Dangalla, H., Jayathunga, W.H., Brahmanage, R.S., Weerakoon, G., Ariyawansa, K.G.S.U., Yapa, N., Nanayakkara, C.M., Ediriweera, S., Fan, X., Kirk, P.M., Zhang, G., Ediriweera, A., Bhat, D.J., Dawoud, T.M., Kumara, K.L.W., Deng, C.Y., Dai, D., **Wijesundara, D.S.A.**, and Madawala, S. (2023). *Checklist, typification details, and nomenclature status of Basidiomycota, originally described from Sri Lanka* (621). New Zealand: Magnolia Press, Auckland, New Zealand.
3. Kulatunga, M, Maintaining Analytical Instruments with Background Theoretical Concepts (2023), Kandy, Sri Lanka.

Books Chapters

1. Perera, M., **Jayarathna, I.P.L.**, Yakandawala, D. M. D., and **Seneweera, S.** (2023). Nanoclay Composites as Agrochemical Carriers. *Clay Composites Environmental Applications* (p. 543-557). Singapore, Springer.
2. **Magana-Arachchi, D.N.**, and Wanigatunge, R.P. (2023). Cyanotoxin in Hydrosphere and Human Interface. *One Health Human, Animal and Environment Triad* (p. 77-86). United States of America, John Wiley & Sons, Inc.
3. **Magana-Arachchi, D.N.**, and Wanigatunge, R.P. (2023). Microplastics in the Atmosphere and Their Human and Eco Risks. *Microplastics in the Ecosphere: Air, Water, Soil, and Food*, (p. 97-112)., John Wiley & Sons.
4. **Magana-Arachchi, D.N.**, and Wanigatunge, R.P. (2023). Covid-19: Survival and Transmission in Wastewater and Sludge. *The Handbook of Environmental Chemistry* (p. 1-24). Berlin, Heidelberg, Springer.
5. **Marikkar, J.M.N.**, (2023). Modification of Fats and Oils as Lard Alternatives. *Innovation of Food Products in Halal Supply Chain Worldwide* (p. 25 - 33). United Kingdom, Academic Press, Elsevier.
6. Paranawithana T.M., Wasalamuni W.A.D.D., and **Ratnayake R.R.**, (2023). Harnessing Home Gardens for Sustainable Agroforestry: A Promising Approach to Reducing Greenhouse Gas emission. *Decarbonization Strategies and Drivers to Achieve Carbon Neutrality for Sustainability* (p. 481-499). Netherlands, Elsevier.

7. Gunatilleke, N., Neidel, J.D., Raman, T.R.S., Gunaratne, T., Ashton, M., Gamage, S., Gunatilleke, S., Tennakoon, K., Kathriarachchi, H., Ediriweera, S., Geekiyanage, N., Burslem, D., **Seneviratne, G.** Madawala, S., Gunasekera, R., Mudappa, D., Osuri, A.M., Kasinathan, S., Bhat, K., Bande, M., Yassir, I, Milan, P., Arbainsyah, and Compendio, S.J. (2023). Ecological Approaches to Forest Restoration: Lessons Learned from Tropical Wet Asia. *Ecological Restoration* (p. 103–147). United Kingdom, Springer.
8. Perera, M. D. R., Amarasena, R. A. L.R., Bandara, W. M. A. T., **Weerasooriya, R.**, and **Jayarathna, I.P.L.**, (2023). Surfactant-Modified Clay Composites: Water Treatment Applications. *Clay Composites Environmental Applications* (p. 233-252). Singapore, Springer.
9. Liu, X., Liu, H., Cui, K., Dai, Z., Wang, B., **Weerasooriya, R.**, and Chen, X. (2023). Adsorption-Reduction of Cr (VI) with Magnetic Fe-C-N Composites. *Adsorption Technology for Water and Wastewater Treatments* (p. 206-219). Switzerland, MDP.
10. **Wickramasinghe, N.C.** (2023). Admitting our inalienable links with the cosmos. *Towards a Philosophy of Cosmic Life* (p. 17–34). United States, Springer.

GRANTS

Grants - Ongoing

1. **Benjamin, S.P.**, received a Research Grant from European Commission, SYNTHESSYS+: TA-Call4 (2022) on 2022-12-01 for Study of Eugène Simon's Salticidae types with special focus of species from Sri Lanka. (Grant Value - 1,600,000 LKR)
2. **Benjamin, S.P.**, received a Research Grant from Alexander von Humboldt Foundation on 2022-08-15 for research on the systematics of spiders. (Grant Value - 10,000,000 LKR)
3. **Dissanayake, M.A.K.L.**, (Co-grantee) received a Research Grant from Ministry of Science, Technology and Research on 2017-01-01 for R&D towards manufacturing thin film solar cells at three universities (University of Peradeniya, University of Jaffna, University of Kelaniya) and NIFS. (Grant Value - 24,000,000 LKR)
4. **Dissanayake, M.A.K.L.**, received a Research Grant from Swedish Research Council, Sweden on 2022-01-01 for the project of novel nano-structures for performance enhancement of low-cost solar cells. (Grant Value - 4,500,000 LKR)
5. **Senadeera, G.K.R.**, (PI) Perera, V.P.S., Rajendra, J.C.N., Karthikeyan, N., Wijenayaka, L.A., and **Dissanayake, M.A.K.L.**, (CI) received a Research Grant from Ministry of Higher Education, World Bank on 2019-09-01 for Engineering nano-materials for photovoltaic and environmental remedial applications. (Grant Value - 30,000,000 LKR)
6. Perera, G.D.R.K., (PI) Wasana, H.M.S., (CI) Abeysundara, H.T.K., (CI) and **Jayarathna, I.P.L.**, (CI) received a Research Grant from National Research Council on 2020-11-17 for Effects of environmental fluoride, hardness and heavy metal (Cd, Pb, As) exposures to the cow milk and their kidney function in CKDu endemic areas of Sri Lanka. (Grant Value - 4,987,500 LKR)
7. Perera, D (Principal investigator - Rajarata University of Sri Lanka), and **Jayasinghe, U.L.B.**, (Collaborator) received a Research Grant from The Asian Development Bank on 2022-04-01 for Saline farming: innovative agriculture to re-energize the economy and restore the ecosystem. (Grant Value - 2,512,250 LKR)
8. **Adikaram, N.K.B.**, (PI) **Jayasinghe, U.L.B.**, (CI) and Yakandawala, D. (CI) received a Research Grant from National research council on 2021-06-01 for A study of postharvest disorders, pitting in guava, mango & papaya & husk scalding, pulp spot, chilling injury & vascular browning in avocado & their management. (Grant Value - 4,983,600 LKR)
9. **Ruvini Liyanage** (Co-grantee) Casual mechanism behind the intergenerational transmission of nutritional choices and their association with metabolic risk indicator” in Sri Lanka. Medical Research Council (MRC) UK developmental grant Ref:MR/T000679X/1
10. **Ruvini Liyanage** (Co-grantee) Exploring the starch composition of underutilized flour varieties in Sri Lanka compared to refined wheat flour, Grant awarded by University of Jayawardhanapura.
11. **Magana-Arachchi, D.N.**(PI), **Vithanage, M.**, (CI), and Wickramasinghe, C. (CI) received a Research Grant from The Bjornson and Prodan Foundation on 2018-01-01 for Balloon flights over central Sri Lanka to detect possible ingress of cometary microorganisms and particulate matter with object of testing HoyleWickramasinghe theory of cometary panspermia. (Grant Value - 1,957,956 LKR)

12. **Magana-Arachchi, D.N.**, and Medegedara.D received a Research Grant from National Research Council of Sri Lanka on 2022-11-22 for Transcriptome analysis of mycobacteria in serum exosomes of latent tuberculosis patients for candidate biomarker identification. (Grant Value - 1,500,000 LKR)
13. Saseevan, S. (supervised by **Prof. D.N. Magana-Arachchi**) received a Research Grant from University of Jaffna on 2020-09-01 for Identification of Urinary biomarkers for Diabetic and Hypertensive Chronic Kidney Disease in Sri Lanka. (Grant Value - 1,600,000 LKR)
14. **Vithanage, M., Magana-Arachchi, D.N.**, Wanigatunge, R., and Rajapaksha, A.U. received a Research Grant from National Science Foundation on 2019-04-26 for Enrichment mechanisms of CKDu-risk factors in groundwaters, their uptake pathways and potential remedies. (Grant Value - 19,209,155 LKR)
15. **Marikkar, J.M.N., (PI)** and Yalegama, L.L.W.C. (CI) received a Research Grant from Sri Lanka Council for Agricultural Research Policy on 2021-03-01 for Physico-chemical, sensory and nutritional characteristics of coconut flour incorporated foods. (Grant Value - 2,235,000 LKR)
16. **Ratnayake, R.R.**, received a Research Grant from Access Engineering PLC, Colombo on 2022-09-01 for conducting research on industrial applications of cyanobacteria. (Grant Value - 1,055,100 LKR)
17. **Weerasooriya, R.**, received a Research Grant from Government of PR China on 2019-04-04 for Distinguished Professor, (200,000 Yuan). (Grant Value - 10,704,828 LKR)
18. Witharana, S. (PI) and **Wijayasinghe, H.W.M.A.C.**, (CI) received a Research Grant from SRC on 2021-07-14 for Development of a commercial type lithium-ion battery using Sri Lankan graphite. (Grant Value - 5,000,000 LKR)
19. **Wijayasinghe, H.W.M.A.C.**, and NIFS received a Research Grant from Mega grant from General Treasury of Sri Lanka on 2018-01-01 for Development of Sri Lankan graphite for rechargeable batteries. (Grant Value - 49,800,000 LKR)
20. **Wijesundara, D.S.A.**, received a Research Grant from Ministry of Environment on 2022-06-01 for Development of NIFS Popham Arboretum. (Grant Value - 13,900,000 LKR)
21. **Wijesundara, D.S.A.**, received a Research Grant from Green movement of Sri Lanka on 2021-08-21 for Fungi in Eucalyptus plantations: implications to forestry and biodiversity green movement of Sri Lanka. (Grant Value - 1,800,000 LKR)

RESEARCH COLLABORATIONS

Prof. M.A.K.L. Dissanayake

1. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with The Open University of Sri Lanka from 2019-09-01 to 2024-01-01.
Summary: Engineering nano-materials for photovoltaic and environmental remedial applications under OUSL-AHEAD grant.
Collaborators: Prof. G.K.R. Senadeera, Prof. V.P.S. Perera, Prof. J.C.N. Rajendra, Dr. N. Karthikeyan, Dr. L.A. Wijenayaka, and Prof. M.A.K.L. Dissanayake.
2. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with Department of Physics, University of Jaffna, Sri Lanka from 2018-01-01 to 2024-01-01.
Summary: Dye sensitized solar cells and gel polymer electrolytes for rechargeable batteries.
Collaborators: Prof. K. Vignarooban, and Prof. M.A.K.L. Dissanayake.
3. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with South Eastern University of Sri Lanka from 2020-01-01 to 2024-01-01.
Summary: Dye sensitized solar cells, quantum dots- sensitized and plasmonic solar cells and IR detector.
Collaborators: Dr. T. Jaseetharan, and Prof. M.A.K.L. Dissanayake.
4. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with Chalmers University (Sweden) from 2019-01-01 to 2024-01-01.
Summary: Collaborative research on Dye sensitized solar cells and Quantum dot sensitized solar cells.
Collaborators: Prof. B.E. Mellander, and Prof. M.A.K.L. Dissanayake.
5. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with Sabaragamuwa University of Sri Lanka from 2018-01-01 to 2024-01-01.
Summary: Applications of TiO₂.
Collaborators: Dr. H.N.M. Sarangika, and Prof. M.A.K.L. Dissanayake.
6. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with Department of Physics, University of Peradeniya from 2017-01-01 to 2024-01-01.
Summary: Dye sensitized solar cells and polymer electrolytes.
Collaborators: Dr. B. Dassanayake, and Prof. M.A.K.L. Dissanayake.
7. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with Department of Physics, University of Peradeniya from 2018-01-01 to 2024-01-01.
Summary: Dye sensitized solar cells.
Collaborators: Prof. T.M.W.J. Bandara, and Prof. M.A.K.L. Dissanayake.
8. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with University of Peradeniya, University of Kelaniya, University of Jaffna and University of Ruhuna from 2017-01-01 to 2024-01-01.
Summary: Collaborative national “EduTraining” project towards R&D and training of personnel competent in thin film solar cell prototype manufacturing maintaining. NIFS is the principal coordinator. Work was started in 2017 and continuing.
Collaborators: Prof. M.A.K.L. Dissanayake.

9. Condensed Matter Physics and Solid-State Chemistry research programme of NIFS collaborates with Faculty of Science, University of Brunei Darussalam, Brunei from 2023-01-01 to 2024-01-01.

Summary: Dye/quantum dot sensitized solar cells with novel counter electrodes.

Collaborators: Prof. P. Ekanayake, Prof. G.K.R. Senadeera, and Prof. M.A.K.L. Dissanayake.

Prof. W.P.J. Dittus

1. Primate Biology research programme of NIFS collaborates with Indian Institute of Science, National Institute of Fundamental Studies (Sri Lanka) from 2018-10-03 to 2024-06-30. Summary: The phylogenetics of hybrids between the Sri Lankan primate species of langur (*Semnopithecus priam* and *S. vetulus*). Naturally occurring hybrids are of interest because of their role in the diversification of animals and the evolution of new species, the setting of limits to genetic compatibility between species, and in the extinction of species. *Collaborators: Prof. W.P.J. Dittus, Prof. P. Karanth, and Prof. S. P. Benjamin.*

Dr. I.P.L. Jayarathna

1. Environmental Science Research Program research programme of NIFS collaborates with Department of Environmental Technology, Faculty of Technology, University of Colombo from 2022-07-01 to 2027-07-01. Summary: Removal of phosphate using iron oxide-coated super sand. *Collaborators: Dr. Sansfica Marlyn Young, and Dr. I.P.L. Jayarathna.*
2. Environmental Science Research Program research programme of NIFS collaborates with Department of Chemistry, University of Peradeniya from 2018-01-01 to 2028-01-02. Summary: New material development and applications. *Collaborators: Dr. Athula Bandara, and Dr. I.P.L. Jayarathna.*
3. Environmental Science Research Program research programme of NIFS collaborates with Faculty of Applied Science, Sbaragamuwa University from 2022-01-01 to 2026-01-01. Summary: Accumulation of micropalastics in Kandy Lake. *Collaborators: Dr. Hasintha Wihjeseekara, and Dr. I.P.L. Jayarathna.*
4. Environmental Science Research Program research programme of NIFS collaborates with The China-Sri Lanka Joint Research and Demonstration Center for Water Technology, University of Peradeniya from 2022-01-01 to 2027-01-01. Summary: Water quality development. *Collaborators: Dr. S. Weragoda, Dr. Madubashini Mahakehelwala, and Dr. I.P.L. Jayarathna.*
5. Environmental Science Research Program research programme of NIFS collaborates with Faculty of Agriculture, University of Peradeniya from 2023-01-01 to 2026-01-01. Summary: Method development for adulteration identification. *Collaborators: Dr. Nipuna Perera, and Dr. I.P.L. Jayarathna.*
6. Environmental Science Research Program research programme of NIFS collaborates with Faculty of Veterinary Medicine and Animal Science, University of Peradeniya from 2021-01-03 to 2027-01-03. Summary: Heavy metals and some selected elemental spotlights in milking cows reared in high CKDu Prevalence areas in Sri Lanka. *Collaborators: Dr. G.D.R.K. Perera, Dr. Ms. H.M.S. Wasana and Dr. I.P.L. Jayarathna.*

Prof. U.L.B. Jayasinghe

1. Natural Products research programme of NIFS collaborates with Faculty of Dental Sciences, University of Peradeniya from 2021-01-06 to 2025-01-06.
Summary: Extraction and identification of bioactive secondary metabolites from plants.
Collaborators: Prof. U.L.B. Jayasinghe, and Prof. R. Jayasinghe.
2. Natural Products research programme of NIFS collaborates with University of Peradeniya, Faculty of Medicine from 2012-01-01 to 2024-01-01.
Summary: Study of plant metabolites.
Collaborators: Dr. Irushika Fernando, and Prof. U.L.B. Jayasinghe.
3. Natural Products research programme of NIFS collaborates with University of Ruhuna, Faculty of Medicine from 2012-01-01 to 2024-01-01.
Summary: Study of plant metabolites.
Collaborators: Dr. M.T. Napagoda, and Prof. U.L.B. Jayasinghe.
4. Natural Products research programme of NIFS collaborates with University of Peradeniya, Faculty of Allied Health Science from 2015-01-01 to 2024-01-01.
Summary: Study of plant and fungal metabolites.
Collaborators: Dr. N.R. Amarasinghe, and Prof. U.L.B. Jayasinghe.

Prof. G.R.A. Kumara

1. Material Processing and Device Fabrication research programme of NIFS collaborates with Department of Physics, University of West Georgia, United States from 2022-01-01 to 2026-01-31.
Summary: Development of perovskite solar cells.
Collaborators: Prof. L. Ajith De Silva, and Prof. G.R.A. Kumara.
2. Material Processing and Device Fabrication research programme of NIFS collaborates with Department of Physics, Georgia State University, United States. from 2022-01-01 to 2026-12-31.
Summary: Development of perovskite solar cells.
Collaborators: Prof. A.G. Unil Perera, and Prof. G.R.A. Kumara.
3. Material Processing and Device Fabrication research programme of NIFS collaborates with Department of Chemistry, University of Peradeniya. from 2022-01-01 to 2026-01-30.
Summary: Development of supercapacitors and dye-sensitized solar cells.
Collaborators: Prof. R.M.G. Rajapakse, and Prof. G.R.A. Kumara.
4. Material Processing and Device Fabrication research programme of NIFS collaborates with Department of Physics, University of Jaffna from 2022-01-01 to 2026-01-30.
Summary: Development of perovskite and dye-sensitized solar cells.
Collaborators: Prof. P. Ravirajan, and Prof. G.R.A. Kumara.
5. Material Processing and Device Fabrication research programme of NIFS collaborates with Department of Physics, University of Peradeniya. from 2021-08-16 to 2026-12-30.
Summary: Development of supercapacitors and dye-sensitized solar cells.
Collaborators: Prof. T.M.W.J. Bandara, and Prof. G.R.A. Kumara.
6. Material Processing and Device Fabrication research programme of NIFS collaborates with Western Norway University of Applied Sciences from 2022-01-02 to 2026-01-01.

Summary: Development of perovskite and dye-sensitized solar cells, development of supercapacitors.

Collaborators: Prof. D. Velauthapillai, and Prof. G.R.A. Kumara.

7. Material Processing and Device Fabrication research programme of NIFS collaborates with Toyota Technological Institute, Japan from 2023-08-01 to 2026-01-30.

Summary: Anode materials for lithium-ion batteries using carbon materials.

Collaborators: Prof. M. Yoshimura, and Prof. G.R.A. Kumara.

Prof. R. Liyanage

1. Nutritional Biochemistry research programme of NIFS collaborates with Horticultural Crops Research and Development Institute (HORDI) from 2022-02-12 to 2024-02-15.

Summary: There are a number of underutilized yams in Sri Lanka with the potential of contributing to improving food security in Sri Lanka. This study investigates the nutritional and functional properties of some selected yams with the aim of promoting their consumption among people to improve their nutritional status.

Collaborators: Mrs.Theja Nanayakkara, Prof. R. Liyanage.

2. Nutritional Biochemistry research programme of NIFS collaborates with University of Sri Jayawardhanapura from 2022-01-12 to 2024-03-31.

Summary: Dietary carbohydrates play a significant role in developing type 2 diabetes and its associated health complications. Systematic reviews and meta-analysis revealed that the type of carbohydrate, their quality, and their composition critically influenced health. This research is designed to compare the physicochemical and functional properties of commonly available dietary carbohydrate sources in Sri Lanka.

Collaborators: Dr. Chatuni Jayathilake, and Prof. R. Liyanage.

3. Nutritional Biochemistry research programme of NIFS collaborates with Kings College London/University of Colombo/ Institute of Research and development from 2020-12-01 to 2023-12-31.

Summary: Nowadays, twin studies in nutritional research have opened a wide range of research opportunities. Twin studies have demonstrated that genetic makeup plays a significant role in many dietary phenotypes (energy and nutrient intakes, dietary patterns, and consumption of specific food types) and health status. This is the first study to identify the dietary habits of a Sri Lankan cohort. The findings of this study would help to identify suitable dietary interventions to prevent and control non-communicable diseases among the population in Sri Lanka.

Collaborators: Dr. Helena Zavos, Prof. Fruhling Vesta Rijdsijk, Prof. A. Sumathipala, Prof.Ranil Jayawardana, and Prof. R. Liyanage.

Prof. D.N. Magana-Arachchi

1. Molecular Microbiology and Human Diseases research programme of NIFS collaborates with Molecular Biology/ Biochemistry Department, National University of Medical Sciences, Rawalpindi, Pakistan from 2018-04-20 to 2024-12-31.

Summary: The study focuses on drug resistant tuberculosis (MDR-TB), the condition at which the TB bacterium becomes resistant to two most powerful first line drugs: rifampin and isoniazid. Herein, we would determine the prevalence of MDR-TB in the country, detect the mutations responsible for resistance development and study the differential patterns of host immune responses.

Collaborators: Prof. S. Younis, and Prof. D.N. Magana-Arachchi.

2. Molecular Microbiology and Human Diseases research programme of NIFS collaborates with respiratory disease treatment unit, Teaching hospital, Kandy from 2018-04-20 to 2031-12-31.
Summary: Information generated on local tuberculosis epidemiology, drug resistance patterns and differential host immune responses, would help in establishing better procedures in controlling drug resistant tuberculosis, improve patient status and reduce the overall health care cost spent on tuberculosis in Sri Lanka.
Collaborators: Dr. R.M.D. Madegedara, and Prof. D.N. Magana-Arachchi.

Prof. J.M.N. Marikkar

1. Food Chemistry research programme of NIFS collaborates with Dr. Chandi Yalegama, Coconut Research Institute, Lunuwila from 2018-06-08 to 2023-05-08.
Summary: Food chemistry project of NIFS signed an MOU with Coconut Research Institute (CRI), Lunuwila in early August, 2018 to undertake a study on the anti-diabetic and anti-oxidative potentials of coconut testa; a byproduct generated by desiccated coconut processing industries in Sri Lanka. Under this MOU, CRI agreed to work with the food chemistry research group of the NIFS by providing samples of coconut varieties, laboratory facilities for chemical analysis.
Collaborators: Dr. Chandi Yalegama and Prof. J.M.N. Marikkar.
2. Food Chemistry research programme of NIFS collaborates with University Putra Malaysia from 2023-07-01 to 2026-12-31.
Summary: Fats and oils have been perceived for a long time as essential nutrients of human diet as well as concentrated sources of energy. They act as carriers of fat-soluble vitamins in the human diet. Besides these, they also play an important role in the transport of substances that determine the growth and development of body muscles as well as the brain. Sri Lanka as a tropical country with a rich biodiversity has got several underutilized oils and fat resources. They are found in edible plants, fruits, seeds and marine animals. Some of them are underutilized due to lack of research on their commercial exploitation. Through systematic studies, these oil resources can be converted into novel food products or ingredients. The novel lipid products can not only be used to address the food and nutritional needs of the society but also can serve as functional foods to mitigate the risk of chronic diseases. In this project, we aim to establish the nutritional profiles of various edible seeds, fruits, and marine animals.
Collaborators: Prof. O.M. Lai, and Prof. J.M.N. Marikkar.

Prof. R.R. Ratnayake

1. Microbiology and Soil Ecosystems research programme of NIFS collaborates with Department of Animal, Plant and Soil Sciences, La Trobe University, Australia from 2019-03-19 to 2023-04-10.
Summary: Investigation of genetic diversity of cyanobacteria in different water bodies of Sri Lanka with their taxonomical identification, nutrient profiling and toxin analysis.
Collaborators: Dr. S. Abeynayake, and Prof. R.R. Ratnayake.
2. Microbiology and Soil Ecosystems research programme of NIFS collaborates with CSIRO, Agriculture and Food, Canberra, Australia from 2017-12-18 to 2025-05-08.
Summary: Regarding the expertise in agricultural modelling.
Collaborators: Dr. S. B. Karanaratne, and Prof. R.R. Ratnayake.
3. Microbiology and Soil Ecosystems research programme of NIFS collaborates with Faculty of Agriculture, University of Ruhuna from 2018-06-15 to 2023-03-05.
Summary: Investigation of genetic diversity of cyanobacteria in different water bodies of Sri

Lanka with their taxonomical identification, nutrient profiling and toxin analysis.
Collaborators: Prof. K.L.W. Kumara, and Prof. R.R. Ratnayake.

4. Microbiology and Soil Ecosystems research programme of NIFS collaborates with School of Environment Sciences, University of Guelph, Canada. from 2016-11-15 to 2024-11-15.
Summary: Regarding the expertise in GIS based mapping.
Collaborators: Dr. A. Biswas, and Prof. R.R. Ratnayake.

Prof. S. Seneweera

1. Plant Stress Biology & Molecular Genetics research programme of NIFS collaborates with University of Peradeniya, Plant Genetic Resources Center from 2020-01-20 to 2024-01-20.
Summary:
Nitrogen (N) is the element that plants require in the highest quantity. Availability of N is one of the key limiting factors in crop productivity in agricultural systems. We are aiming to develop an environmentally friendly, cost effective, biodegradable, controlled release nano fertilizer system with high nitrogen use efficiency.
Collaborators: Prof. S. Seneweera, Prof. D.M.D. Yakandawala, and Dr. I.P.L. Jayarathne.
2. Plant Stress Biology & Molecular Genetics research programme of NIFS collaborates with La Trobe University from 2020-01-01 to 2023-12-12.
Summary: Iron is an important micronutrient essential for mental and physical development in humans. This project will make a substantial contribution to the understanding of the physiological mechanism of iron loading into rice grains and will contribute to human iron nutrition.
Collaborators: Seneweera, S., and Gendall, A.

Prof. N.D. Subasinghe

1. Earth Resources and Renewable Energy research programme of NIFS collaborates with Rajarata University, Mihintale from 2022-01-01 to 2025-01-01.
Summary: Here we conduct analysis on archeological samples from Yan Oya anicut, Sri Lanka.
Collaborators: Prof C.R. Withanachch, Prof. N.D. Subasinghe.
2. Earth Resources and Renewable Energy research programme of NIFS collaborates with National Ocean Affairs Committee, Ministry of Foreign Relations, Sri Lanka from 2016-01-01 to 2025-12-12.
Summary: Conduct geothermal explorations applying geological, geophysical and geochemical techniques in the geothermal areas of Sri Lanka.
Collaborators: Ms. S.A. Samaranayake. Prof. N.D. Subasinghe.
3. Earth Resources and Renewable Energy research programme of NIFS collaborates with Geological Survey and Mines Bureau, Sri Lanka from 2016-02-01 to 2025-12-01. Summary: Conducting geophysical surveys on geothermal areas in Sri Lanka.
Collaborators: Mr. Nalin de Silva., Prof. N.D. Subasinghe.
4. Earth Resources and Renewable Energy research programme of NIFS collaborates with Rajarata University, Mihintale from 2016-01-01 to 2025-12-01. Summary: Conduct geothermal explorations applying geological, geophysical and geochemical techniques in the geothermal areas of Sri Lanka.
Collaborators: Dr. U. Dahanayake, Dr. H. O. Wijewardane, Prof. N.D. Subasinghe.

5. Earth Resources and Renewable Energy research programme of NIFS collaborates with Dept. of Geology, University of Peradeniya from 2016-01-01 to 2025-01-01.
Summary: Conduct research on petrology and mineralogy of Sri Lankan rocks.
Collaborators: Prof. N.D. Subasinghe.
6. Earth Resources and Renewable Energy research programme of NIFS collaborates with Dept. of Physics, University of Peradeniya from 2018-02-01 to 2025-12-01.
Summary: Here we conduct research on Time-dependent finite-difference model for transient and steady-state analysis of thermoelectric bulk materials.
Collaborators: Dr. B.M.K. Pemasiri., Prof. N.D. Subasinghe.
7. Earth Resources and Renewable Energy research programme of NIFS collaborates with Dept. of Physics, University of Peradeniya from 2019-01-01 to 2025-02-01.
Summary: Here we conduct thermoelectric researches by applying various techniques with different materials.
Collaborators: Dr. L.K. Narangamma., Prof. N.D. Subasinghe.
8. Earth Resources and Renewable Energy research programme of NIFS collaborates with Dept. of Physics, University of Peradeniya from 2019-01-01 to 2024-12-01.
Summary: Here we conduct thermoelectric researches by applying various techniques with different materials.
Collaborators: Prof. T.M.W.J. Bandara, Prof. N.D. Subasinghe.
9. Earth Resources and Renewable Energy research programme of NIFS collaborates with Department of Geology, University of Peradeniya from 2016-01-01 to 2025-12-01.
Summary: Here we are carrying out various petrological and structural geological studies with the participation of undergraduate and postgraduate students.
Collaborators: S.P.K. Malaviarachchi, Prof. N.D. Subasinghe.
10. Earth Resources and Renewable Energy research programme of NIFS collaborates with Department of Geology, Naturalis Biodiversity Center, Darwinweg 2 – 2333 CR Leiden, Netherlands, Department of Earth Sciences, University of Utrecht, 3584 CB Utrecht, Netherlands from 2021-01-01 to 2023-03-11.
Summary: Here we attempt to constrain the P–T evolution of ultrahigh-temperature (UHT) granulites using textures coupled with multiple thermobarometric approaches. Sapphirine-bearing granulites were collected from a quarry in the central part of the Highland Complex of Sri Lanka.
Collaborators: L. M. Kriegsman, Prof. N.D. Subasinghe.
11. Earth Resources and Renewable Energy research programme of NIFS collaborates with Department of Geology, Naturalis Biodiversity Center, Darwinweg 2 – 2333 CR Leiden, Netherlands, Department of Earth Sciences, University of Utrecht, 3584 CB Utrecht, Netherlands from 2021-01-01 to 2023-03-11.
Summary: The project attempts to constrain the P–T evolution of ultrahigh-temperature (UHT) granulites using textures coupled with multiple thermobarometric approaches. Sapphirine-bearing granulites were collected from a quarry in the central part of the Highland Complex of Sri Lanka.
Collaborators: L. M. Kriegsman, and Prof. N.D. Subasinghe.

Prof. D.S.A. Wijesundara

1. Plant Taxonomy and Conservation research programme of NIFS collaborates with National Herbarium Royal Botanic Gardens, Peradeniya from 2016-03-01 to 2026-12-31.
Summary: With the national Herbarium many taxonomic studies and conservation documentation activities including the preparation of national red List are conducted.
Collaborators: Dr. Subhani Ranasinghe, and Prof. D.S.A. Wijesundara.
2. Plant Taxonomy and Conservation research programme of NIFS collaborates with Qujing Normal University, Qujing, Yunnan, P.R. China from 2019-08-01 to 2026-12-31.
Summary: With this collaboration several studies on fungi are conducted. One graduate student is working on fungi in Eucalyptus plantations in Sri Lanka. Studies are also planned on establishing a National mycological repository.
Collaborators: Prof. Nalin Wijayawardena, and Prof. D.S.A. Wijesundara.
3. Plant Taxonomy and Conservation research programme of NIFS collaborates with Agricultural Biotechnology Centre University of Peradeniya from 2018-08-01 to 2025-12-31.
Summary: Several research activities are conducted through this collaboration. Main projects include research on Sri Lankan Cinnamon and taxonomic studies of genus *Strobilanthes* (nelu).
Collaborators: Prof. Pradeepa Bandaranayake, and Prof. D.S.A. Wijesundara.
4. Plant Taxonomy and Conservation research programme of NIFS collaborates with Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya, from 2021-06-01 to 2024-12-31.
Summary: Underutilized fruit ma dan (*Syzygium cuminii*) Sri Lanka is studied jointly.
Collaborators: Prof. Kapila Dissanayake, and Prof. D.S.A. Wijesundara.
5. Plant Taxonomy and Conservation research programme of NIFS collaborates with Natural History Museum United Kingdom from 2017-05-01 to 2026-12-31.
Summary: Taxonomy of Sri Lankan lichens is studied with the collaboration of the natural history museum, UK. There is a graduate student jointly supervised.
Collaborators: Dr. Gothamie Weerakon, and Prof. D.S.A. Wijesundara.
6. Plant Taxonomy and Conservation research programme of NIFS collaborates with Department of Crop Science, Faculty of Agriculture, University of Peradeniya from 2017-07-01 to 2025-12-31.
Summary: Taxonomic studies of Pteridophytes (ferns) of Sri Lanka is the major research activity in this collaboration.
Collaborators: Dr. R. H. G. Ranil, and Prof. D.S.A. Wijesundara.
7. Plant Taxonomy and Conservation research programme of NIFS collaborates with Department of Chemistry, University of Peradeniya from 2016-03-01 to 2025-12-31.
Summary: The main research activities of this collaboration are phytochemical studies of higher plants and lichens.
Collaborators: Prof. V. Karunarathne, and Prof. D.S.A. Wijesundara.

Dr. H.W.M.A.C. Wijayasinghe

1. Nanotechnology and Advanced Materials research programme of NIFS collaborates with Department of Physics, University of Jaffna from 2019-06-01 to 2023-05-01.
Summary: Development of Novel Electrolyte and Electrode Materials for Secondary Sodium-ion and Magnesium-ion Batteries.
Collaborators: Dr. H.W.M.A.C. Wijayasinghe, Dr. K. Vignarooban, and Dr. G. Sashikesh.

2. Nanotechnology and Advanced Materials research programme of NIFS collaborates with Department of Mechanical Engineering, University of Moratuwa from 2021-07-01 to 2024-06-30.
Summary: Development of a commercial type lithium-ion battery using Sri Lankan graphite.
Collaborators: Dr. H.W.M.A.C. Wijayasinghe, Dr. S. Vitharana, Dr. L. Subasinghe, and Dr. T.H.N.G. Amaraweera.

Prof. R. Weerasooriya

1. Environmental Science Research Program research programme of NIFS collaborates with Wuhan New fibre Optics Electron Co., Ltd, PR China from 2018-01-01 to 2024-01-01.
Summary: interfacing water treatment plants.
Collaborators: Prof. R. Weerasooriya and Interface industry group.
2. Environmental Science Research Program research programme of NIFS collaborates with Chung Hsing University, Taiwan from 2019-01-01 to 2023-01-01.
Summary: surface spectroscopy of GO.
Collaborators: Prof. R. Weerasooriya and Jiann-Yeu Chen.
3. Environmental Science Research Program research programme of NIFS collaborates with University of Manitoba, Canada from 2020-01-01 to 2023-01-01.
Summary: electrochemistry of graphite.
Collaborators: Prof. R. Weerasooriya and C. Kuss.
4. Environmental Science Research Program research programme of NIFS collaborates with University of Peradeniya from 2010-01-01 to 2024-01-01.
Summary: Vibration spectroscopy of surfaces.
Collaborators: Prof. R. Weerasooriya and Dr. Atula Bandara.
5. Environmental Science Research Program research programme of NIFS collaborates with University of Jayawardhanapura from 2017-01-01 to 2023-01-01.
Summary: Graphite based membranes.
Collaborators: Prof. R. Weerasooriya and Prof. A.R. Kumarasinghe.
6. Environmental Science Research Program research programme of NIFS collaborates with University of Winnipeg, Canada, University of Peradeniya from 2020-01-01 to 2023-01-01.
Summary: Remediation of V contaminated soils.
Collaborators: Prof. R. Weerasooriya and Prof. S. Indrarathne.
7. Environmental Science Research Program research programme of NIFS collaborates with Rajarata University and Chinese Academy of Sciences from 2019-01-01 to 2023-01-01.
Summary: Electrochemical water treatment.
Collaborators: Prof. R. Weerasooriya, Dr. B. Tian and Prof. Ajith Herath.
8. Environmental Science Research Program research programme of NIFS collaborates with National Water Supply Drainage Board, Kandy from 2017-01-01 to 2024-01-01.
Summary: Membrane use for water desalination. China Sri Lanka collaboration.
Collaborators: Prof. R. Weerasooriya and Dr. S. K Weragoda.
9. Environmental Science Research Program research programme of NIFS collaborates with Chinese Academy of Sciences China from 2017-01-01 to 2024-10-01.
Summary: Membrane development for drinking water desalination.
Collaborators: Prof. R. Weerasooriya and Prof. Y. Wei.

10. Environmental Science Research Program research programme of NIFS collaborates with Hefei University of Technology, PR China from 2019-01-01 to 2023-01-01.
Summary: In situ electrochemical sensors for chemical speciation.
Collaborators: Prof. R. Weerasooriya and Prof. Xing Chen.

11. Environmental Science Research Program research programme of NIFS collaborates with University of Peradeniya from 2018-01-01 to 2023-01-01.
Summary: Groundwater flow modeling.
Collaborators: Prof. R. Weerasooriya and Prof. P. Wijekone.

RESEARCH SUPERVISION

Ph.D. Completed

1. Ph. D degree was awarded to Mr. M. Premarathna in year 2023 by University of Peradeniya for the thesis titled "Microbial biofilms and their network interactions". The research was supervised by **Prof. G. Seneviratne**.
2. Ph. D degree was awarded to Ms. L. S. J. Cabral de Mel in year 2023 by University of Southern Queensland for the thesis titled "Efficacy and welfare of aversive geofencing devices for managing the movements of Asian elephants". The research was supervised by Dr. B. Allen, Prof. T. Maraseni, **Prof. S. Seneweera**, Prof. D. Weerakoon, and Prof. A. Dangolla.
3. Ph. D degree was awarded to Mr. H.D. Jayasinghe in year 2023 by University of Colombo in the research area of DNA Barcoding, Morphological Taxonomy and Phylogeny, the research was supervised by **Prof. D.S.A. Wijesundara**, Dr. S. Ranasinghe, and Dr.H. Kathriarachchi.
4. Ph. D degree was awarded to Ms. T.K. Bowange Investigation of Genetic Diversity of Cyanobacteria in Some Selected Extreme Ecosystems of Sri Lanka with Their Taxonomical Identification and Nutrient Profiling in year 2023 by University of Peradeniya the research was supervised by **Prof. R. R. Ratnayake**.

M.Phil Completed

1. M.Phil degree was awarded to Ms. M.A. Farhana in year 2023 by University of Peradeniya for the thesis titled "Synthesis and characterization of Sb₂S₃ and fabrication of efficient solar cells". The research was supervised by **Prof. J. Bandara**.
2. M.Phil degree was awarded to Ms. A. Satkunanathan in year 2023 by University of Peradeniya for the thesis titled "Molecular phylogeny and taxonomic revision of Selected Jumping spider genera (Family: Salticidae) from Sri Lanka.". The research was supervised by **Prof. S.P. Benjamin**, and Prof. P. Samaraweera.
3. M.Phil degree was awarded to Ms. M. Tharmarajan in year 2023 by University of Peradeniya for the thesis titled "Molecular Phylogeny and Taxonomy of Selected Cobweb Spider Genera (Araneae: Therididae) in Sri Lanka". The research was supervised by **Prof. S.P. Benjamin**, and Prof. P. Samaraweera.
4. M.Phil degree was awarded to Ms. S.M.V.K. Sewwandi in year 2023 by Postgraduate Institute of Science, University of Peradeniya for the thesis titled "Nutritional and Biochemical Properties of Raw and Differently Processed *Artocarpus nobilis* Seeds in Sri Lanka". The research was supervised by **Prof. R. Liyanage**, Prof. R. Sivakanesan, **Prof. D.S.A. Wijesundara**, and Prof. C. N. R. A. Alles
5. M.Phil degree was awarded to Ms. C.B Gunawardhana in year 2023 by University of Peradeniya for the thesis titled "Chemistry and Bioactivity of *Costus speciosus* and associated fungi *Phoma multirostrata* and *Guignardia mangiferae* ". The research was supervised by **Prof. U.L.B. Jayasinghe**, and **Prof. N.S. Kumar**.
6. M.Phil degree was awarded to Ms.K.M.R.U. Gunarathne in year 2023 by University of Peradeniya for the thesis titled "Bioactivity studies and prebiotic potential of coconut testa flour of selected Sri Lankan coconut cultivars". The research was supervised by **Prof. J.M.N. Marikkar**, and Prof.E. Mendis.

7. M.Phil degree was awarded to Ms. D.G.S.N. Samarasinghe in year 2023 by University of Kelaniya for the thesis titled "Diversity and Distribution of Thermophilic Bacteria and Archaea in hot springs of Sri Lanka: Culture Dependent and culture-independent Approach". The research was supervised by **Prof. D.N. Magana-Arachchi**, and Dr. R. Wanigatunge.
8. M.Phil degree was awarded to Ms. J.M.P.S. Madamarandawala in year 2023 by University of Peradeniya for the thesis titled "Genetic Characterization of Drug Resistant *Mycobacterium tuberculosis* Isolates from Pulmonary Tuberculosis Patients and Identification of Associated Host Blood Transcriptomic Biomarkers". The research was supervised by **Prof. D.N. Magana-Arachchi**, Prof. R.G.S.C. Rajapakse, and Prof. R.M.D. Madegedara.
9. M.Phil degree was awarded to Mrs.U.M.P.K. Perera in the year 2023 by University of Peradeniya for the thesis titled "Development of environmental benign nano fertilizer for nitrogen management" the research was supervised by **Prof. S. Seneweera**, Prof. D.M.D. Yakandawala, and **Dr. I.P.L. Jayarathne**.
10. M.Phil degree was awarded to Ms. J.N. Kanagaratnam in year 2023 by Postgraduate Institute of Science, University of Peradeniya for the thesis titled "Structural Modification of Sri Lankan Graphite for the Rechargeable Battery Application". The research was supervised by **Dr. H.W.M.A.C. Wijayasinghe**, Dr. N.W.B. Balasooriya, and Dr. T.H.N.G. Amaraweera.
11. M.Phil degree was awarded to Ms. H.M.H.D.K. Naranpanawa in year 2023 by Postgraduate Institute of Science, University of Peradeniya for the thesis titled "Development of Battery Grade Sri Lankan Vein Graphite Through Optimization of Purification and Surface Modification Followed by Scaling up of the Processes". The research was supervised by **Dr. H.W.M.A.C. Wijayasinghe**, and Dr. N.W.B. Balasooriya.

M.Sc. Completed

1. M.Sc. degree was awarded to Ms.B.G.R.R. Bandara in year 2023 by Qilu University of Technology for the thesis titled "Investigation of phytotoxic potential of the extract from leaves of *Zingiber officinale* (Ginger)". The research was supervised by **Prof. U.L.B. Jayasinghe**, Prof.T. Li, and Prof.N. Wang.
2. M.Sc. degree was awarded to Mr. S.N.B. Ekanayake in year 2023 by the Postgraduate Institute of Agriculture, University of Peradeniya. The thesis titled "Financial and environmental benefits of Biofilm biofertilizer in lowland paddy cultivation Sri Lanka". The research was supervised by **Prof. G. Seneviratne**, Dr. M. Premarathna and Dr. P. Korale-gedara. The degree awarded date was 2023.10.23.

B.Sc. Completed

1. Ms. G.G.S. Sithumini from University of Jaffna submitted the Undergraduate thesis titled "Bioactivity studies of *Allium sativum*, *Piper nigrum* and *Trigonella foenumgraceum*" on 2023-11-01. The research was conducted at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**.
2. Ms. S.M. Sooriarachchi graduated from Sabaragamuwa University of Sri Lanka in year 2023. The research project on "Removal of 2,5-dichlorophenol from the air using zeolite-based catalyst" was conducted at the NIFS under the supervision of **Dr. I.P.L. Jayarathna**, Prof. S.K. Gunathilake, Dr. S.S.R.M.D.H.R. Wijesekara, and Dr. N.S. Wanniarachchi from 2022-11-17 to 2023-03-14.

3. Ms. L.S.H.S. Mayandi graduated from Sabaragamuwa University of Sri Lanka in year 2023. The research project on "Analysis of microplastics and other water quality parameters in inflows and outflow of Kandy Lake in Sri Lanka" was conducted at the NIFS under the supervision of **Dr. I.P.L. Jayarathna**, and Dr. S.S.R.M.D.H.R. Wijesekara from 2022-11-17 to 2023-03-14.
4. Ms. J.M.U.S. Wijenayake graduated from Sabaragamuwa University of Sri Lanka in year 2023. The research project on "In vitro prebiotic potential of coconut testa flour crude polysaccharides on *Lactobacillus* sp." was conducted at the NIFS under the supervision of **Prof. J.M.N. Marikkar** from 2022-11-08 to 2023-03-07.
5. Ms. L.R.M.K. N. Liyadipitiya graduated from University of Sri Jayawardhanapura in year 2023. The research project on "Nutritional Composition and Anti-Hyperglycemic Potential of Edible Banana (*Musa* sp.) Soft Stem" was conducted at the NIFS under the supervision of **Prof. J.M.N. Marikkar** from 2022-11-21 to 2023-06-20.
6. Ms. R. P. N. S. Randeni graduated from Open University of Sri Lanka in year 2023. The research project on "Development of vegetative propagation, and recovery of syrup and crystals from *Stevia rebaudiana* plant" was conducted at the NIFS under the supervision of **Prof. J.M.N. Marikkar** from 2022-07-10 to 2023-06-30.
7. Ms. Z. Fathima Izfah graduated from College of Chemical Sciences in year 2023. The research project on "Nutritional composition and Mid – IR spectral characterization of *Terminalia catappa* L. fruits' seed kernel" was conducted at the NIFS under the supervision of **Prof. J.M.N. Marikkar** from 2022-09-12 to 2023-05-31.
8. Ms. T. Nirosika graduated from University of Jaffna in year 2023. The research project on "Assessment of low-calorie food products incorporated with *Stevia* leaf powder" was conducted at the NIFS under the supervision of **Prof. J.M.N. Marikkar** from 2023-02-13 to 2023-07-20.
9. Ms.D.I. Rajani graduated from Lincoln university college -Malaysia in year 2023. The research project on "Evaluation of Physical and chemical parameters and microbial stability of selected semisolid extemporaneous preparations which are being dispensed at skin clinic, National Hospital, Kandy" was conducted at the NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, and Dr. S K. Daas from 2023-03-03 to 2023-12-01.
10. Ms.H.B.M.W.M.D. Mahagedara graduated from Lincoln university college -Malaysia in year 2023. The research project on "Evaluation of Physical and chemical parameters and microbial stability of selected semisolid extemporaneous preparations which are being dispensed at skin clinic, National Hospital, Kandy" was conducted at the NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, and Dr.S. K. Das from 2023-03-03 to 2023-12-01.
11. Ms.T. K. Katekumbura graduated from Lincoln university college -Malaysia in year 2023. The research project on "Evaluation of Physical and chemical parameters and microbial stability of selected semisolid extemporaneous preparations which are being dispensed at skin clinic, National Hospital, Kandy" was conducted at the NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, and Dr.S. K. Das from 2023-03-03 to 2023-12-01.
12. Mr.K.M.I.R. Munasingha graduated from Lincoln university college -Malaysia in year 2023. The research project on "Evaluation of Physical and chemical parameters and microbial stability of selected semisolid extemporaneous preparations which are being dispensed at skin clinic, National Hospital, Kandy" was conducted at the NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, and Dr. Sreemoy Kanthi Das from 2023-03-03 to 2023-12-01.
13. Ms.A.W.O.D. Bandaranayake graduated from Lincoln university college -Malaysia in year 2023. The research project on "Evaluation of Physical and chemical parameters and microbial

stability of selected semisolid extemporaneous preparations which are being dispensed at skin clinic, National Hospital, Kandy" was conducted at the NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, and Dr.S. K. Das from 2023-03-03 to 2023-12-01.

14. Ms. H.P. Dayananda graduated from South Eastern University of Sri Lanka in year 2023. The research project on "Morphology based evaluation of long-term survival of Cyanobacteria collected from selected extreme ecosystems of Sri Lanka" was conducted at the NIFS under the supervision of **Prof. R.R. Ratnayake** from 2022-08-15 to 2023-05-20.
15. Ms. H.S. Jayasekara graduated from University of Jaffna in year 2023. The research project on "The potential of nostoc sp. Grown in the parboiled effluent as a biofertilizer for paddy cultivation" was conducted at the NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-03-20 to 2023-09-22.
16. Ms. W.A.B. Samarajeewa graduated from Sri Lanka Institute of Information Technology (SLIIT) in year 2023. The research project on "Investigation of the potential of selected freshwater cyanobacteria as biodegradable plastic procedures; An eco-friendly solution for plastic pollution" was conducted at the NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-06-13 to 2023-11-15.

Undergraduate Industrial Training-Completed

1. Mr.F. T. Jonathan from Eastern University of Sri Lanka completed the Industrial Training at NIFS under the supervision of **Prof. N.K.B. Adikaram**, and **Prof. U.L.B. Jayasinghe** from 2023-09-25 to 2023-10-27.
2. Mr.K. Kirushananth from Eastern University of Sri Lanka completed the Industrial Training at NIFS under the supervision of **Prof. N.K.B. Adikaram**, and **Prof. U.L.B. Jayasinghe** from 2023-09-25 to 2023-10-27.
3. Ms. E.M.T.A. Ekanayaka was trained as a Research student in the research area of Natural Products at NIFS under the supervision of **Prof. U.L.B. Jayasinghe** from 2023-01-23 to 2023-11-01.
4. Ms. T.W.Y. Jayamali from University of Peradeniya completed the Industrial Training at NIFS under the supervision of **Dr. I.P.L. Jayarathna** from 2022-12-19 to 2023-01-20.
5. Ms. A.P.C.L. Perera from University of Peradeniya completed the Industrial Training at NIFS under the supervision of **Dr. I.P.L. Jayarathna** from 2022-12-19 to 2023-01-20.
6. Ms. R.H.M.S.Y. Udangamuwa from Sri Lanka Institute of Information Technology completed the Industrial Training at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** from 2022-11-08 to 2023-01-27.
7. Ms. Y.U. Jayaweera from Sri Lanka Institute of Information Technology completed the Industrial Training at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** from 2022-11-08 to 2023-01-27.
8. Ms. A.M.U. Athauda from University of Kelaniya completed the Industrial Training at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** from 2023-01-02 to 2023-03-31.
9. Ms. W.A.B.M. Samarajeewa from Sri Lanka Institute of Information Technology (SLIIT) completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2022-11-08 to 2023-01-31.

10. Ms. J.M. H. Jayasekara from University of Jaffna completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-02-13 to 2023-03-13.
11. Ms. S. M. Chathurangi from Rajarata University of Sri Lanka completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-03-07 to 2023-04-05.
12. Ms. Somasiri from Rajarata University of Sri Lanka completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-03-07 to 2023-06-26.
13. Ms. S. Faizal from Ocean University of Sri Lanka completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-09-01 to 2023-08-12.
14. Ms. M. Mansoor from Ocean University of Sri Lanka completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-09-01 to 2023-08-12.
15. Ms. S. Thurkka from Jaffna University completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-09-25 to 2023-10-20.
16. Ms. Murugesapillai A. from Jaffna University completed the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-09-25 to 2023-10-20.

Training as a Volunteer Research Assistants

1. Mr. M. N. U. Mohammeth was trained in 2023 as a Research student at NIFS in the research area of "Computer Science, Mathematics and Statistics" under the supervision of **Prof. S. R. Kodituwakku**.
2. Mr. J.A.S.U. Gunawardena was trained as a Research student in the research area of Nutritional Biochemistry at NIFS under the supervision of **Prof. R. Liyanage** from 2022-08-08 to 2023-06-01.
3. Mr. W.M.K.K. Walisinghe was trained in 2023 as a research student at NIFS in the research area of "Nutritional Biochemistry" under the supervision of **Prof. R. Liyanage**.
4. Ms.H. Moragalla was trained as a Research student in the research area of Microbiology and Soil Ecosystems at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-06-12 to 2023-09-27.
5. Ms. H. P. Dayananda was trained as a Research student in the research area of Microbiology and Soil Carbon Sequestration at NIFS under the supervision of **Prof. R.R. Ratnayake** from 2023-07-12 to 2023-12-31.
6. Ms. A.N. Gunathilake was trained in 2023 as a Research student at NIFS in the research area of "Natural Products" under the supervision of **Prof. U.L.B. Jayasinghe**, and **Prof. N.K.B. Adikaram**.

Undergraduate Thesis submitted

1. Ms. R.H.M.S.Y. Udangamuwa from Sri Lanka Institute of Information Technology submitted the Undergraduate thesis titled "Investigation of amylase and lipase production of Bacillus spp. isolated from extreme environments: Using agro-industrial and kitchen wastes" on 2023-11-13. The research was conducted at NIFS under the supervision of **Prof. D.N. Magana-Arachchi**.

2. Ms. Ariyachandra S. from Sabaragamuwa University of Sri Lanka submitted the Undergraduate thesis titled "Cyanobacteria-based bioremediation of agro-industry wastewater and the potential of using wastewater as a growth medium for cyanobacteria mass culturing" on 2024-01-05. The research was conducted at NIFS under the supervision of **Prof. R.R. Ratnayake**.
3. Mr. A.G.M.P. Rajapaksha, Undergraduate student of Wayamba University of Sri Lanka is conducting the research project in the research area of "Development of an Electro-Dialysis Reversla Electrode System Using Sri Lankan Graphite" at the NIFS under the supervision of Dr. T.H.N.G. Amaraweera **Dr. H.W.M.A.C. Wijayasinghe**, since 2023.01. 17. Thesis submission date-30-10-2023.
4. Mr. R.M.L.H Ranaweera, Undergraduate student of Uva Wellassa University of SS is conducting the research project in the research area of "Investigating temperature dependence of lithium-ion diffusion through the silicon (111) surface" at the NIFS under the supervision of Dr. T.H.N.G. Amaraweera **Dr. H.W.M.A.C. Wijayasinghe**, since 2021.09.21.
5. Mr. M.H.M. Shamri from Uva Wellassa University submitted the Undergraduate thesis titled "Recycling Anode Material from Discarded Lithium-Ion Rechargeable Batteries" on 2023-10-16. The research was conducted at NIFS under the supervision of Mr. H.P.T.S. Hewathilake, Dr. T.H.N.G. Amaraweera, and **Dr. H.W.M.A.C. Wijayasinghe**.
6. Ms. M.M.D. Sathsara from Uva Wellassa University submitted the Undergraduate thesis titled "Recycling Cathode Material from Discarded Lithium-Ion Rechargeable Batteries" on 2023-10-16. The research was conducted at NIFS under the supervision of Mr. H.P.T.S. Hewathilake, Dr. T.H.N.G. Amaraweera, and **Dr. H.W.M.A.C. Wijayasinghe**.

Postdoctoral Research work in progress

1. Dr. C.A. Thotawatthage is conducting Postdoctoral research in the research area of Environmental Sciences at NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, and Prof. C. Wickramasinghe since 2018-07-03.

Ph.D. Research work in progress

1. Ms. K.A.D.M.S. Sarathchandra is reading for a Ph. D degree at University of Peradeniya in the research area of Antimony sulfide planar solar cells at NIFS under the supervision of **Prof. J. Bandara** since 2022-06-09.
2. Ms. H. M. S. K. H. Bandara is reading for a Ph. D degree at University of Peradeniya in the research area of Natural Product Chemistry at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, and Dr. N. R. Amarasinghe since 2018-08-01.
3. Ms.D. M. D. M. Dissanayake is reading for a Ph. D degree at University of Peradeniya in the research area of Natural product chemistry at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, Prof. N. S. Kumar and N. B. K. Adikaram since 2019-10-24.
4. Ms. A.G.A.W. Alakolanga is reading for a Ph. D degree at Jacobs University, Bremen, Germany in the research area of Natural Products and Biochemistry at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, and Prof. N. Kuhnert since 2020-10-01.
5. Ms. S. Saseevan is reading for a Ph. D degree at the University of Peradeniya in the research area of identification of urinary biomarkers for CKD at NIFS under the supervision of

Prof. D.N. Magana-Arachchi, Prof. S. Rajapakse, and Dr. W.A.A.G.N. Nishanthi since 2020-09-02.

6. Mr. E.M.S. Ekanayake is reading for a Ph. D degree at Uva Wellassa University in the research area of Conservation Biology at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2021-04-27.
7. Ms.T. Tamasha Fernando is reading for a Ph. D degree at Wayamba University Sri Lanka in the research area of Development and feasibility evaluation of an ecosystem services model at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-01-01.
8. Ms. W.I. Sandamali is reading for a Ph. D degree at Open University of Sri Lanka in the research area of Engineering nano-materials for photovoltaics at NIFS under the supervision of **Prof. G.K.R. Senadeera**, and **Prof. M.A.K.L. Dissanayake** since 2019-08-01.
9. Ms. A.T.D. Rathnathilaka is reading for a Ph. D degree at University of Peradeniya in the research area of Microbiology at NIFS under the supervision of **Prof. G. Seneviratne** since 2018-10-15.
10. Ms.C. Wijerathna is reading for a Ph. D degree at University of Southern Queensland in the research area of Plant Biotechnology, Plant Physiology, and Nanotechnology at NIFS under the supervision of **Prof. S. Seneweera**, and Prof. Steven Neate since 2019-02-25.
11. Mr. P. Abeywardena is reading for a Ph. D degree at University of Peradeniya in the research area of Petrology, Structural Geology at NIFS under the supervision of Dr. P.L. Dharmapriya, Prof. S. Malaviarachchi, and **Prof. N.D. Subasinghe** since 2019-08-07.
12. Ms. M.P. Thilakarathna is reading for a Ph. D degree at University of Sri Jayawardenepura in the research area of Geothermal explorations under the Supervision of **Prof. N.D. Subasinghe** and Prof. S. Gamage since 01.01.2023
13. Mr. W.T.R.S. Fernando is reading for a Ph. D degree at Postgraduate Institute of Science, University of Peradeniya in the research area of Cathode Development for Rechargeable Batteries at NIFS under the supervision of **Dr. H.W.M.A.C. Wijayasinghe** since 2020-12-08.

M.Phil Research work in progress

1. Mr.R.P.P.D. Rajakaruna is reading for a M. Phil degree at University of Peradeniya in the research area of Solar cells at NIFS under the supervision of **Prof. J. Bandara** since 2022-06-09.
2. Mr.A.G.C.N. Wijerathna is reading for a M. Phil degree at University of Peradeniya in the research area of Solar Water Splitting at NIFS under the supervision of **Prof. J. Bandara** since 2021-11-25.
3. Mr. D.M.G. Dayananda is reading for a M. Phil degree at University of Peradeniya in the research area of Zoology at NIFS under the supervision of **Prof. S.P. Benjamin**, and Prof.I. Karunarathne since 2022-08-01.
4. Ms.K.M.R.K.T. Herath is reading for a M. Phil degree at University of Peradeniya in the research area of Zoology at NIFS under the supervision of **Prof. S.P. Benjamin**, and Prof. I. Karunarathne since 2023-10-17.

5. Ms. W.M.H.U. Wijerathna is reading for a M. Phil degree at University of Peradeniya in the research area of Zoology at NIFS under the supervision of **Prof. S.P. Benjamin**, Prof. I. Karunarathna, and Dr. S. Ranasinghe since 2023-10-17.
6. Mr. S.M.D.M.C Senarathna is reading for a M. Phil degree at University of Peradeniya in the research area of Air pollution monitoring and modelling at NIFS under the supervision of **Dr. G. Bowatte** since 2018-09-25.
7. Ms. S. H. Hettiarachchi is reading for a M. Phil degree at Postgraduate Institute of Science, University of Peradeniya in the research area of Electrospun Nanofibers, Dye sensitized solar cells, Nanofiber water filter at NIFS under the supervision of **Prof. M.A.K.L. Dissanayake**, and **Prof. G.K.R. Senadeera** since 2020-11-16.
8. Ms. P.U. Sandunika is reading for a M. Phil degree (Reg. Pending) in the research area of Solar Cells at NIFS under the supervision of **Prof. M.A.K.L. Dissanayake**, and **Prof. G.K.R. Senadeera** since 2023-09-01.
9. Ms.T. Kulangana is reading for a M. Phil degree at University of Peradeniya in the research area of Plant and Environmental Sciences at NIFS under the supervision of **Prof. M.C.M. Iqbal** since 2021-10-05.
10. Ms. M. D. R. Perera is reading for a M. Phil degree at University of Peradeniya in the research area of Materials Chemistry at NIFS under the supervision of **Dr. I.P.L. Jayarathna** since 2020-11-16.
11. Ms. R.A.L.R. Amarasena is reading for a M. Phil degree at University of Peradeniya in the research area of Material Chemistry at NIFS under the supervision of **Dr. I.P.L. Jayarathna** since 2020-11-24.
12. Ms. M.A.K. Madumekala is reading for a M. Phil degree at University of Peradeniya in the research area of water research: material Development and pollutant remediation at NIFS under the supervision of **Dr. I.P.L. Jayaratne**, since 2023-10-17.
13. Mrs. L. N. Manawadu is reading for a M. Phil degree at University of Peradeniya in the research area of Post Harvest Pathology at NIFS under the supervision of **Prof. N.K.B. Adikaram**, **Prof. U.L.B. Jayasinghe**, and Prof. D. Yakandawala since 2017-09-15.
14. Ms. H. S. T. Kaushalya is reading for a M. Phil degree at University of Peradeniya in the research area of Chemistry at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, Prof. N. S. Kumar, and **Prof. N.K.B. Adikaram** since 2018-04-02.
15. Ms. B.M.S. Nilmini is reading for a M. Phil degree at University of Peradeniya in the research area of Natural Product Chemistry at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, **Prof. N.K.B. Adikaram**, and Prof. N. S. Kumar since 2018-05-15.
16. Ms.J.C. Kalinga is reading for a M. Phil degree at University of Peradeniya in the research area of Bioactive secondary metabolites associated with plants and endophytic fungi at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, and **Prof. N.K.B. Adikaram** since 2020-12-01.
17. Ms.K.D.P.U. Siriwardhane is reading for a M. Phil degree at University of Peradeniya in the research area of Bioactive secondary metabolites associated with plants and endophytic fungi at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, and **Prof. N.K.B. Adikaram** since 2020-12-01.

18. Ms.N. Athapattu is reading for a M. Phil degree at University of Peradeniya in the research area of Bioactive secondary metabolites associated with plants and endophytic fungi at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, and **Prof. N.K.B. Adikaram** since 2021-10-04.
19. Ms. H.M.N. P Herath is reading for a M. Phil degree at University of Peradeniya in the research area of Natural products at NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, and Dr. D. Perera since 2022-05-06.
20. Mr. A.D.T. Medagedara is reading for a M. Phil degree at University of Peradeniya in the research area of Electrochemical energy storage devices at NIFS under the supervision of **Prof. G.R.A. Kumara**, and Dr. T.M.W.J. Bandara since 2021-03-01.
21. Ms. M.I.U. Weerasinghe is reading for a M. Phil degree at University of Peradeniya in the research area of Solar Energy at NIFS under the supervision of Prof.T.M.W.J. Bandara, and **Prof. G.R.A. Kumara** since 2022-03-15.
22. Mr. A. E. Gunasekaran is reading for a M. Phil degree at University of Peradeniya in the research area of Computer Science at NIFS under the supervision of **Prof S. R. Kodituwakku**, and Dr. R. D. Nawarathna since 2022-11-08.
23. Mr. K.G.S.N. Samaraweera is reading for a M. Phil degree at University of Peradeniya in the research area of Computer Science at NIFS under the supervision of **Prof S. R. Kodituwakku**, and Dr. R. D. Nawarathna since 2023-01-04.
24. Ms. R. Kulasingam is reading for a M. Phil degree at Postgraduate Institute of Agriculture in the research area of Food Science and Technology at NIFS under the supervision of **Prof. R. Liyanage**, and Prof.T Madujith since 2020-11-01.
25. Ms. H.R.P. Prasadini is reading for a M. Phil degree at University of Peradeniya in the research area of Food Science at NIFS under the supervision of **Prof. R. Liyanage** since 2022-12-20.
26. Ms. M. A Wickramasinghe is reading for a M. Phil degree at University of Peradeniya in the research area of Food and Nutrition at NIFS under the supervision of **Prof. R. Liyanage**, Prof.T. Madujith, Prof.Fruhling Vesta Rijdsdijk, Dr. Helena Zavos, Prof. R. Jayawardena, and Prof. A. Sumathipala since 2022-02-28.
27. Ms. S.M.N.S. Nirmani is reading for a M. Phil degree at University of Sri Jayewardenepura in the research area of Food Science at NIFS under the supervision of Dr. C. Jayathilake, Prof.Indira Wickramasinghe, **Prof. R. Liyanage**, and Dr. M. Jayasinghe since 2022-09-07.
28. Ms. S.S.K. Marasinghe is reading for a M. Phil degree at University of Peradeniya in the research area of Food Chemistry at NIFS under the supervision of **Prof. J.M.N. Marikkar** since 2018-06-01.
29. Ms. A. M. Rekasa is reading for a M. Phil degree at Southeastern University of Sri Lanka in the research area of Food Science and Technology at NIFS under the supervision of **Prof. J.M.N. Marikkar** since 2021-03-01.
30. Ms. B.S.K. Ulpathakumbura is reading for a M. Phil degree at University of Peradeniya in the research area of Food Chemistry at NIFS under the supervision of **Prof. J.M.N. Marikkar**, and **Prof. U.L.B. Jayasinghe** since 2021-07-13.

31. Ms. W.R.U.A. Bandara is reading for a M. Phil degree at the University of Peradeniya in the research area of Molecular Microbiology at NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, Dr. D. Madegedara, and Prof. W.A.I.P. Karunaratne since 2020-12-15.
32. Ms. H.M.S.A.T. Gunathilaka is reading for a M. Phil degree at University of Peradeniya in the research area of Molecular Microbiology at NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, and Dr. W.R.P. Wijesinghe since 2022-05-23.
33. Ms.R.I.S. Karunathilaka is reading for a M. Phil degree at University of Peradeniya in the research area of Molecular Microbiology at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** since 2022-12-20.
34. Ms. W.B.C.P. Weerathne is reading for a M. Phil degree at University of Peradeniya in the research area of Asbestos-Related Occupational Health at NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, Dr A. Wijayasinghe, and **Dr. M. Vithanage** since 2019-02-02.
35. Ms. W.M.S.N. Bandara is reading for a M. Phil degree at the University of Kelaniya in the research area of Environmental Toxicology at NIFS under the supervision of **Prof. D.N. Magana-Arachchi**, **Prof. M.S. Vithanage**, and Dr. R.P. Wanigatunge since 2021-07-08.
36. Ms. C. Bandara is reading for a M. Phil degree at Postgraduate Institute of Science, University of Peradeniya in the research area of Potential of Cyanobacteria for value addition at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2022-12-12.
37. Ms. A. Muralitharan is reading for a M. Phil degree at University of Peradeniya in the research area of Soil science at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2022-12-21.
38. Mr. P. Manamendra is reading for a M. Phil degree at Postgraduate Institute of Science, University of Peradeniya in the research area of Soil Carbon sequestration in wetland ecosystems at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-02-07.
39. Ms.W.D.U. Premarathna is reading for a M. Phil degree at University of Peradeniya in the research area of Soil Science at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-10-02.
40. Ms. D.D.M.O. Dissanayake is reading for a M. Phil degree at Postgraduate Institute of Science, University of Peradeniya in the research area of Soil Carbon sequestration at NIFS under the supervision of **Prof. R.R. Ratnayake**, and **Prof. S. Seneweera** since 2018-07-26.
41. Ms. S. W. Meepegamage is reading for a M. Phil degree at University of Peradeniya in the research area of Molecular Microbiology at NIFS under the supervision of **Prof. G. Seneviratne** since 2017-10-01.
42. Mr. D.R. Charles is reading for a M. Phil degree at university of peradeniya in the research area of Geophysics at NIFS under the supervision of **Prof. N.D. Subasinghe** Prof. H.M.T.G.A. Pitawala since 2012-02-12.
43. Ms. G. Wijesinghe is reading for a M. Phil degree at University of Peradeniya in the research area of Sedimentology, Mineral Exploration at NIFS under the supervision of Dr. P.L. Dharmapriya, Dr. S. Malaviarachchi, Mr. M. Satish-kumar, and **Prof. N.D. Subasinghe** since 2018-11-24.
44. Mr. R.A. Rathnayake is reading for a M. Phil degree at University of Peradeniya in the research area of Thermoelectricity at NIFS under the supervision of **Prof. N.D. Subasinghe**, and Dr. B.M.K. Pemasiri since 2020-01-27.

45. Ms. P. Rukshagini is reading for a M. Phil degree at University of Peradeniya in the research area of water chemistry at NIFS under the supervision of **Prof. R. Weerasooriya** since 2018-03-01.
46. Ms. P. M. C. J. Bandara is reading for a M. Phil degree at University of Peradeniya in the research area of Water Chemistry at NIFS under the supervision of **Prof. R. Weerasooriya**, Prof. A. R. Kumarasinghe, Prof. Xing Chen, and Prof. Balasooriya since 2020-12-01.
47. Mr. P.L.C.U.S.B. Lekamge is reading for a M. Phil degree at PGIS, University of Peradeniya in the research area of Forest restoration and Conservation at NIFS under the supervision of **Prof. D.S.A. Wijesundara**, **Prof. M.C.M. Iqbal**, and Prof. H.M.S.P. Madawala since 2017-02-01.
48. Mr. J.H.T.B. Jayamaha is reading for a M. Phil degree at University of Jaffna in the research area of Novel Electrolyte and Electrode Materials for Secondary Sodium-ion and Magnesium-ion Batteries at NIFS under the supervision of Dr. K. Vignarooban, and **Dr. H.W.M.A.C. Wijayasinghe** since 2019-01-01.
49. Mr. Y.M.I.B. Samarakoon is reading for a M. Phil degree at Postgraduate Institute of Science, University of Peradeniya in the research area of Development of vein quartz for energy conversion applications at NIFS under the supervision of **Dr. H.W.M.A.C. Wijayasinghe**, Dr. T.H.N.G. Amaraweera, and Dr. R.J.K.U. Ranathunga since 2019-06-01.
50. Mr R. Brahmanage is reading for a M. Phil degree at University of Colombo in the research area of Fungi in Eucalyptus plantations at NIFS under the supervision of **Prof. D.S.A. Wijesundara**, Prof Nalin Wijayawardena, Prof sameera Ariyawansa, and Prof Chandrika Nanayakkara since 2022-01-01.
51. Ms. B. Premarathne is reading for a M. Phil degree at University of Peradeniya in the research area of Mushroom at NIFS under the supervision of **Prof. D.S.A. Wijesundara** since 2022-10-01.
52. Ms. D. Hewawasam is reading for a M. Phil degree at University of Moratuwa in the research area of Development of a commercial type lithium-ion battery using Sri Lankan graphite at NIFS under the supervision of **Dr. H.W.M.A.C. Wijayasinghe**, Dr. S. Witharana, Dr. L. Subasinghe, Dr. T.H.N.G. Amaraweera, and Prof. I. Albinsson since 2023-02-14.
53. Ms. H.F. Fahmidah is reading for a M. Phil degree at University of Peradeniya in the research area of Food Chemistry at NIFS under the supervision of **Prof. J.M.N. Marikkar**, and **Prof. U.L.B. Jayasinghe** since 2023-03-29.
54. Ms. H.K.G.B.M. Premarathne is reading for a M. Phil degree at Postgraduate Institute of Science, University of Peradeniya in the research area of Taxonomy of mushrooms at NIFS under the supervision of **Prof. D.S.A. Wijesundara** since 2022-10-01.

M.Sc. Research work in progress

1. Mr. S.A.D.A.V. Sumithraarachchi, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Water Purification" at the NIFS under the supervision of **Prof. J. Bandara** since 2018-06-18.
2. Ms. J.M.R.V. Jayasundara, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Photocatalysts" at the NIFS under the supervision of **Prof. J. Bandara** since 2020-11-21.

3. Mr. D.C. Rajapakse, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Water Splitting with aid of thin film photocatalytic surface" at the NIFS under the supervision of **Prof. J. Bandara** since 2022-06-12.
4. Ms. A. Karunarathne, M.Sc. student of Postgraduate Institute of Science, University of Peradeniya is conducting the M.Sc. research project in the research area of "Quantum dot sensitized solar cells" at the NIFS under the supervision of Prof. T.M.W.J. Bandara, and **Prof. M.A.K.L. Dissanayake** since 2022-07-17.
5. Ms. S.M.K.T. Samarakoon, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Microbiology" at the NIFS under the supervision of **Prof. L. Jayasinghe**, and **Prof. N.K.B. Adikaram** since 2022-02-07.
6. Ms. T. D. A. D. K. Kulathunge, M.Sc. student of University of Kelaniya is conducting the M.Sc. research project in the research area of "Natural products" at the NIFS under the supervision of **Prof. U.L.B. Jayasinghe** since 2022-04-01.
7. Mr. D.A.N.C. Abeysekara, M.Sc. student of PGIS, University of Peradeniya is conducting the M.Sc. research project in the research area of "Nanoscience and nanotechnology" at the NIFS under the supervision of **Prof. G.R.A. Kumara**, and Prof. R.M.G. Rajapakse since 2018-04-02.
8. Mr.H.W. Gardiarachchi, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Dye-sensitized solar cells" at the NIFS under the supervision of **Prof. G.R.A. Kumara**, and Prof.R.M.G. Rajapakse since 2021-10-21.
9. Mr. T. Otsuka, M.Sc. student of Toyota Technological Institute, Nagoya, Japan is conducting the M.Sc. research project in the research area of "Anode materials for lithium-ion batteries using carbon materials" at the NIFS under the supervision of **Prof. G.R.A. Kumara**, and Prof. M. Yoshimura since 2023-08-01.
10. Ms. H.A.C. Dias, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Medical Microbiology" at the NIFS under the supervision of **Prof. R. Liyanage** since 2022-10-04.
11. Ms. S.M.D.C. Bandara, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of " Total lipid content and fatty acid composition of three morphologically-distinct *chlorella* spp. Isolated from three different freshwater bodies in Sri Lanka for biodiesel production" at the NIFS under the supervision of **Prof. R.R. Ratnayake** Since 2022-12-12.
12. G.P.R.D. Pathirana, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Molecular biology and biotechnology" at the NIFS under the supervision of **Prof. G. Seneviratne** since 2022-09-01.
13. Mr. S.N.B. Ekanayake, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Soil carbon sequestration" at the NIFS under the supervision of **Prof. G. Seneviratne** since 2022-10-01.
14. Ms. A.M.A.M. Abeyasinghe, M.Sc. student of University of Peradeniya is conducting the M.Sc. research project in the research area of "Geothermal" at the NIFS under the supervision of **Prof. N.D. Subasinghe** since 2020-12-01.
15. Ms. A. R. G. T. K. Agalawela, M.Sc. student of Postgraduate Institute of Agriculture, University of Peradeniya is conducting the M.Sc. research project in the research area of "Plant Taxonomy"

at the NIFS under the supervision of **Prof. D.S.A. Wijesundara**, Dr. N. Sirimalwatte, and Prof. S. C. Karunarathna since 2023-04-03.

16. Ms. A. E. Amarasekera, M.Sc. student of Postgraduate Institute of Peradeniya is conducting the M.Sc. research project in the research area of "Membrane Development" at the NIFS under the supervision of **Prof. R. Weerasooriya** since 2021-01-15.

B.Sc. Undergraduate Industrial Training in Progress

1. Mr. A. K. Gamage from University of Jaffna conducting the Industrial Training at NIFS under the supervision of Prof. **S. R. Kodituwakku** since 2023-09-01.
2. Mrs. B. N, Madumithili from University of Peradeniya conducting the Industrial Training at NIFS under the supervision of Prof. **S. R. Kodituwakku** since 2023-01-30.
3. Mr. R.M.A.M.B. Ratnayake from University of Peradeniya conducting the Industrial Training at NIFS under the supervision of **Prof. G.R.A. Kumara** since 2023-07-31
4. Ms. M.S. Lakmali from University of Colombo conducting the Industrial Training at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** since 2023-07-10.
5. Ms.M.H.F. Muzna from University of Kelaniya conducting the Industrial Training at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** since 2023-11-20.
6. Mr.M.G.S.B. Marasinghe from University of Kelaniya conducting the Industrial Training at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** since 2023-11-20.
7. Mr. D.M.N.B. Dissanayake from Bangalore University, India conducting the Industrial Training at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2022-12-01.

B.Sc. Undergraduate projects in Progress

1. Ms. S. A. P. M. Bandara, undergraduate student of University of Jayawardanapura is conducting the research project in the research area of "Microplastic Analysis" at the NIFS under the supervision of **Dr. I. P. L. Jayarathne** since 2023-10-23.
2. Mr. B. V. C. M. Benaragama, undergraduate student of Institute of Chemistry Ceylon is conducting the research project in the research area of "Microplastics (Environmental)" at the NIFS under the supervision of **Dr. I. P. L. Jayarathne** since 2023-10-19.
3. Mr. K. B. Samarasundera, undergraduate student of Institute of Chemistry Ceylon is conducting the research project in the research area of "Catalytic reaction for Zeolite material" at the NIFS under the supervision of **Dr. I. P. L. Jayarathne** since 2023-10-19.
4. Mr. H. P. B. S. T. D. Silva, undergraduate student of University of Peradeniya is conducting the research project in the research area of "Zeolite material" at the NIFS under the supervision of **Dr. I. P. L. Jayarathne**, and Dr. W. M. A. T. Bandara since 2023-07-01.
5. Ms. T. B. Withanawasam, undergraduate student of Open University Srilanka is conducting the research project in the research area of "Natural products" at the NIFS under the supervision of **Prof. U.L.B. Jayasinghe** since 2023-06-15.

6. Ms. M.A.K.H. Mallawa Arachchi, undergraduate student of University of Peradeniya is conducting the research project in the research area of "Natural Products, Food Science" at the NIFS under the supervision of **Prof. U.L.B. Jayasinghe**, and Prof. E. Mendis since 2023-09-01.
7. Mr.H. A K. D. Premasiri, undergraduate student of University of Sri Jayewardenepura is conducting the research project in the research area of "Natural Products" at the NIFS under the supervision of **Prof. U.L.B. Jayasinghe** since 2023-10-23.
8. Ms. W.A.D.S. Wijesinghe, undergraduate student of Open University of Sri Lanka is conducting the research project in the research area of "Natural Products" at the NIFS under the supervision of Rodrigo, S., and **Prof. U.L.B. Jayasinghe** since 2022-12-13.
9. Ms. S.G.R.L. Abeysinghe, undergraduate student of Faculty of Applied Sciences, Rajarata University is conducting the research project in the research area of "Development of a counter electrode for dye-sensitized solar cells application using activated coconut shell charcoal and carbon nanotube composite" at the NIFS under the supervision of **Prof. G.R.A. Kumara**, and Dr. J.M.K.W. Kumari since 2023-10-11.
10. Ms.M.S.S.P. Somarathna, undergraduate student of University of Peradeniya is conducting the research project in the research area of "Food and Nutrition" at the NIFS under the supervision of Prof. B.C. Jayawardana, Dr. P. Weththasinghe, and **Prof. R. Liyanage** since 2023-12-18.
11. Ms. T.M.D.H. Kumarasinghe, undergraduate student of University of Peradeniya is conducting the research project in the research area of "Human Nutrition" at the NIFS under the supervision of Prof. B.C. Jayawardana, Dr. P. Weththasinghe, and **Prof. R. Liyanage** since 2023-12-18.
12. Ms. W.A.S.H. Senevirathne, undergraduate student of Sabaragamuwa University of Sri Lanka is conducting the research project in the research area of "Nutritional Biochemistry" at the NIFS under the supervision of **Prof. R. Liyanage** since 2023-12-18.
13. Mr. D.G.C.S. Illangarathne, undergraduate student of Open University of Sri Lanka is conducting the research project in the research area of "Food Chemistry" at the NIFS under the supervision of **Prof. J.M.N. Marikkar** since 2023-06-06.
14. Ms. K.G.S.N. Kumari, undergraduate student of Open University Sri Lanka is conducting the research project in the research area of "Food and Nutrition" at the NIFS under the supervision of **Prof. J.M.N. Marikkar** since 2023-06-14.
15. Ms. M.M.P.M. Marasinghe, undergraduate student of University of Peradeniya is conducting the research project in the research area of "Food Chemistry" at the NIFS under the supervision of **Prof. J.M.N. Marikkar** since 2023-12-04.
16. Ms. E.M.U.D.M. Ekanayake, undergraduate student of Sabaragamuwa University of Sri Lanka is conducting the research project in the research area of "Food Chemistry" at the NIFS under the supervision of **Prof. J.M.N. Marikkar** since 2023-12-18.
17. Ms. Ariyachandra S., undergraduate student of Sabaragamuwa University of Sri Lanka is conducting the research project in the research area of "Microbiology and Bioremediation" at the NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-08-31.
18. Ms. Maheswaran R., undergraduate student of University of Ruhuna is conducting the research project in the research area of "Soil Science" at the NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-11-28.

19. Ms. Mahendraraj K, undergraduate student of University of Ruhuna is conducting the research project in the research area of "Soil Science" at the NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-11-28.
20. Ms. Zakey A, undergraduate student of University of Ruhuna is conducting the research project in the research area of "Microbiology and Bioremediation" at the NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-11-28.
21. Mr. R.M.S.S. Rasnayake, undergraduate student of The Open University Sri Lanka is conducting the research project in the research area of "Solar cells" at the NIFS under the supervision of **Prof. G.K.R. Senadeera** since 2023-02-03.
22. Ms. W.M.S.K. Weerasekara, undergraduate student of The Open University of Sri Lanka is conducting the research project in the research area of "Solar Cells" at the NIFS under the supervision of **Prof. G.K.R. Senadeera** since 2023-04-11.
23. Ms. P. G. S. M. Silva, undergraduate student of Sabaragamuwa University of Sri Lanka, is conducting the research project in the research area of "Microbiology" at the NIFS under the supervision of **Prof. D.S.A. Wijesundara** since 2023-12-04.
24. Ms. N.K. Jinasena, undergraduate student of Sabaragamuwa University of Sri Lanka is conducting the research project in the research area of "Phytoremediation" at the NIFS under the supervision of **Prof. D.S.A. Wijesundara** since 2023-08-30.
25. Ms. H.W. M. M. Chandrasena, undergraduate student of Uva Wellassa University of Sri Lanka is conducting the research project in the research area of "Electrochemical Exfoliation of Vein Graphite" at the NIFS under the supervision of Mr. H.P.T.S. Hewathilake, Dr. T.H.N.G. Amaraweera, and **Dr. H.W.M.A.C. Wijayasinghe** since 2023-08-25.
26. Mr.S.M.M.U. Sivirathnan, undergraduate student of Rajarata University of Sri Lanka is conducting the research project in the research area of "Development of PVDF Polymer-based Gel Polymer Electrolyte for Lithium-Ion Batteries" at the NIFS under the supervision of Dr. J.M.K.W. Kumari, **Dr. H.W.M.A.C. Wijayasinghe**, and Dr. H.O. Wijewardane since 2023-09-01.

Training as a Volunteer Research Assistants

1. Ms. T. Hettiarachchi is training as a Research student in the research area of Primate Biology at NIFS under the supervision of **Prof. W.P.J. Dittus** since 2020-09-28.
2. Ms. T.G.N.M. T. Bandara is training as a Research student at NIFS in the research area of "Research Observation and Internship" under the supervision of **Prof. M.A.K.L. Dissanayake**, and **Prof. G.K.R. Senadeera** since 2023-09-02.
3. Mr. A.M.L.E. Bandara is training as a Research student at NIFS in the research area of "Solar Cells" under the supervision of **Prof. M.A.K.L. Dissanayake**, and **Prof. G.K.R. Senadeera** since 2023-09-11.
4. Ms. T. R. Wekadapola is training as a Research student at NIFS in the research area of "Natural Products" under the supervision of **Prof. U.L.B. Jayasinghe** since 2023-09-20.
5. Mr.R.R.M.M.N.B. Bambaradeniya is training as a Research student at NIFS in the research area of "Activated carbon supercapacitors" under the supervision of **Prof. G.R.A. Kumara** since 2023-10-02.

6. Ms.K.V.D. Madhuwanthi is training as a Research student at NIFS student of University of Peradeniya is conducting the research project in the research area of "Dye-Sensitized Solar Cells" at the NIFS under the supervision of **Prof. G.R.A. Kumara**, and Dr. T.J.D. Abeysekera since 2022-12-01.
7. Mr. I.G.K.D. Amarathunga is training as a Research student at NIFS in the research area of "Solar cells" under the supervision of **Prof. G.R.A. Kumara** since 2022-11-30.
8. Mr. P.M.L. Kumarage is training as a Research student at NIFS in the research area of "Supercapacitors" under the supervision of **Prof. G.R.A. Kumara** since 2022-10-02.
9. Mr. W.M.C. Weerasekara is training as a Research student at NIFS in the research area of "Solar Cells" under the supervision of **Prof. G.R.A. Kumara** since 2023-05-01.
10. Ms. M.A.D.M. Fernando is training as a Research student at NIFS in the research area of "Food Science" under the supervision of **Prof. R. Liyanage** since 2023-10-03.
11. Ms. R.G.S.D Rambodagedara is training as a Research student at NIFS student of Institute of Chemistry Ceylon is conducting the research project in the research area of "Food science" at the NIFS under the supervision of **Prof. R. Liyanage** since 2023-02-13.
12. Ms. R.G.S.D Rambodagedara is training as a Research student at NIFS student of Institute of Chemistry Ceylon is conducting the research project in the research area of "Food science" at the NIFS under the supervision of **Prof. R. Liyanage** since 2023-02-13.
13. Ms.W.K.H.K. Welagedara is training as a Research student at NIFS student of University of Peradeniya is conducting the research project in the research area of "Molecular Microbiology and Human Diseases" at the NIFS under the supervision of **Prof. D.N. Magana-Arachchi** since 2023-04-17.
14. Ms.R.A.K. Dissanayake is training as a Research student in the research area of Molecular Microbiology at NIFS under the supervision of **Prof. D.N. Magana-Arachchi** since 2023-11-15.
15. Ms. D. Kahawita is training as a Research student at NIFS in the research area of "Microbiology and Soil Ecosystems" under the supervision of **Prof. R.R. Ratnayake** since 2023-11-29.
16. Ms.S.S. Wijesundara is training as a Research student in the research area of Microbiology at NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-01-16.
17. Ms. P. Herath is training as a Research student at NIFS student of Sri Lanka Institute of Information Technology (SLIIT) is conducting the research project in the research area of "Microbiology and Soil Ecosystems" at the NIFS under the supervision of **Prof. R.R. Ratnayake** since 2023-11-15.
18. Mr. C.L. Jayaweera is training as a Research student at NIFS student of University of Peradeniya is conducting the research project in the research area of "case study on water treatment plant using nano and reverse osmosis membranes for water desalination" at the NIFS under the supervision of **Prof. R. Weerasooriya** since 2023-08-25.

AWARDS & RECOGNITIONS

Awards:

1. **Prof. J. Bandara** awarded a Fellowship by AvH Foundation, Technical University Dresden, Germany from 2023-08-01 to 2023-10-31.
2. **Prof. J. Bandara** awarded a Fellowship by Chinese Academy of Sciences (The CAS President's International Fellowship Initiative, PIFI) from 2022-08-30 to 2023-04-30.
3. **Ms. W.M.S. N. Bandara** received a National Award for being a finalist in the Three Minute Thesis Competition on 2023-06-20.
4. **Ms.W.R.U.A. Bandara** received the Award for Scientific Publications in the Category of Research Assistant from National Institute of Fundamental Studies on 2023-04-04.
5. **Prof. S.P. Benjamin** received the SUSRED (Support Scheme for Supervision of Research Degrees) from National Science Foundation on 2022-06-13.
6. Ms. Bowange T.K. received the Best Paper Award from International Research Conference of SLTC Research University 2023 (IRC2023) on 2023-12-15.
7. **Prof. M.A.K.L. Dissanayake** received a National Competitive Award for SUSRED (Support Scheme for Supervision of Research Degrees) 2021/2022 on 2023-07-06.
8. **Ms. H.M.S.A.T Gunathilaka** received a National Award for being a finalist in the Three Minute Thesis Competition on 2023-06-20.
9. **Ms. M.S.H. Hettiarachchi** received the award for Scientific Publications in the category of research assistants from National Institute of Fundamental Studies on 2023-04-04.
10. **Dr. I.P.L. Jayarathna** received a National Competitive Award for All Island research competition on 2023-06-19.
11. **Prof. U.L.B. Jayasinghe** received a National Award for General research committee award, Sri Lanka Association for the Advancement of Science on 2023-12-10.
12. **Prof. U.L.B. Jayasinghe** received the NSF SUSRED Award - 2019 from National Science Foundation on 2023-05-03.
13. **Prof. U.L.B. Jayasinghe** received a NIFS Outstanding Scientist for Senior Research Professor category on 2023-04-04.
14. **Prof. G.R.A. Kumara** received an International Award for Best AD Scientific Index scientist in the country in Energy Engineering on 2023-06-28.
15. **Prof. G.R.A. Kumara** received an International Award for World's Top 10% Scientists on 2023-06-28.
16. **Prof. G.R.A. Kumara** Chief Guest for Science Day Programme of Swarnamali Girl's College, Kandy in 2023.

17. **Prof. R. Liyanage** received a Presidential Award for Applicability and reliability of the glucose oxidase method in assessing alpha amylase inhibitory activity - Journal of Food Chemistry on 2023-11-21.
18. **Prof. D.N. Magana-Arachchi** received a NIFS Outstanding Scientist for Research Excellence Award in the category of Associate Research Professor in the 2022 Academic Year on 2023-04-04.
19. **Prof. J.M.N. Marikkar** awarded a Research Fellowship by INTI International University Malaysia from 2023-06-01 to 2025-12-31.
20. **Ms. H.M.H.D.K. Naranpanawa** received the Best Presenter from National Science and Technology Commission on 2023-01-27.
21. **Prof. G.K.R. Senadeera** received a National Award for OUSL Research Award on 2023-11-09.
22. **Prof. G.K.R. Senadeera** received a National Competitive Award for SUSRED (Support Scheme for Supervision of Research Degrees) 2021/2022 on 2023-07-06.
23. **Ms. K. Samarakoon** received the award for Scientific publications in the Category of Research Assistant from National Institute of Fundamental Studies on 2023-04-04.
24. **Prof. G. Seneviratne** received an International Competitive Award for Best Scientist in Sri Lanka in the field of Agriculture on 2023-01-01.
25. **Ms. S. Saseevan** received First Place in the NIFS Three Minute Thesis Competition on 2023-06-20.
26. **Ms. S. Saseevan** received the Award for Scientific Publications in the Category of Research Assistant from National Institute of Fundamental Studies on 2023-04-04.
27. **Prof. R. Weerasooriya** received an International Competitive Award for Overseas Talents Plan on 2023-12-02.
28. **Prof. R. Weerasooriya** received a NIFS Outstanding Scientist for Senior Category on 2023-03-02.
29. **Prof. R. Weerasooriya** received a Presidential Award on 2023-11-02.
30. **Prof. R. Weerasooriya** received a National Award for SUSRED award remediation of fluoride and nitrate rich drinking SUSRED award water with high hardness through electrocoagulation and electro dialysis on 2023-05-23.
31. **Prof. R.R. Ratnayake** received a National Award for postgraduate supervision (SUSRED 2021/2022) based on the thesis entitled as "Isolation of Denitrifying Bacteria and their Potential use in Nitrate Removal from Well Water of Jaffna District" on 2023-05-01.
32. **Prof. R.R. Ratnayake** received a National Award for postgraduate supervision (SUSRED 2021/2022) based on the thesis entitled as "Microbial Celluloses: The Potential Application in biofuel production textile industry and agriculture" on 2023-04-14.
33. **Ms. P.S. Ruwanpathirana** received the Merit award for oral presentation made on Potential of *Nostoc* sp. as a biofertilizer on growth and yield of paddy-*oryza sativa* from National Science and Technology Commission, Young Scientists Forum (YSF) on 2023-01-27.

34. **Ms. B.S.K. Ulpathakumbura** received the award for Scientific publications in the Category of Research Assistant from National Institute of Fundamental Studies on 2023-04-04.
35. **Ms. K.M.R.U. Gunarathna** received a NIFS Outstanding Scientist for Research excellence under research assistant category on 2023-04-04.
36. **Ms. H.M.H.D.K. Naranpanawa** received the award for scientific publications in the category of research assistants at National Institute of Fundamental Studies from National Institute of Fundamental Studies, Kandy, Sri Lanka on 2023-04-04.
37. **Ms. H.M.H.D.K. Naranpanawa** received the best presenter from 11th YSF Symposium organized by Young Scientist Forum, National Science and Technology Commission on 2023-01-27.
38. **Dr. J.M.K.W. Kumari** received the award for Scientific Publications in the category of research assistants from National Institute of Fundamental Studies on 2023-04-04.

Recognition:

1. **Prof. N.K.B. Adikaram** received the recognition as third best in the country in Plant Science according to the AD scientific index - Sri Lanka scientists on 2023-08-16.
2. **Prof. M.A.K.L. Dissanayake** chairperson of "Physical Sciences session" of Young Scientists' Conference on Multidisciplinary Research (YSCMR-2023) at National Institute of Fundamental Studies on 2023-11-09.
3. **Prof. M.A.K.L. Dissanayake** received the certificate of completion for the project titled "Engineering nanomaterials for photovoltaic and environmental remedial applications" from Accelerating Higher Education Expansion and Development (AHEAD) Operation on 2023-11-01.
4. **Prof. M.A.K.L. Dissanayake** received the recognition of ranking as the best scientist in Metallurgical & Materials Engineering in Sri Lanka from the AD Scientific Index 2023 on 2023-06-24.
5. **Prof. M.A.K.L. Dissanayake** Deputy Project Director of the Edu-Training project on Prototype manufacturing of thin film solar cells at Ministry of Technology and Innovation from 2017-01-01 to 2024-01-01.
6. **Prof. M.A.K.L. Dissanayake** Chief Guest for "Experzio 22", all island research symposium of Research Unit of Kingswood College, Kandy in 2023.
7. **Prof. M.A.K.L. Dissanayake** received the recognition of ranking among top 2% researchers in the world from Standard University, United States on 2023-10-04.
8. **Prof. N.D. Subasinghe** Member of consultation group at Revision of Hanthana Environmental Protection Area (HEPA) Gazette from 2023-01-01 to 2024-06-30.
9. **Prof. R. Weerasooriya** severed as the Visiting Faculty from Dept of Environmental Science; Department of Soil Science, University of Peradeniya on 2023-07-14.
10. **Prof. R. Weerasooriya** Chairperson for the International Water Conference 14-15 Dec., 2023 from Chinese Academy of Sciences on 2023-12-14.

11. **Prof. R. Liyanage** received the Certificate of recognition for second best in the country in Nutrition & Dietetics Science According to the AD Scientific Index-Sri Lanka Scientists Ranking on 2023-08-16.
12. **Prof. J.M.N. Marikkar** received the Certificate of recognition as the fourth best in the country in Food Science & Engineering according to the AD Scientific Index-Sri Lanka Scientists Ranking on 2023-08-16.
13. **Prof. R. Liyanage** received the Session Chair (Food Science and Nutrition) of the 9th Undergraduate Research Symposium (UReS) from Faculty of Livestock Fisheries and Nutrition - Wayamba University of Sri Lanka on 2023-02-16.
14. **Prof. R. Liyanage** invited as a resource person for A/L Teacher In-Service Training Curriculum Development from National Institute of Education, Sri Lanka on 2023-07-19.
15. **Prof. R. Liyanage** was the Chairperson-Biological Sciences Session 01-Young Scientists Multidisciplinary Research (YSCMR)-2023 from National Institute of Fundamental Studies on 2023-11-09.
16. **Prof. R. Liyanage** received the one of the the Top cited articles in the Journal of the Science of Food and Agriculture in 2021-2022 from Journal of the Science of Food and Agriculture on 2023-01-01.
17. **Prof. D.N. Magana-Arachchi** Reviewer for Young Scientists' Conference on Multidisciplinary Research (YSCMR), National Institute of Fundamental Studies in 2023.
18. **Prof. D.N. Magana-Arachchi** Visiting Lecturer at PGIA University of Peradeniya from 2021-06-07 to 2023-12-31.
19. **Prof. D.N. Magana-Arachchi** Reviewer for Postgraduate Institute of Science-Research Congress (RESCON) in 2023.
20. **Prof. J.M.N. Marikkar** Reviewer for Young Scientists' Conference on Multidisciplinary Research (YSCMR), National Institute of Fundamental Studies in 2023.
21. **Prof. R. Weerasooriya** Resource Person at Ministry of Water Supply on 2023-01-01.
22. **Prof. R. Weerasooriya** acted as the Visiting Faculty Post graduate lecturing at Dept Civil Engineering, University of Moratuwa on 2023-01-13.
23. **Prof. R. Weerasooriya** was the Visiting Faculty from Rajarata University on 2023-01-01.
24. **Prof. U.L.B. Jayasinghe** received the recognition as the best in the country in Pharmacy & Pharmaceutical Science according to the AD scientific index - Sri Lanka scientists on 2023-08-16.
25. **Prof. R. Weerasooriya** Chairperson- Water Quality Management- I at University of Peradeniya on 2023-08-18.
26. **Prof. J. Bandara** received the recognition of ranking as the best scientist in Nanoscience and Nanotechnology in Sri Lanka from AD Scientific Index on 2023-06-24.
27. **Prof. R.R. Ratnayake** Chief Guest for “COMPENDIUM 23” all-island Inter-School Research Quiz Competition organized by Research Societies of Dharmaraja College, Kandy & Mahamaya Girls' College, Kandy in 2023.

28. **Prof. R.R. Ratnayake**, Member of expert panel of consultation group at Revision of Hanthana Environmental Protection Area (HEPA) Gazette from 2023-01-01 to 2024-06-30
29. **Prof. R.R. Ratnayake**, was the Chairperson-Biological Sciences Session 01-Young Scientists Multidisciplinary Research (YSCMR)-2023 from National Institute of Fundamental Studies on 2023-11-09.
30. **Prof. D.S.A. Wijesundara** member at Expert panel – Forestry Sector Master Plan from 2022-01-10 to 2023-12-31.

Reviewer:

1. **Prof. J. Bandara** Reviewer for Solar RRL in 2023.
2. **Prof. S.P. Benjamin** Reviewer for phylogeny in 2023.
3. **Prof. S.P. Benjamin** Reviewer for European Journal of Taxonomy in 2023.
4. **Prof. S.P. Benjamin** Reviewer for Peer review of the submitted manuscript in Arthropod systematics and Phylogeny in 2023.
5. **Prof. S.P. Benjamin** Reviewer submitted manuscript in Arachnology in 2023.
6. **Prof. S.P. Benjamin** Reviewer for Zoosystematics and Evolution in 2023.
7. **Prof. S.P. Benjamin** Reviewer for Peer review of the submitted manuscript in Biodiversity Data Journal in 2023.
8. **Prof. M.A.K.L. Dissanayake** Reviewer for Materials Science in Semiconductor Processing in 2023.
9. **Prof. M.A.K.L. Dissanayake** Reviewer for Research Congress of the Postgraduate Institute of Science, University of Peradeniya (RESCON 2023) in 2023.
10. **Prof. M.A.K.L. Dissanayake** Reviewer for Optical Materials in 2023.
11. **Prof. M.A.K.L. Dissanayake** Reviewer for Electrochimica Acta in 2023.
12. **Ms. H.M.S.A.T. Gunathilaka** Reviewer for the Experzio 22 All-Island Research Symposium, organized by the Kingswood Research Unit, Kingswood College Kandy in 2023.
13. **Ms. R.I.S. Karunathilaka** Reviewer for the Experzio 22 All-Island Research Symposium, organized by the Kingswood Research Unit, Kingswood College Kandy in 2023.
14. **Prof. G.R.A. Kumara** reviewer for Journal of Materials Science in 2023.
15. **Prof. G.R.A. Kumara** reviewer for Journal of Alloy Compounds in 2023.
16. **Prof. G.R.A. Kumara** reviewer for Applied Nano Material in 2023.
17. **Prof. G.R.A. Kumara** reviewer for Applied Electronic material in 2023.
18. **Prof. G.R.A. Kumara** reviewer for PGIS research Congress University of Peradeniya (RESCON 2023) in 2023.

19. **Prof. G.R.A. Kumara** reviewer for Young Scientists Conference on Multidisciplinary Research (YSCMR-2023) in 2023.
20. **Prof. R. Liyanage** Reviewer for Journal of Technology and Value Addition in 2023.
21. **Prof. R. Liyanage** Reviewer for Experzio 22 All-Island Research Symposium in 2023.
22. **Prof. R. Liyanage** Reviewer for Young Scientists' Conference Multidisciplinary Research (YSCMR)-2023 in 2023.
23. **Prof. D.N. Magana-Arachchi** Reviewer for the Experzio 22 All-Island Research Symposium, organized by the Kingswood Research Unit, Kingswood College Kandy in 2023.
24. **Prof. D.N. Magana-Arachchi** Reviewer for Journal of the National Science Foundation of Sri Lanka (Special Issue) in 2023.
25. **Prof. D.N. Magana-Arachchi** Reviewer for The Lancet Regional Health – Southeast Asia in 2023.
26. **Prof. J.M.N. Marikkar** Reviewer for Sri Lankan Journal of Technology in 2023.
27. **Prof. J.M.N. Marikkar** Reviewer for LWT-Food Science and Technology in 2023.
28. **Prof. R.R. Ratnayake** Reviewer for International Journal of Environmental Issues in 2023.
29. **Prof. R.R. Ratnayake** Reviewer for Journal of Agronomy in 2023.
30. **Ms. S. Saseevan** Reviewer for the Experzio 22 All-Island Research Symposium, organized by the Kingswood Research Unit, Kingswood College Kandy in 2023.
31. **Prof. R. Weerasooriya** Reviewer for Groundwater for Sustainable Development in 2023.
32. **Prof. R. Weerasooriya** Reviewer for Toxicology Reports in 2023.
33. **Prof. R. Weerasooriya** Reviewer for Heliyon in 2023.
34. **Prof. R. Weerasooriya** Reviewer for Environmental Pollution in 2023.
35. **Prof. R. Weerasooriya** Reviewer for South African Journal of Chemical Engineering in 2023.
36. **Prof. R. Weerasooriya** Reviewer for Arabian Journal of Chemistry in 2023.
37. **Prof. R. Weerasooriya** Reviewer for Journal of Environmental Chemical Engineering in 2023.
38. **Prof. R. Weerasooriya** Reviewer for International Journal of Electrochemical Science in 2023.
39. **Prof. R. Weerasooriya** Reviewer for Colloids and Surfaces A: Physicochemical and Engineering Aspects in 2023.
40. **Prof. R. Weerasooriya** Reviewer for Applied Surface Science Advances in 2023.
41. **Prof. R. Weerasooriya** Reviewer for Journal of Environmental Management in 2023.
42. **Prof. R. Weerasooriya** Reviewer for Air Quality, Atmosphere & Health in 2023.

43. **Prof. R. Weerasooriya** Reviewer for Diamond & Related Materials in 2023.
44. **Prof. R. Weerasooriya** Reviewer for Journal of Hazardous Materials in 2023.
45. **Prof. R. Weerasooriya** Reviewer for Journal of Alloys and Compounds in 2023.
46. **Prof. R. Weerasooriya** Reviewer for Water, Air, & Soil Pollution in 2023.
47. **Prof. R. Weerasooriya** Reviewer for Process Safety and Environmental Protection in 2023.
48. **Prof. R. Weerasooriya** Reviewer for Materials Chemistry and Physics in 2023.
49. **Prof. R. Weerasooriya** Reviewer for Journal of Water Process Engineering in 2023.
50. **Prof. R. Weerasooriya** Reviewer for Environmental Geochemistry and Health in 2023.
51. **Prof. R. Weerasooriya** Reviewer for Air Quality, Atmosphere & Health in 2023.
52. **Prof. R. Weerasooriya** Reviewer for Journal of Environmental Management in 2023.
53. **Prof. R. Weerasooriya** Reviewer for Chemosphere in 2023.
54. **Prof. R. Weerasooriya** Reviewer for Process Safety and Environmental Protection in 2023.
55. **Prof. R. Weerasooriya** Reviewer for Journal of Water Process Engineering in 2023.
56. **Prof. R. Weerasooriya** Reviewer for Journal of Chemical Environmental Engineering Reviewer in 2023.
57. **Prof. R. Weerasooriya** Reviewer for Ecotoxicology and Environmental Safety in 2023.
58. **Prof. R. Weerasooriya** Reviewer for Journal of Water Process Engineering in 2023.

Serving in Committees:

1. **Prof. M.A.K.L. Dissanayake** member of the evaluation committee for contract extension of Mr. A.G.C.N. Wijeratne, Research Assistant (Gr. II) at National Institute of Fundamental Studies on 2023-09-18.
2. **Prof. M.A.K.L. Dissanayake** core technical committee member of the 9th Biennial Conference on Science and Technology (BiCOST IX) at National Science and Technology Commission (NASTEC) from 2023-03-23 to 2023-03-24.
3. **Prof. M.A.K.L. Dissanayake** member of the Technical Evaluation Committee & Project Procurement Committee for the Project on Prototype Manufacturing of Solar Panels of the Ministry of Education at Ministry of Education on 2023-05-25.
4. **Prof. M.A.K.L. Dissanayake** member of the NIFS-TEC Committee to evaluate technical specifications for an Ultrasonic Cleaner at National Institute of Fundamental Studies on 2023-05-31.
5. **Prof. M.A.K.L. Dissanayake** member of the NIFS Committee to prepare a Policy Document for Sustainability of ongoing research projects at National Institute of Fundamental Studies on 2023-06-08.

6. **Prof. M.A.K.L. Dissanayake** member of the committee to evaluate the progress and recommend extensions for Ms. A.M.A.M. Abeyasinghe, Research Assistant (Gr. II) of NIFS ERRE Project at National Institute of Fundamental Studies on 2023-04-21.
7. **Prof. M.A.K.L. Dissanayake** member of the committee to evaluate the progress and recommend 6-month extensions for NIFS Research Assistants at National Institute of Fundamental Studies on 2023-04-21.
8. **Prof. M.A.K.L. Dissanayake** member of the committee on NIFS Strategic Plan at National Institute of Fundamental Studies on 2023-04-25.
9. **Prof. M.A.K.L. Dissanayake** member of the Interview Panel for the selection of Research Assistants for the Earth Resources and Renewable Energy Project of NIFS at National Institute of Fundamental Studies on 2023-01-09.
10. **Prof. M.A.K.L. Dissanayake** member of the evaluation committee for contract extension of Mr. A.D.T. Medagedara, Research Assistant (Gr. II) of NIFS at National Institute of Fundamental Studies on 2023-02-08.
11. **Prof. M.A.K.L. Dissanayake** member of the Technical Evaluation Committee (TEC) of NIFS for renovation work at Dambulla Arboretum at National Institute of Fundamental Studies on 2023-01-10.
12. **Prof. M.A.K.L. Dissanayake** committee member, Ad hoc Committee on Basic Sciences to support the Technical Evaluation Panel (TEP) of the Research Division in research grant evaluation and monitoring at National Science Foundation on 2023-04-24.
13. **Prof. M.A.K.L. Dissanayake** member of the evaluation committee to evaluate the application of Prof. Rohana Chandrajith for NIFS Adjunct Professorship at National Institute of Fundamental Studies on 2023-12-12.
14. **Prof. G.R.A. Kumara** Chairman at Committee to investigate the unavailable inventory items of SEDU at National Institute of Fundamental Studies on 2023-03-16.
15. **Prof. G.R.A. Kumara** Chairman at Committee to monitor the transport division at National Institute of Fundamental Studies on 2023-07-26.
16. **Prof. G.R.A. Kumara** Chairman at Evaluation committee to extension of contract of Mr. A.D.T. Medagedara research assistant Gr. (II) at National Institute of Fundamental Studies on 2023-02-08.
17. **Prof. G.R.A. Kumara** Chairman at Organizing committee of KARMANTHA 2023 at BMICH, Colombo. on 2023-06-22.
18. **Prof. G.R.A. Kumara** Chairman at School Science Program Committee at National Institute of Fundamental Studies on 2023-07-26.
19. **Prof. G.R.A. Kumara** Chairman at Technical committee to evaluate N2O Gas regulator with anti Freezer Unit at National Institute of Fundamental Studies on 2023-08-18.
20. **Prof. G.R.A. Kumara** Member at Technical evaluation committee of Simultaneous Thermal Analyzer at National Institute of Fundamental Studies on 2023-07-04.
21. **Prof. G.R.A. Kumara** Member at Selection Committee for Efficiency Bar Examination for Chief Technical Officers at National Institute of Fundamental Studies on 2023-02-15.

- Prof. G.R.A. Kumara** Member at Scholarship Committee at National Institute of Fundamental Studies on 2023-01-01.
22. **Prof. G.R.A. Kumara** Editorial board member at Handling Editor for Young Scientists Conference on Multidisciplinary Research (YSCMR-2023) at National Institute of Fundamental Studies on 2023-09-11.
 23. **Prof. G.R.A. Kumara** Member at Technical evaluation committee of sealed rechargeable battery at National Institute of Fundamental Studies on 2023-08-14.
 24. **Prof. G.R.A. Kumara** Member at Technical evaluation committee of CCTV camera system for Dambulla Arboretum at National Institute of Fundamental Studies on 2023-10-11.
 25. **Prof. G.R.A. Kumara** Member at Technical evaluation committee of digital multimeter at National Institute of Fundamental Studies on 2023-07-25.
 26. **Prof. R. Liyanage** Evaluator for several Technical evaluation committees at NIFS in 2023.
 27. **Prof. R. Liyanage** Served on the Committee to prepare a Policy Document for the Sustainability of Ongoing research projects at NIFS at National Institute of Fundamental Studies from 2023-08-06 to 2023-03-11.
 28. **Prof. D.N. Magana-Arachchi** a member of the NIFS Organizing Committee for the National Science Week -2023 Exhibition at Colombo National Museum, Organized by the Ministry of Education from 2023-11-08 to 2023-11-10.
 29. **Prof. D.N. Magana-Arachchi** Member of the Board of Study in Plant Sciences at Postgraduate Institute of Science, University of Peradeniya from 2023-04-01 to 2026-03-31.
 30. **Prof. D.N. Magana-Arachchi** is a committee member for Drafting Sri Lanka Standard for Biofertilizers at Sri Lanka Standards Institution from 2021-06-09 to 2023-01-31.
 31. **Prof. D.N. Magana-Arachchi** is a member of the Research Management Committee (RMC) at State Ministry of Skills Development, Vocational Education, Research & Innovation from 2021-01-01 to 2023-12-31.
 32. **Prof. D.N. Magana-Arachchi** Chairperson of the Organizing Committee for the NIFS Annual Research Review- 2022 at National Institute of Fundamental Studies on 2023-01-01.
 33. **Prof. D.N. Magana-Arachchi** WG Committee member for Organic Soil amendments at Sri Lanka Standards Institution from 2022-05-01 to 2023-03-10.
 34. **Prof. J.M.N. Marikkar** Evaluator for several Technical evaluation committees at NIFS in 2023.
 35. **Prof. R.R. Ratnayake** Member of the Board of Study in Biochemistry & Molecular Biology at Postgraduate Institute of Science, University of Peradeniya from 2020-01-02 to 2026-01-02.
 36. **Prof. R.R. Ratnayake** Member of Committee on Development of Ecosystem Services Indicators & Guidelines at Central Environmental Authority, Sri Lanka from 2020-02-01 to 2026-02-01.
 37. **Prof. R.R. Ratnayake** Member of Working Group Committee (WGC) on Fertilizer Test Methods at Sri Lanka Standards Institution (SLSI) from 2021-11-03 to 2023-10-25.

38. **Prof. R. Weerasooriya** Chairman at National Costing Model Committee, Ministry of Water Supply from 2023-12-08 to 2024-01-31.
39. **Prof. R. Weerasooriya** Groundwater Policy Formulation Ministry of Water Supply at Ministry of Water Supply from 2023-08-31 to 2024-01-03.
40. **Prof. R. Weerasooriya** Co-ordinator at Research Committee – JRDC University of Peradeniya from 2023-01-02 to 2023-12-31.
41. **Prof. R. Weerasooriya** Co-ordinator at JRDC - National Steering Committee Ministry of Water Supply from 2023-01-02 to 2023-12-31.
42. **Prof. D.S.A. Wijesundara** member at Expert Committee to develop a national Biodiversity Policy from 2023-01-10 to 2024-01-31.
43. **Prof. D.S.A. Wijesundara** member at National Committee on Man and Biosphere at National Science Foundation (NSF) from 2014-01-10 to 2024-01-31.
44. **Prof. D.S.A. Wijesundara** member at National Committee on Biodiversity and Environment at National Science Foundation (NSF) from 2014-01-10 to 2024-01-31.
45. **Prof. D.S.A. Wijesundara** member at National Expert Committee on Climate Change Adaptation at Ministry of Environment from 2007-01-10 to 2024-01-31.
46. **Prof. D.S.A. Wijesundara** Member at National Expert Committee on Mangrove Conservation and sustainable use at Ministry of Environment from 2007-01-10 to 2024-01-31.
47. **Prof. D.S.A. Wijesundara** Member at Third National Biodiversity Experts Committee at Ministry of Environment from 2007-01-10 to 2024-01-31.
48. **Prof. D.S.A. Wijesundara** Member at Council of SLTC Research University from 2023-01-01 to 2024-01-31.
49. **Prof. D.S.A. Wijesundara** Member at Council of University of Peradeniya from 2020-01-01 to 2024-01-31.
50. **Prof. D.S.A. Wijesundara** Co-Chair at National Invasive Species Specialist Group at Ministry of Environment from 2012-02-01 to 2024-01-31.
51. **Prof. D.S.A. Wijesundara** Chairman at National Committee on Floriculture at Sri Lanka Council for Agricultural Research Policy (CARP) from 2001-01-15 to 2024-01-31.
52. **Prof. D.S.A. Wijesundara** Chairman at National Committee on Man and Biosphere Program of UNESCO from 2000-01-05 to 2024-01-31.

Modertor/ Evalautor/Examiner:

Moder:

1. **Prof. M.A.K.L. Dissanayake** moderator of the annual exam paper on Polymer Physics for South Eastern University of Sri Lanka at South Eastern University of Sri Lanka on 2023-02-08.
2. **Prof R. Liyanage** received the Moderator for the course module; Biochemistry (BTF106BC3) from Faculty of Technology, University of Jaffna on 2023-02-06.

3. **Prof. R. Liyanage** Moderator for Biochemistry (BTF106BC3) course module at Faculty of Technology, University of Jaffna on 2023-02-06.
4. **Prof. J.M.N. Marikkar** moderator of the annual exam paper on Postharvest Technology of Cereals for South Eastern University of Sri Lanka on 2023-07-08.
5. **Prof. J.M.N. Marikkar** moderator of the annual exam paper on Food laws and Quality Assurances for South Eastern University of Sri Lanka on 2023-08-20.

Evaluator:

1. **Prof. S.P. Benjamin** Evaluator for Investigator driven grants in NRC in 2023
2. **Prof. S.P. Benjamin** Evaluator for Investigator driven grants in NRC in 2023.
3. **Prof. M.A.K.L. Dissanayake** Chairman of the committee to evaluate the application of Prof. M. Yoshimura for NIFS Adjunct Professorship at National Institute of Fundamental Studies on 2023-04-20.
4. **Prof. M.A.K.L. Dissanayake** Evaluator for University of Peradeniya, Multidisciplinary grants in 2023.
5. **Prof. M.A.K.L. Dissanayake** Evaluator for National Research Council Grant Project Progress Report for Grant NRC PPP 18-07 in 2023.
6. **Prof. M.A.K.L. Dissanayake** Evaluator for National Science Foundation Competitive Grant Application 103(ii) in 2023.
7. **Prof. G.R.A. Kumara** Evaluator for Selected Transition Metals and Nitrogen co-doped Titanium Dioxide Electrode for Dye Sensitized Solar Cells, National research council in 2023.
8. **Prof. G.R.A. Kumara** Evaluator for National Research Council grant (Title -Fine-tuning electronic/semiconductor properties of metal organic framework series to be applied in dye-sensitized solar cells) in 2023 in 2023.
9. **Prof. G.R.A. Kumara**, Evaluator for stable composite based on titanium dioxide and clay as an effective photocatalyst for wastewater treatment in 2023.
10. **Prof. D.N. Magana-Arachchi** Evaluator for The Second Surveillance Assessment of the Coconut Development Authority in 2023.
11. **Prof. D.N. Magana-Arachchi** Evaluator for Sri Lanka Accreditation Board (SLAB) conducted the Re-Assessment of the Water Microbiology Laboratory of Sri Lanka Standard Institute – SLSI) on 2023.10.16 & 17 in 2023.
12. **Prof. D.N. Magana-Arachchi** Evaluator for The Second Surveillance Assessment of the Microbiology Laboratory of Bureau Veritas Consumer Products Services Lanka (Pvt) Ltd on 2023.07.17 & 18 in 2023.
13. **Prof. R.R. Ratnayake** served as a Panel member of the technical sessions in AgSURS 2023 at Faculty of Agriculture, Sabaragamuwa University of Sri Lanka on 2023-05-11.

14. **Prof. R. Weerasooriya** Evaluator for D. Sc. degree Evaluation Panel - University of Peradeniya -subject expert in 2023.

Examiner:

1. **Prof. M.A.K.L. Dissanayake** Examiner for Ph.D. dissertation of Ms. H.G.N. Rajapaksha in 2023.
2. **Prof. M.A.K.L. Dissanayake** Examiner for Ph.D. dissertation of Ms. N.A.A.B. Nissanka in 2023.
3. **Prof. G.R.A. Kumara** Examiner for M.Phil. dissertation of Ms. H.M.N. Wickramasinghe in 2023.
4. **Prof. G.R.A. Kumara** Examiner for Hybrid systems combining perovskite solar cells and supercapacitors based on bio-sourced activated carbon for energy conversion - storage devices. in 2023.
5. **Prof. R. Liyanage** Member of the panel of judges for the annual undergraduate poster competition organized by the E2 section of SLAAS under the theme of "Nutraceuticals: Chemistry and Applications" from Sri Lanka Association for the Advancement of Science (SLAAS) on 2023-07-29.
6. **Prof. R. Liyanage** received the Member of the panel of judges for the Technical Session on 'Food Security' at iPURSE 2023. from University of Peradeniya on 2023-09-21.
7. **Prof. R. Liyanage** served as the second examiner for Grain Science and Technology, Department of Biosystems Technology, University of Jaffna in 2023. from University of Jaffna on 2023-01-09.
8. **Prof. R. Liyanage** Examiner for a thesis submitted for MPhil degree-Faculty of Medicine, University of Peradeniya in 2023.
9. **Prof. D.N. Magana-Arachchi** Examiner for PhD Thesis of Mr. B. Supun Badusekara, Postgraduate Institute of Agriculture (PGIA), University of Peradeniya in 2023.
10. **Prof. D.N. Magana-Arachchi** Examiner for PhD Thesis of Ms. H.M.P.S. Kumari, Postgraduate Institute of Agriculture (PGIA), University of Peradeniya in 2023.
11. **Prof. D.N. Magana-Arachchi** Examiner for MSc Thesis of Ms.A.K.U. Karunadasa, Postgraduate Institute of Science (PGIS), University of Peradeniya in 2023.
12. **Prof. J.M.N. Marikkar** served as the second examiner for Postharvest Technology of Cereals, Department of Biosystem Technology, Southeastern University of Sri Lanka on 2023-07-09.
13. **Prof. J.M.N. Marikkar** served as the second examiner for Food Laws and Quality Assurance, Department of Biosystem Technology, Southeastern University of Sri Lanka on 2023-07-09.
14. **Prof. J.M.N. Marikkar** Examiner for Food Chemistry and Food Analysis course of Bachelor of Biosystem Technology Degree Program of Southeastern University of Sri Lanka in 2023.

15. **Prof. R.R. Ratnayake** Examiner for M.Phil. Thesis entitled as "Study on bacteria – mediated antagonistic mechanisms and degradation of cyanotoxins as measures of controlling cyanobacterial blooms" in University of Ruhuna, Sri Lanka in 2023.
16. **Prof. R.R. Ratnayake** Examiner for Ph.D. Thesis entitled as "Isolation, purification, characterization and application of cellulase from brown garden snail. *Cornu aspersum* to utilize waste cellulose as a resource for Bio-pharmaceutical development." in Sefako Makgatho Health Science University, South Africa in 2023.

Editoril Committee:

1. **Prof. M.A.K.L. Dissanayake** Editor for Young Scientists' Conference on Multidisciplinary Research (YSCMR-2023) in 2023.
2. **Prof. M.A.K.L. Dissanayake** was the Member of the Editorial Board of Ceylon Journal of Science on 2022-04-18.
3. **Prof. J.M.N. Marikkar** Editor-in-Chief for Annual Research Review in 2023.
4. **Prof. J.M.N. Marikkar** Editor-in-Chief for the Proceeding Book of the Young Scientists Conference on Multidisciplinary Research in 2023.

TRAINING & PARTICIPATION

Training

1. Ms. A.M.A.M. Abeysinghe Trained at an International Workshop on *Modern techniques of geochemical analysis and geophysical prospecting of mineral deposits* from 2023-10-10 to 2023-10-29 at Institute of Geology and Geophysics, Chinese Academy of Sciences, China.
2. Ms. S.M.S.C Bandara Participated at a National Workshop on *Statistical modelling with R* from 2023-06-15 to 2023-06-20 at Online.
3. **Prof. M.A.K.L. Dissanayake** Participated at a National Programme on *prepare policy recommendations on Renewable Energy, submitted to the government by National Science and Technology Commission (NASTEC)* from 2023-03-23 to 2023-03-24 at BICOST (Bi-annual Science and Technology conference), Colombo.
4. **Prof. M.A.K.L. Dissanayake** Participated at an International Workshop on *joint collaborative research under the Swedish Research Council Grant* from 2023-02-19 to 2023-03-02 at Chalmers University of Technology, Gothenburg, Sweden.
5. Mr. A.K. Gamage Trained at an International Programme on *Responsive Web Design* from 2023-09-15 to 2023-10-09 at Free Code Camp.
6. Ms.H.M.S.A.T. Gunathilaka, Ms.R.I.S. Karunathilaka, Ms.S. Saseevan, and Ms.W.M.S.N. Bandara Participated at a National Workshop on *Research Skills Strengthening Workshops Series - Thesis writing and publishing research articles* on 2023-02-23 at webinar, National Institute of Fundamental Studies.
7. Ms.H.M.S.A.T. Gunathilaka, Ms.R.I.S. Karunathilaka, Ms.S. Saseevan, and Ms.W.M.S.N. Bandara Participated at an International Workshop on *Common English Language Mistakes* on 2023-05-24 at Webinar.
8. Mr. A.E. Gunasekaran Trained at an International Programme on *Introduction to Large Language Models* on 2023-12-18 at Google Cloud (Coursera).
9. Mr. A.E. Gunasekaran Trained at an International Programme on *Foundations of Project Management* on 2023-12-27 at Google (Coursera).
10. Mr. A.E. Gunasekaran Trained at an International Programme on *Introduction to Generative AI* on 2023-11-21 at Google Cloud (Coursera).
11. Mr. A.E. Gunasekaran Trained at an International Programme on *Introduction to Artificial Intelligence (AI) (With Honors)* from 2023-12-01 to 2023-12-06 at IBM (Coursera).
12. Mr. A.E. Gunasekaran Trained at an International Programme on *Understanding Research Methods* from 2023-07-03 to 2023-07-10 at University of London & SOAS University of London (Coursera).
13. Mr. A.E. Gunasekaran Trained at a Programme on *Academic Information Seeking* on 2023-03-11 at University of Copenhagen and Technical University of Denmark (DTU) (Coursera).
14. Mr. A. E. Gunasekaran, Ms. H. C. Hettiarachchi, and Mr. K. G. S. N. Samaraweera Participated at a Workshop on *Thesis Writing and Publishing Research Articles* on 2023-02-23 at Webinar.

15. Mr. A. E. Gunasekaran, Mr. K. G. S. N. Samaraweera, and Ms. H. C. Hettiarachchi Participated at a Workshop on *Crafting Winning Research Proposals* on 2023-01-26 at Staff Development Center, University of Peradeniya.
16. Mr. A.E. Gunasekaran, Mr. K. G. S. N. Samaraweera, and Ms. B.N. Madumithili Participated at a Workshop on *Python Fundamentals for Researchers* on 2023-08-04 at Prof. Cyril Ponnampere Auditorium, NIFS.
17. Mr. A.E. Gunasekaran, and Prof. S. R. Kodituwakku Participated at an International Conference on *Impact Conference - AI4COVID 2023* from 2023-07-24 to 2023-07-25 at Earl's Regency Hotel, Kandy.
18. Mr. A.E. Gunasekaran, and Mr. K. G. S. N. Samaraweera Participated at a Workshop on *Introduction to R and RStudio (Posit) for Researchers* on 2023-07-05 at Prof. Cyril Ponnampere Auditorium, NIFS.
19. Ms. H.H. Hettiarachchi Participated at an International Programme on *Primate Biology; dental development of toque macaques (Macaca sinica)* from 2020-09-28 to 2023-09-27 at n/a.
20. Ms. H.C. Hettiarachchi Trained at an International Programme on *Exploratory Data Analysis with MATLAB* from 2023-06-22 to 2023-07-27 at Coursera.
21. Ms. H. C. Hettiarachchi Trained at an International Programme on *Manage Data for an Online Grocer Using MySQL Workbench* on 2023-07-26 at Coursera.
22. Ms. H.C. Hettiarachchi Trained at an International Programme on *Build and deploy a stroke prediction model using R* on 2023-07-25 at Coursera.
23. Ms. H.C. Hettiarachchi Trained at an International Programme on *Clean and analyze social media usage data with Python* on 2023-07-24 at Coursera.
24. Ms. H.C. Hettiarachchi Trained at an International Programme on *Perform exploratory data analysis on retail data with Python* on 2023-07-23 at Coursera.
25. Ms. H.C. Hettiarachchi Trained at an International Programme on *Facial Expression Recognition with PyTorch* on 2023-07-22 at Coursera.
26. Ms. H.C. Hettiarachchi Trained at an International Programme on *Take a Swing at Baseball Analytics: Explore Player Careers* from 2023-07-20 to 2023-07-21 at Coursera.
27. Ms. H.C. Hettiarachchi Trained at an International Programme on *Forecast bikeshare demand using time series models in R* on 2023-07-17 at Coursera.
28. Ms. H.C. Hettiarachchi Trained at an International Programme on *Analyze User Research Data with Microsoft Forms* on 2023-07-14 at Coursera.
29. Ms. H.C. Hettiarachchi Trained at an International Programme on *Google Data Analytics Professional Certificate | Foundations: Data, Data, everywhere* from 2023-01-01 to 2023-06-17 at Coursera.
30. Ms. H.C. Hettiarachchi Trained at an International Programme on *Optimization Onramp* on 2023-06-13 at Web.
31. Ms. H.C. Hettiarachchi Trained at an International Programme on *MATLAB Onramp* on 2023-06-12 at Web.

32. Ms. H.C. Hettiarachchi Participated at a Workshop on *Statistical Data Analysis and Interpretation using SPSS* from 2023-07-10 to 2023-07-14 at Webinar.
33. Ms.R.I.S. Karunathilaka, Ms.H.M.S.A.T. Gunathilaka, Ms.S. Saseevan, and Ms.W.K.H.K. Welagedara Participated at a National Workshop on *R and R studio for Statistics for Research* on 2023-07-05 at National Institute of Fundamental Studies.
34. Ms.R.I.S. Karunathilaka, Ms.H.M.S.A.T. Gunathilaka, Ms.S. Saseevan, and Ms.W.K.H.K. Welagedara Participated at a National Workshop on *R and R studio for Statistics for Research* on 2023-07-05 at National Institute of Fundamental Studies.
35. **Prof. G.R.A. Kumara**, Mr. A.D.T. Medagedara, and Mr.I.G.K.D. Amarathunga Participated at a National Workshop on *IEEE Summer School on Emerging Photovoltaic Technologies* on 2023-07-22 at University of Jaffna.
36. **Prof. G.R.A. Kumara**, and Mr. A.D.T. Medagedara Participated at an International Conference on *Advanced Materials for Clean Energy and Health Applications (AMCEHA 2023)* from 2023-09-19 to 2023-09-20 at Coimbatore Institute of Technology College in Coimbatore, India.
37. **Prof. G.R.A. Kumara**, Medagedara, A.D.T, Weerasinghe, M.I.U, and Kumarage, P.M.L Participated at a National Exhibition on *National Industrial Exhibition "KARMANTHA 2023"* from 2023-06-22 to 2023-06-25 at BMICH, Colombo, Sri Lanka.
38. **Prof. R. Liyanage** Participated at a Workshop on *Python Fundamentals for Researchers* on 2023-08-04 at NIFS Auditorium.
39. **Prof. R. Liyanage**, Ms. M. A. Wickramasinghe, Ms. H.R.P. Prasadini, and Ms. H.C. Dias Participated at a Workshop on *Introduction to R and R studio* on 2023-07-05 at National Institute of Fundamental Studies.
40. Ms. B.N. Madumithili Trained at an International Programme on *Foundations of Project Management* on 2023-07-21 at Google (Coursera).
41. Ms. B.N. Madumithili Trained at an International Programme on *Google Sheets - Advanced Topics* on 2023-12-11 at Google Cloud (Coursera).
42. Ms. B.N. Madumithili Trained at an International Programme on *Getting started with Google Workspace (Specialization)* from 2023-08-02 to 2023-12-11 at Google Cloud (Coursera).
43. Ms. B.N. Madumithili Trained at an International Programme on *Getting Started with Zoom Administration* on 2023-10-30 at Zoom Learning Center.
44. Ms. B.N. Madumithili Trained at an International Programme on *Getting Started with Zoom Meetings Administration* on 2023-10-31 at Zoom Learning Center.
45. Ms. B.N. Madumithili Trained at an International Programme on *Preparing to Network in English* from 2023-10-20 to 2023-10-26 at Edx.
46. Ms. B.N. Madumithili Participated at a Workshop on *Introduction to R and RStudio (Posit) for Researchers* on 2023-07-05 at Prof. Cyril Ponnamparuma Auditorium, NIFS.
47. **Prof. D.N. Magana-Arachchi** Participated at a National Programme on *(Three-month Online WIPO-NIPO Mentoring program) Sri Lankan Women Scientists and Researchers, conducted by the Division for Asia and the Pacific Regional and National Development Sector, World*

Intellectual Property Organization, Geneva, Switzerland from 2023-07-31 to 2023-10-31 at National Institute of Fundamental Studies.

48. **Prof. D.N. Magana-Arachchi** Participated at a National Workshop on *Intellectual Property for Sri Lankan Women Inventors and Scientists* from 2023-06-13 to 2023-06-14 at Galadari Hotel, Colombo.
49. Ms. H.K.G.B.M. Premarathne, and Ms. A.R.G.T.K. Agalawela Participated at a Workshop on *“Fungal phylogenetics, mushroom identification, photography of micro & macro fungi and postproduction* from 2023-07-20 to 2023-07-25 at Faculty of Technology, Rajarata University, Mihintale.
50. Ms. H.K.G.B.M. Premarathne, and Ms. A.R.G.T.K. Agalawela Participated at a Workshop on *workshop on Python Fundamentals for Researchers* on 2023-08-04 at National Institute of Fundamental Studies.
51. Ms. H.K.G.B.M. Premarathne, and Ms. A.R.G.T. K. Agalawela Participated at a Workshop on *workshop on R and RStudio for Statistics for Research* on 2023-07-05 at National Institute of Fundamental Studies.
52. Ms. P.U. Sandunika, Ms. A. Karunarathne, Mr. A.M.L.E. Bandara, Mr. R.M.S.S. Rasnayake, and Ms. W.M.S.K. Weerasekara Trained at an International Workshop on *Current trends in photo-electrochemical and photovoltaic materials, device and applications* on 2023-10-06 at Postgraduate Institute of Science University of Peradeniya Sri Lanka.
53. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Build Basic Generative Adversarial Networks (GANs)* on 2023-12-11 at Coursera.
54. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Deep Learning with PyTorch: Neural Style Transfer* on 2023-07-17 at COURSERA.
55. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Develop a free website with WordPress* on 2023-07-16 at COURSERA.
56. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Introduction to Generative AI* on 2023-07-16 at Google Cloud.
57. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Introduction to ChatGPT* on 2023-07-14 at DATA CAMP.
58. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Analyze User Research Data with Microsoft Forms* on 2023-07-14 at COURSERA.
59. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Introduction to Python Programming* on 2023-07-13 at udemy.
60. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Introduction to Python* on 2023-03-10 at Datacamp.
61. Mr. K.G.S.N. Samaraweera Trained at a Programme on *Programming for Everybody (Getting Started with Python)* on 2023-02-04 at University of Michigan.
62. Ms. I. Rathnayaka Trained at a National Workshop on *Exploring Natural Sciences Through Data"- Introduction to R for Statistical Data Analysis* on 2023-11-08 at The Open University of Sri Lanka.

63. Ms. I. Rathnayaka, M.A. Wickramasinghe, and Ms. H.R.P. Prasadini Participated at a Workshop on *Python Fundamentals for Researchers* on 2023-08-04 at National Institute of Fundamental Studies.
64. Ms. S. Saseevan, Ms.H.M.S.A.T. Gunathilaka, and Ms.R.I.S. Karunathilaka Participated at a National Workshop on *Python Fundamentals for Researchers* on 2023-08-04 at National Institute of Fundamental Studies.
65. **Prof. D.S.A. Wijesundara** Participated at a Programme on *MAB program meeting* on 2023-12-12 at at UNESCO office.
66. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *Access to Biological Material and Fair and Equitable Benefit Sharing meeting* on 2023-11-17 at Ministry of Environment & Wildlife Resources.
67. **Prof. D.S.A. Wijesundara** Participated at an International Symposiums on *WILDLANKA International Symposium 2023* from 2023-10-18 to 2023-10-19 at at Eagle Ballroom, Water's Edge, Battaramulla.
68. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *Agricultural Research Policy (CARP) Floriculture* on 2023-10-02 at Agricultural Research Policy (CARP) Floriculture.
69. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Central highlands ecosystems GEF meeting* on 2023-10-09 at Central highlands ecosystems GEF.
70. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services meeting* on 2023-10-05 at Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.
71. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Science and Technology Commission (NASTEC) committee meeting* on 2023-09-21 at National Science and Technology Commission (NASTEC).
72. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Invasive Species Specialist Group (NISSG)* on 2023-09-12 at National Invasive Species Specialist Group (NISSG).
73. **Prof. D.S.A. Wijesundara** Participated at a Programme on *NBCE meeting* on 2023-09-08 at Environment Ministry.
74. **Prof. D.S.A. Wijesundara** Participated at a Programme on *ESA meeting* on 2023-08-21 at zoom.
75. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Biodiversity policy* on 2023-08-18 at zoom.
76. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Scoping meeting* on 2023-08-09 at At Popham arboretum, National Institute of Fundamental Studies.
77. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services meeting* from 2023-07-24 to 2023-07-26 at Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

78. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Science and Technology Commission (NASTEC) committee meeting* on 2023-07-24 at National Science and Technology Commission.
79. **Prof. D.S.A. Wijesundara** Participated at a Programme on *ESA meeting* on 2023-06-30 at zoom.
80. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Science and Technology Commission (NASTEC) committee meeting* on 2023-06-22 at At National Science and Technology Commission.
81. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Forestry Sector Master Plan meeting* on 2023-05-19 at Hector Kobbekaduwa Agrarian Research and Training Institute.
82. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Biodiversity policy meeting* on 2023-05-05 at zoom.
83. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Science and Technology Commission (NASTEC) committee meeting* on 2023-05-03 at At National Science and Technology Commission.
84. **Prof. D.S.A. Wijesundara** Participated at a Programme on *ESA meeting* on 2023-03-28 at zoom meeting.
85. **Prof. D.S.A. Wijesundara** Participated at a Programme on *9th Sri Lanka Biennial Conference on Science and Technology 2023* on 2023-03-23 at Waters Edge.
86. **Prof. D.S.A. Wijesundara** Participated at a Programme on *PEC meeting* on 2023-03-21 at Environment Ministry.
87. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Forestry Sector Master Plan meeting* on 2023-03-04 at Hector Kobbekaduwa Agrarian Research and Training Institute.
88. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Science and Technology Commission (NASTEC) committee meeting* on 2023-02-22 at National Science and Technology Commission.
89. **Prof. D.S.A. Wijesundara** Participated at a Programme on *Sustainable Development Goals (SDG) meeting* on 2023-02-15 at Sustainable Development Goals (SDG).
90. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Invasive Species Specialist Group (NISSG) meeting* on 2023-02-07 at National Invasive Species Specialist Group.
91. **Prof. D.S.A. Wijesundara** Participated at a National Programme on *National Science and Technology Commission (NASTEC) committee meeting* on 2023-01-24 at At National Science and Technology Commission.

DISSEMINATION OF SCIENCE

Symposia

1. "Annual Research Review 2022" was organized by the NIFS Scientists and the Science Education and Dissemination Unit for the Scientific Community at Professor Cyril Ponnampereuma auditorium via Zoom on 2023-04-04 with the participation of 186 delegates. *Prof. Sirimali Fernando, Secretary General, National Commission for UNESCO graced the occasion as the chief guest while Prof. Surangi Yasawardene, Senior Professor of Anatomy, Department of Anatomy, Faculty of Medical Sciences, University of Sri Jayewardenepura delivered the Keynote address.*
2. "*Young Scientists' Conference on Multidisciplinary Research (YSCMR) 2023*" was organized by the Young Scientists' Association of the National Institute of Fundamental Studies (NIFS-YSA) for the Scientific Community at Professor Cyril Ponnampereuma auditorium via zoom on 2023-11-09 with the participation of 142 postgraduate students and early career scientists. *Resource Persons: Prof Saman Halgamuge, Ms. Rashindrie Perera, Ms. Deshani Poddenige and Prof. Eran Edirisinghe*

3MT Competition

1. Three Minute Thesis (3MT) competition was organized by the Young Scientists' Association of National Institute of Fundamental Studies of Sri Lanka (NIFS-YSA) for the undergraduate and post-graduate students of Sri Lanka at Prof. Cyril Ponnampereuma auditorium, NIFS, Kandy on 2023-06-11 with the participation of 35 competitors Island wide.

Training programs

1. "*Training program on HPLC Instrumentation and application*" was organized by the Nutritional Biochemistry Programme for the Officials at the NIFS, Kandy on 2023-05-15 with 13 participants. *Resource Persons: Dr. R. Liyanage, Ms. M.A. Wickramasinghe, and Ms. H.R.P. Prasadini*

Workshops

1. "*Introduction to R and R Studio (Posit) for Researchers*" was organized by the Computer Science, Mathematics, and Statistics Project in Collaboration with the Young Scientists Association (YSA) for the Scientific Community at the Prof. Cyril Ponnampereuma Auditorium, NIFS, Kandy. on 2023-07-05 with 35 participants. *Resource Person: Senior Professor Pushpakanthie Wijekoon.*
2. "*Python Fundamentals for Researchers*" was organized by the Computer Science, Mathematics, and Statistics Project in Collaboration with the Young Scientists Association (YSA) and Wiley Global Technology Sri Lanka (Pvt) Ltd for the Scientific Community at Prof. Cyril Ponnampereuma Auditorium, NIFS, Kandy on 2023-08-04 with 43 participants. *Resource Persons: Mr. Asantha Hettiatachchige and Mr. Suviru Bandara from Wiley Sri Lanka*

Lab Visits

1. Fifty undergraduate students from the Faculty of Science, University of Peradeniya visited the NIFS to familiarize NIFS research activities at different laboratories on 2023-05-22.
Resource Persons: MBU staff.
2. Fifty undergraduate students from the Faculty of Science, University of Peradeniya visited the NIFS laboratories on 2023-06-07.
Resource Persons: MBU staff.
3. Seventy A/L Science stream students from Mahamaya Girls' College, Kandy visited the NIFS to gain laboratory experience from Condensed Matter Physics and Solid-State Chemistry Research Lab /Material Processing & Device Fabrication Research Lab /Materials development & pollution remediation Research Lab/Earth Resources & Renewable Energy Research Lab/ Nanotechnology and Physics of Materials Research Lab on 2023-10-02.
Resource Persons: Prof. M.A.K.L. Dissanayake, Prof. G.R.A. Kumara, Prof. N.D. Subasinghe, Dr. L. Jayarathna, and Dr. H.W.M.A.C. Wijayasinghe
4. Two hundred A/L Science Stream Students from Nalanda College Colombo visited the NIFS to gain the laboratory experience in Condensed Matter Physics and Solid-State Chemistry Research Lab, Nanotechnology and Physics of Materials Research Lab, Earth Resources & Renewable Energy Research Lab, Material Processing & Device Fabrication Research Lab, Materials development & pollution remediation Research Lab, Water Research Lab, Nutritional Biochemistry Research Lab, Molecular Microbiology & Human Diseases Research Lab, Microbiology & Soil Ecosystems Research Lab, Microbial Biotechnology Research Lab, Plant Taxonomy & Conservation Research Lab, Material Processing & Device Research Lab on 2023-10-12.
Resource Persons: Prof. M.A.K.L. Dissanayake, Dr. H.W.M.A.C. Wijayasinghe, Prof. N.D. Subasinghe, Prof. G.R.A. Kumara, Dr. L. Jayarathna, Prof. R. Weerasooriya, Dr. R. Liyanage, Prof. D.N. Magana-Arachchi, Prof. R. Rathnayake, Prof. G. Seneviratne, Prof. D.S.A. Wijesundara, and Prof. S.P. Benjamin.
5. Sixty undergraduate students from Sri Jayawardhanapura University visited the NIFS to gain laboratory experience from the Condensed Matter Physics and Solid-State Chemistry Research Lab Lab, Nanotechnology and Physics of Materials Research Lab Lab, Earth Resources & Renewable Energy Research Lab Lab, Material Processing & Device Fabrication Research Lab Lab, Materials development & pollution remediation Research Lab, Water Research Lab on 2023-10-13.
Resource Persons: Prof. M.A.K.L. Dissanayake, Dr. H.W.M.A.C. Wijayasinghe, Prof. N.D. Subasinghe, Prof. G.R.A. Kumara, Dr. L. Jayarathna, and Prof. R. Weerasooriya.
6. Fifty-four students from Ananda Balika Vidiyalaya, Colombo visited the NIFS to gain laboratory experience from the Nutritional Biochemistry Research Lab Lab, Molecular Microbiology & Human Diseases Research Lab Lab, Microbiology & Soil Ecosystems Research Lab Lab, Environmental Science Research Lab, Material Processing & Device Fabrication Research Lab Lab, Evolution, Ecology & Biodiversity Research Lab on 2023-11-14.
Resource Persons: Dr. R. Liyanage, Prof. D.N. Magana-Arachchi, Prof. R. Rathnayake, Dr. L. Jayarathna, Prof. G.R.A. Kumara, and Prof. S.P. Benjamin .
7. Twenty-nine students from Vishaka Vidiyalaya, Colombo visited the NIFS to gain experience in laboratories, they visited the Condensed Matter Physics and Solid-State Chemistry R. Lab, Material Processing & Device Fabrication R. Lab, Environmental Science R. Lab, Biofertilizer R. Lab laboratories on 2023-11-24.
Resource Persons: Prof. M.A.K.L. Dissanayake, Prof. G.R.A. Kumara, Dr. I.P.L. Jayarathna, Prof. R. Weerasooriya, and Prof. G. Seneviratne.

Exhibitions

1. "National Science Day Exhibition" was organized by the Ministry of Education for the General Public at the National Museum Premises, Colombo from 2023-11-08 to 2023-11-10
Resource Persons: Prof. Saluka Kodituwakku Prof. Rohan Weerasooriya, Prof. Deepal Subasinghe, Prof. Suresh Benjamin, and Prof. Dhammika Maganaarachchi

Special Lectures

1. "The role of Young scientist on current political and economic crisis in Sri Lanka" was organized by Prof. Siril Wijesundara & the SEDU for the Scientific Community at Professor Cyril Ponnampere auditorium on 2023-01-05 with 100 participants.
Resource Persons: Mr. Mahinda Deshapriya Chairman/ The Commission of Delimitation and Former Chairman/of the Election Commission.
2. "Sri Lanka: A Renewable Energy Island?" was organized by the YSA & SEDU for the Scientific Community at the Professor Cyril Ponnampere auditorium on 2023-03-15 with 100 participants.
Resource Persons: Prof. Lakshman Dissanayake, Research Professor NIFS.
3. "Relevance of Innovation and Multidisciplinary Collaboration in Natural Product Discovery & Development" was organized by Prof. Lalith Jayasinghe & the SEDU for the Scientific Community at the Professor Cyril Ponnampere Auditorium on 2023-03-20 with 76 participants.
Resource Persons: Eminent Prof. Leslie Gunatilaka, Director of Natural Products Center, University of Arizona, USA.
4. "Advanced Raman Spectroscopy of Carbon Nanomaterials" was organized by Prof. Ashoka Kumara & SEDU for the Scientific Community at Prof. Cyril Ponnampere auditorium on 2023-08-08 with 82 participants.
Resource Persons: Professor Masamichi YOSHIMURA, Adjunct Professor NIFS & Group Leader of Surface Science Laboratory at Toyota Technological Institute, Japan.
5. ඕසෝන් දිනයට සමගාමීව පරිසර නියමුවන් දැනුවත් කිරීමේ වැඩසටහන - නුගවෙල මධ්‍ය විද්‍යාලය" was organized by the SEDU for the School Community at the NIFS on 2023-10-11 with 12 participants.
Resource Persons: Prof. R. Weerasooriya.
6. "Highlights from long-term studies of primate life history and conservation in Sri Lanka" was organized by the SEDU for the Scientific Community at Prof. Cyril Ponnampere auditorium on 2023-11-29 with 50 participants.
Resource Persons: Prof. W.P.J. Dittus.

Dissemination through International Documentaries

1. Philipp Griess (Producer), Philipp Griess (Director). (2023). *Adaptation to changing ecosystems in our primate ancestors shaped the success of Homo sapiens* [TV program]. Sri Lanka: UFA Documentary GmbH
Resource Person from NIFS: Prof. W.P.J. Dittus
Content Description: From the perspective of macaque society in human ancestry how did Homo sapiens become so successful, how its interaction with ecosystems and landscape shaped our evolution, and asks the question of how to apply this deep-time survival knowledge to the 21st century.

2. BBC, Natural World (Producer), Rasmussen, D. (Director). (2023). *The Life of Mammals (tentative title)* [TV Programme]. Sri Lanka: BBC Natural World, Netflix
Resource Person from NIFS: Prof. W.P.J. Dittus
Content Description: At the time of this writing the documentary is still being edited as confidential material. Therefore, the title as well as the content may vary from my description. The film focuses on the ingenuity of toque macaque monkeys (at our study site at Polonnaruwa) when they dive underwater in ponds to forage on one of their favorite foods – the waterlilies. The venture involves risks of predation from water monitors as well as neighboring groups of competing macaques. The film depicts Sri Lankan nature and archaeology in an artistic manner that serves as a subtle promotion of tourism in Sri Lanka.

Dissemination Science through Printed Media

1. Prof. Magana-Arachchi, D.N. (2023-02-24), வளி மாசடைதலின் பின்னர் கண்டியில் காற்றின் சாதக பாதக நிலைமைகள். *தினகரன்-அறிவியல்* p.03.
2. Prof. Magana-Arachchi, D.N. (2023-02-24), Air Quality in Kandy impacted by Air pollution. *Daily News- Vidya* p.03.
3. Prof. Magana-Arachchi, D.N. (2023-02-24), දුෂිත වායුවක් සමඟ මහනුවර වනයේ ගුණ අගුණ. *දිනමිණ - Vidya* p.03.
4. Prof. Magana-Arachchi, D.N., Wanigatunge, R., Herath, H., and Mallawarachchi, W.N. (2023-04-10), නොදැන බොන නොදන්නා විෂ: සයනොවැක්ටීරියා දූලක. "වස විස විමසුම"-*Chemical watch* p.06.
5. Prof. Magana-Arachchi, D.N. (2023-09-29), Innovative Research and Technologies in Life Sciences-2023. *Daily News- Vidya* p.07.
6. Prof. Magana-Arachchi, D.N. (2023-09-29), සෛව විද්‍යාවේ නවෝත්පාදන පර්යේෂණ හා තාක්ෂණයන් -2023. *දිනමිණ - Vidya* p.07.
7. Prof. Magana-Arachchi, D.N. (2023-09-29), உயிரியலில் புதுமையான ஆராய்ச்சி மற்றும் தொழில்நுட்பங்கள். *தினகரன்-அறிவியல்* p.07.
8. Prof. Subasinghe, N.D. (2023-04-29), අපේ පොළව හෙලවෙන්නේ නෑ. *Dinamina Vidya* p.09.
9. Prof. Weerasooriya, R. (2023-04-28), Lessons learned by drinking groundwater quality research. *Vidya* p.7.
10. Prof. Weerasooriya, R. (2023-10-10), Future Sri Lanka – Water based economy. *The Royal College Magazine, Royal College Colombo* p.1-3.
11. Prof. Wickramasinghe, N.C. (2023-11-05), The case for our cosmic ancestry. *The Island* p.14-17.
12. Prof. Wijesundara, D.S.A. (2023-05-26), Restoration of degraded lands through assisted natural regeneration. *Dailynews Vidya - Lake House - Sri Lanka* p.7.
13. Prof. Wijesundara, D.S.A (2023-08-25), Let us save Nilgala. *Dailynews Vidya - Lake House - Sri Lanka* p.1.

14. **Prof. Wijesundara, D.S.A** (2023-01-09), Exploring Sri Lanka's diverse grasslands: from savannahs to villus. *Dailynews Vidya - Lake House - Sri Lanka* p.2.
15. **Prof. Wijesundara, D.S.A.** (2023-01-09), Distribution of endemic flowering plants in Sri Lanka and their conservation. *Dailynews Vidya - Lake House - Sri Lanka* p.6.

Invited Speeches:

1. **Prof. Dissanayake, M.A.K.L.** (2023). *Electrochemical Solar Cells*. Special Lecture, Postgraduate Institute of Science, University of Peradeniya.
2. **Prof. Dissanayake, M.A.K.L.** (2023). *Sri Lanka: A Renewable Energy Island?* Special Lecture, National Institute of Fundamental Studies, Sri Lanka.
3. **Prof. Dissanayake, M.A.K.L.** (2023). *Can we transform Sri Lanka into a "Renewable Energy Island"*. Invited Speech, Faculty of Science, University of Kelaniya.
4. **Dr. Jayarathna, I.P.L.** (2023). *Chemical bonding*. Special Lecture, St. Sylvester's College, Kandy.
5. **Dr. Jayarathna, I.P.L.** (2023). *What do you want to do after A/L*. Invited Speech, St. Sylvester's College, Kandy.
6. **Prof. Kumara, G.R.A.** (2023). *Conversion and Storage of Solar Energy: Solar Cells and Supercapacitors*. Invited Speech, University of Jaffna.
7. **Prof. Kumara, G.R.A.** (2023). *The recent development of eco-friendly supercapacitors*. Invited Speech, Coimbatore Institute of Technology College in Coimbatore, India.
8. **Prof. Kumara, G.R.A.** (2023). *NIFS research on the biomass carbon and its utilization as the electrode for dye-sensitized and perovskite solar cells*. Invited Speech, Molecular Chemistry and Materials, Institute of Molecular Sciences, University of Bordeaux, France.
9. **Prof. Kumara, G.R.A.** (2023). *Innovative Low-Cost Method for Activating Coconut Shell Charcoal for Utilization as Supercapacitor Electrodes*. Invited Speech, BMICH, Colombo, Sri Lanka.
10. **Prof. Liyanage, R.** (2023). *Probiotic Enriched Fermented Soy- Gel as a vegan Substitute for Dairy Yoghurt*. Poster, Eagle Hall, Waters Edge, Battaramulla.
11. **Prof. Liyanage R.** (2023). *Fatty acid profile and phenolic acid profile of raw and processed *Artocarpus nobilis* (Ceylon breadfruit) seed*. Poster, BMICH, Colombo.
12. **Prof. Magana-Arachchi, D.N.** (2023). *Environmental Health Australia (EHA WEHD) LiveChat on Transboundary Haze Events*. Invited Speech, National Institute of Fundamental Studies.
13. **Prof. Magana-Arachchi, D.N.** (2023). *Patenting Research*. Special Lecture, National Institute of Fundamental Studies.
14. **Prof. Rathnayake R.R.** (2023). *The Importance of Micro-organisms in Solving Global Crises*. Invited Speech, Siddhartha Maha Vidyalaya, Ampitiya, Kandy.

15. **Prof. Marikkar, J.M.N.** (2023). *How to write a good abstract and create an effective presentation*. Special Lecture, NIFS.
16. **Prof. Seneviratne, G.** (2023). *Nature: Is it an intelligent creature?* Invited Speech, online.
17. Solanki, N., Premarathna, M., **Prof. Seneviratne, G.**, and Ponmozhi, J. (2023). *Root-microbe interaction via root-on-chip: a microfluidic approach*. Poster, IIT Madras, India.
18. Sewwandi, S.M.V.K., Ramiah, S., Alles, N., **Prof. Wijesundara, D.S.A.**, and **Prof. Liyanage R.**
19. **Prof. Seneviratne, G.** (2023). *Modern Bio-organic fertilizers for paddy cultivation*. Special Lecture, The Parliament of Sri Lanka.
20. **Prof. Subasinghe, N.D.** (2023). *What would happen if a meteorite hits the Earth*. Keynote, Maliyadeva Boys College, Kurunegala.
21. **Prof. Subasinghe, N.D.** (2023). *නුතන විද්‍යාව සහ ප්‍රයෝජිත ලෝකය*. Keynote, Gampola Wickramabahu MMV.
22. Wickramasinghe, M.A. (2023). *Nutritionally rich roasted/microwaved Artocarpus nobilis (Waldel) seeds: Nutri capsules with unique taste*. Plenary, Eagle Hall, Waters Edge, Battaramulla.
23. **Prof. Wijesundara, D.S.A.** (2023). *Figures and Facts on Floriculture*. Presentation, Royal Botanic Gardens, Auditorium.
24. **Prof. Wijesundara, D.S.A.** (2023). *Introduction and control of invasive plants*. Presentation, Environment Ministry auditorium.
25. **Prof. Wijesundara, D.S.A.** (2023). *Navigating biodiversity and invasive plants*. Presentation, Department of Agriculture.
26. **Prof. Wijesundara, D.S.A.** (2023). *Floriculture research and floriculture council*. Presentation, CARPSL.
27. **Prof. Wijesundara, D.S.A.** (2023). *Dry zone vegetation*. Presentation, Eastern University of Sri Lanka.
28. **Prof. Wijesundara, D.S.A.** (2023). *Popham Arboretum*. Presentation, Through Zoom.
29. **Prof. Wijesundara, D.S.A.** (2023). *Facing challenges*. Presentation, Colombo University of Sri Lanka.
30. **Prof. Wijesundara, D.S.A.** (2023). *Wildlife trafficking*. Presentation, Lawyers association-Negombo.
31. **Prof. Wijesundara, D.S.A.** (2023). *Urban gardening*. Presentation, Natural History Society.
32. **Prof. Wijesundara, D.S.A.** (2023). *Plants of Sri Lanka*. Presentation, Marriott Hotel Colombo.
33. **Prof. Wijesundara, D.S.A.** (2023). *Vegetation of Sri Lanka*. Presentation, Central Environmental Authority.

Young Scientists Association (YSA)

Committee:

- **Adviser to the YSA – Dr. I.P.L. Jayarathne**
- *Co-chairs – Mr. Esmond Gunasekaran, Ms. Malmi Wickramasinghe*
- *Co-secretaries – Mr. Ravindu Pathirana, Ms. Bhagya Premarathna*
- *Co-treasurers – Mr. Supun Samaraweera, Mrs. Chathurika Bandara*
- *Committee members – Ms. Prasadini, Mrs. Janya, Mrs. Nirasha Atapaththu, Ms. Jayani Bandara, Mr. Dimuthumal Rajakaruna, Mr. Chathuranga.*

About YSA:

The Young Scientist Association (YSA) extends its ethos globally, offering resources, collaborative opportunities, and professional development to young scientists worldwide. Through workshops, mentorship programs, and a supportive community, YSA fosters collaboration, resilience, and growth. Advocating for fundamental science and promoting scientific literacy, YSA inspires the next generation and enhances global recognition for its members. By embracing values of passion, learning, and inclusivity, YSA empowers young scientists to excel, contribute meaningfully to scientific advancement, and make a positive impact on society.

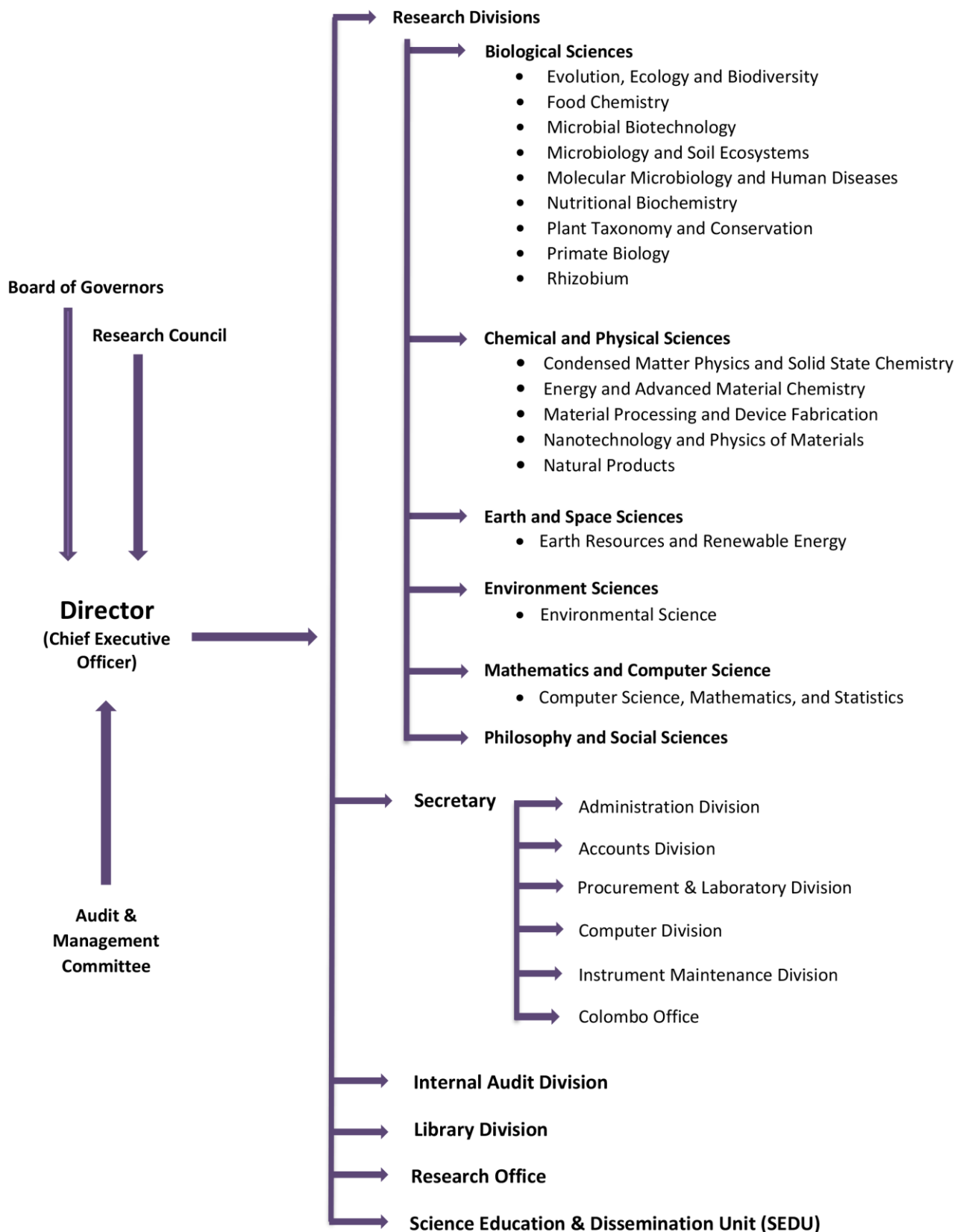
Activities:

- Annual Research Review supported by YSA members.
- Successful 3-Minute Thesis Competition (3MT) led by co-chairs Ms. Medhavi and Ms. Kulangana.
- Pre-webinar series organized for 3MT competition.
- Workshop on “R & R Studio Statistics for Research” conducted by Prof. Pushpakanthie Wijekoon.
- Annual trip to Galaboda Rainfall conducted.
- Vesak lantern event
- Formation of Journal Club with the first session on “climate change”.
- Workshop on “Python Fundamentals for Researchers” by Mr. Asantha Hettiarachchige.
- NIFS T-shirt campaign organized for fundraising.
- Successful “5th Young Scientist’s Conference on Multidisciplinary Research 2023” (YSCMR-2023) with 150 participants led by Mr. Ravindu and Mr. Supun

SECTION 3-ORGANIZATION

	Page No.
Organizational Chart	97
Board of Governors	98
Research Council	99
Staff List	100
Director	106
Secretary	106
Office of the Director	107
Accounts Division	107
Administration Division	107
Computer Division	108
Instruments & Maintenance Division	108
Internal Audit Division	108
Library	108
Procurement & Laboratory Store Division	109
Research Office	109
Science Education & Dissemination Unit	109

ORGANIZATIONAL CHART



BOARD OF GOVERNORS

A twelve-member Board of Governors administers NIFS with Prof. Athula Sumathipala as the Chairman. The Board administers the institute and makes rules for the procedures in the conduct of its affairs.



Prof. Athula Sumathipala
Chairman
Appointed by H.E., the President



Dr. Thushara Vajira Perera
Science & Technology Advisor
to H.E. the President
Ex-officio Member



Senior Professor S. Amaratunge
Chairman
University Grants Commission
Ex-officio Member



Prof. Saluka R. Kodithuwakku
The Director/NIFS
(From 1st May 2022)
Ex-officio Member



Dr. W. Sardha Hemapriya
Obstetrician & Gynecologist
Appointed by H.E., the President



Prof. S.B.S. Abayakoon
University of Peradeniya
Appointed by H.E., the President



Dr. Yamuna Niranjali Rajapakse
Lanka Hospital, Colombo
Appointed by H.E., the President



Prof. M.A.K.L. Dissanayake
Research Professor/NIFS
Appointed by the Minister



Eng. Nihal Rupasinghe
Appointed by the Minister



Prof. Siril Wijesundara
Research Professor/NIFS
Elected from the Research Council



Prof. Deepal Subasinghe
Associate Research Professor/NIFS
Elected from the Research Council



Ms. B.W.G.C.S. Bogahawatta
Additional Director General
Ministry of Finance
Treasury Representative



Ms. M.P.W. Shiromani
Secretary to the Board/NIFS

RESEARCH COUNCIL

The Research Council, whose membership comprises university academics and researchers of the NIFS, served as an advisory body. The Research Council has control over the general direction of research and forwards its recommendations to the Board of Governors.

Chairman

- Prof. Saluka R. Kodithuwakku, Director/NIFS

Members

Appointed by H.E the President

- Prof. W.C.S.J. Wickramasinghe, Department of Parasitology, Faculty of Medicine, University of Peradeniya
- Prof. W.A.J.M. De Costa, Department of Crop Science, Faculty of Agriculture, University of Peradeniya

Ex-Officio:

Senior Research Professors, Research Professors, Associate Research Professors, and Senior Research Fellows of the National Institute of Fundamental Studies

- Prof. J. Bandara, Senior Research Professor
- Prof. U.L.B Jayasinghe, Senior Research Professor
- Prof. G. Seneviratne, Senior Research Professor
- Prof. M.A.K.L. Dissanayake, Research Professor (on contract)
- Prof. S.P. Benjamin, Research Professor
- Prof. G.R.A. Kumara, Research Professor (on contract)
- Prof. R. Weerasooriya, Research Professor (on contract)
- Prof. D. S. A. Wijesundara, Research Professor (on contract)
- Prof. D.N. Magana-Arachchi, Associate Research Professor
- Prof. R.R. Ratnayake, Associate Research Professor
- Prof. N.D. Subasinghe, Associate Research Professor
- Prof. N. Marikkar, Associate Research Professor (on contract)
- Prof. R. Liyanage, Senior Research Fellow
- Dr. H.W.M.A.C. Wijayasinghe, Senior Research Fellow
- Dr. I.P.L. Jayaratne, Research Fellow

Nominated by the University Grant Commission

- Prof. P. Ravirajan, Department of Physics, Faculty of Science, University of Jaffna
- Prof. Chandana P. Udawatte, Vice Chairman, University Grant Commission
- Prof. M. Vithanage, Office of the Dean, Faculty of Applied Sciences, University of Sri Jayewardenepura
- Prof. R.G.S.C. Rajapakse, Dean, Faculty of Science, University of Peradeniya
- Prof. H.M.T.G.A. Pitawala, Director/PGIS (From 23.06.2023)

STAFF LIST - 2023

Director : Prof. Saluka R. Kodithuwakku
Secretary : Ms. M.P.W. Shiromani – (from 01.11.2023 to-date)
Ms. Samantha Herath – (from 02.05.2023 to 31.10.2023)
Prof. U.L.B. Jayasinghe – (from 11.03.2023 to 01.05.2023)
(Acting Secretary)
Ms. Sagarika D. K. Mediwaka (from 10.01.2022 to 10.03.2023)

Research Staff

Senior Research Professors

Prof. Bandara J. M. S.
Prof. Jayasinghe U. L. B.
Prof. Seneviratne P. R. G.

Research Professors

Prof. Benjamin S. P.
Prof. Dissanayake M. A. K. L.
Prof. Kumara G. R. A.
Prof. Weerasooriya R.
Prof. Wijesundara D. S. A.

Associate Research Professors

Prof. Magana Arachchi D. N.
Prof. Marikkar N.
Prof. Rathnayake R. R.
Prof. Subasinghe N. D.
Prof. Liyanage N. L. B. R.

Senior Research Fellows

Dr. Wijayasinghe H. W. M. A. C.

Research Fellows

Dr. Jayarathne I. P. L.

Visiting Research Professors (Honorary)

Prof. Adikaram N.K. B.
Prof. Dittus W.P.J.
Prof. Kulasooriya S.A.
Prof. Nanayakkara A.
Prof. Oi-Ming Lai
Prof. Senadeera G.K.R.
Prof. Vithanage M.

Honorary Visiting Research Fellows

Dr. R. D. Nawarathna
Dr. L S. Nawarathna
Dr. S. Ranasinghe

Visiting Scientist (Honorary)

Dr. Edirisinghe V.

Postdoctoral Research Fellow

Dr. Premaratne M.
Dr. Jayasinghe H.D.

Adjunct Professors (Honorary)

Lifetime Research Professors

Prof. Wickramasinghe C.
Prof. Tennakone K.

Adjunct Professors (Honorary)

Other Adjunct Research Professors

Prof. Choudhary I.
Prof. Chen X.
Prof. Dallavalle S.
Prof. Dharmadasa I. M.
Prof. Fujimoto Y.
Prof. Hirotsu N.
Prof. Ismail N. H.
Prof. Nammi S.
Prof. Karunaratne S.
Prof. Karunatanane S.
Prof. Nikolai Kuhnert N.
Prof. Wijekoon P.
Prof. Wei Y.
Prof. Xu Z.
Prof. Yoshimura M.

Research Assistants

Computer Science, Mathematics & Statistics Research Programme

Mr. Gunasekaran A.E.	NIFS Research Assistant Gr. II
Ms. Hettiarachchi H.C.	NIFS Research Assistant Gr. II (up to 31.07.2023)
Mr. Samaraweera K.G.S.N.	NIFS Research Assistant Gr. II (from 04.01.2023)

Condensed Matter Physics & Solid-State Chemistry Research Programme

Ms. Hettiarachchi M.S.H.	NIFS Research Assistant Gr. II
Ms. Subasinghe J.L.	NIFS Research Assistant Gr. II (up to 04.07.2023)
Ms. Sandamali W.I.	Grant Research Assistant
Ms. Sandunika P.O.	NIFS Research Assistant Gr. II (from 01.09.2023)

Energy & Advanced Material Chemistry Research Programme

Mr. Rajakaruna R.P.P.D.	NIFS Research Assistant Gr. II
Ms. Sarathchandra K.A.D.M.S.	NIFS Research Assistant Gr. II
Mr. Wijerathna A.G.C.N.	NIFS Research Assistant Gr. II (up to 31.12.2023)
Mr. Sumithraarachchi S.A.D.A.V.	Grant Research Assistant

Environmental Science Research Programme

Air pollution & risk Management Research Project

Mr. Senaratna M.	Grant Research Assistant
------------------	--------------------------

Material Development & Pollutants Remediation Research Project

Mr. Amarasena R.A.L.R.	NIFS Research Assistant Gr. II (up to 01.11.2023)
Ms. Madhumekala M.A.K.	NIFS Research Assistant Gr. II (from 01.06.2023)
Ms. Perera M.D.R.	NIFS Research Assistant Gr. II

Water Research Project

Ms. Amarasekara A.E.	NIFS Research Assistant Gr. II (up to 30.04.2023)
Ms. Bandara P.M.C.J.	NIFS Research Assistant Gr. II
Ms. Sewwandi B.V.N.	NIFS Research Assistant Gr. II (from 01.06.2023)
Ms. Piyathilake I.D.U.H.	Grant Research Assistant

Evolution, Ecology & Biodiversity Research Programme

Mr. Dayananda D.N.G.	NIFS Research Assistant Gr. II
Ms. Herath K.M.R.K.T.	NIFS Research Assistant Gr. II (from 21.08.2023)

Food Chemistry Research Programme

Ms. Ulpatha Kumbura B.S.K.	NIFS Research Assistant Gr. II
Ms. Fahmida H.F.	NIFS Research Assistant Gr. II (from 16.01.2023)

Material Processing & Device Fabrication Research Programme

Mr. Medagedara A.T.D.	NIFS Research Assistant Gr. II
Ms. Weerasinghe M.I.U.	NIFS Research Assistant Gr. II

Microbial Biotechnology Research Programme

Mr. Ekanayake S.	NIFS Research Assistant Gr. II
Ms. Jayasinghe S.D.P. N.	NIFS Research Assistant Gr. II (from 01.11.2023)
Ms. Jayakody J.A.D.K.N.N.	NIFS Research Assistant Gr. II (from 01.11.2023)
Ms. Nuska. M.R.M.F.	NIFS Research Assistant Gr. II (01.08.2023-16-08-2023)
Mr. Premarathna U.M.B.	NIFS Research Assistant Gr. I
Mr. Pathirana G.P.R.D.	Temporary Research Assistant

Microbiology & Soil Ecosystems Research Programme

Ms. Paranavithana T.M.	NIFS Research Assistant Gr. II (up to 27.09.2023)
Ms. Bandara S.M.D.C.	NIFS Research Assistant Gr. II
Ms. Premaratne W.D. U.	NIFS Research Assistant Gr. II (from 02.10-2023)

Molecular Microbiology & Human Diseases Research Programme

Ms. Gunathilake H.M.S.A.T.	NIFS Research Assistant Gr. II
Ms. Karunathilake R.I.S.	NIFS Research Assistant Gr. II (up to 19.12.2023)
Ms. Bandara W.M.S.N.	Grant Research Assistant
Ms. Saseevan S.	Grant Research Assistant

Nanotechnology & Advanced Materials Research Programme

Mr. Fernando W.T.R.S.	NIFS Research Assistant Gr. II
Ms. Naranpanawa H.M.H.D.K.	NIFS Research Assistant Gr. II
Mr. Samarakoon I.B.	NIFS Research Assistant Gr. II (up to 31.07.2023)

Natural Products Research Programme

Ms. Atapattu A.M.N.A.	NIFS Research Assistant Gr. (up to 31.08.2023)
Ms. Kalinga J.C.	NIFS Research Assistant Gr. II
Ms. Siriwardhane K.D.P.U.	NIFS Research Assistant Gr. II
Ms. Alakolanga A.G.A.W. *	Grant Research Assistant
	* on leave from Uwa Wellasse University
Ms. Bandara H.M.S.K.	Grant Research Assistant
Ms. Samarakoon S.M.K.T.	Grant Research Assistant

Nutritional Biochemistry Research Programme

Ms. Prasadini H. R. P.	NIFS Research Assistant Gr. II
Ms. Wickramasinghe M.	NIFS Research Assistant Gr. II

Plant & Environmental Sciences Research Programme

Ms. Theivendrarajah K.	NIFS Research Assistant Gr. II
------------------------	--------------------------------

Plant Taxonomy & Conservation Research Programme

Mr. Jayasinghe H.D.	NIFS Research Assistant Gr. II (up to 30.08.2023)
Mr. Lekamge P.L.C.U.S.B.	Acting Arboretum Manager
Mr. Brahmanage R.	Grant Research Assistant
Ms. Premaratne H.K.G.B.M.	Grant Research Assistant

Plant Stress Biology and Molecular Genetics Research Programme

Ms. Perera U.M.P.K.	NIFS Research Assistant Gr. II (up to 31.03.2023)
---------------------	---

Rhizobium Project Staff

Mr. Ekanayake E.M.H.G.S.	Research & Development Officer
Mr. Kumara R.K.G.K.	Field Manager
Ms. Aberathne A.H.M.C.D.	Technical Assistant
Mr. Tennakoon A.H.M.A.K.	Technical Assistant

Technical staff attached to Research programmes

Ms. Aluthatabendi D.M.	Chief Technical Officer
Mr. Athukorale N.P.	Chief Technical Officer
Mr. Jayaweera D.S.	Chief Technical Officer
Mr. Jayasekara Banda W.G.	Chief Technical Officer
Ms. Karunaratne R.K.C.	Chief Technical Officer (up to 02.06.2023)
Mr. Pathirana G.P.A.K.	Chief Technical Officer
Ms. Perera R.S.M.	Chief Technical Officer
Ms. Ratnayake R.H.W.M.I.C.	Technical Officer Grade III

Other staff members attached to Research Projects

Mr. Lal M.A.	Laboratory Attendant- Special Grade (up to 02.03.2023)
Mr. Hapukotowa R.B.	Laboratory Attendant- Special Grade
Ms. Harischandra D.R.T.L.	Lapidarist Gr. III

Office of the Director

Ms. Jeewa Kasthuri M.D.	Senior Personal Secretary to the Director
Ms. Seneviratne O.W.K.	Stenographer Gr. I
Ms. Liyanage D.M.A.D.E.	Management Assistant Gr. III
Mr. Bandara A.G.J. S.	Office Aid Gr. III

Accounts Division

Ms. Samarakkody P.S.S.	Accountant
Ms. Senarath, H.M.C.W.	Accounts Officer (from 10.05.2023)
Ms. Nissanka M.K.	Senior Staff Assistant–Book Keeper
Ms. Palliya Guruge M.P.	Senior Staff Assistant – Clerical
Ms. Rathnayake R.M.V.P.	Senior Staff Assistant – Clerical
Mr. Keshan M.K.D.	Management Assistant Gr. III
Ms. Pamukshi K.G.T.	Management Assistant Gr. III
Mr. Weerasuriya B.J.	Management Assistant Gr. III

Administration Division

Ms. Weerasooriya R.P.M.	Senior Staff Assistant- Clerical
Ms. Ranasinghe C.	Senior Staff Assistant- Receptionist (up to 24.10.2023)
Ms. Illangakoon C.L.S.	Senior Staff Assistant- Stenographer
Mr. Gunathilake D.G.	Record Keeper- Special grade
Mr. Gunathilake A.G.S.T.	Management Assistant Gr. III
Mr. Gunasekara K.G.T.B.	Driver- Special Grade
Mr. Somananda M.A.G.	Driver- Special Grade (up to 31.12.2023)
Mr. Dissanayake D.M.D.B.	Driver Gr. III
Mr. Jayasinghe H.A.D.N.	Driver Gr. III

Mr. Kumara A.V.A.P.	Machinist – Special Grade (up to 09.10.2023)
Mr. Udapitiya U.B.R.S.	Machinist Gr. III
Mr. Peiris T.R.	Electrician Gr. III
Mr. Dorakumbura D.G.K.	Mason - Special Grade (up to 05.07.2023)
Mr. Gunawardena A.D.	Karyala Karya Sahayaka/ Driver
Mr. Dodamwela D.W.G.A.C.	Primary level-unskilled
Mr. Wijewardena P.G.N.S.	Primary level-unskilled
Computer Division	
Mr. Weerakoon W.M.R.B.	Chief Technical Officer (up to 06.05.2023)
Ms. Sakalasooriya S.S.K.	Chief Technical Officer
Internal Audit Division	
Ms. Madhushani, W.W.M.I.	Internal Audit Officer (from 10.05.2023)
Instrument & Maintenance Division	
Mr. Kulathunga M.N.B.	Chief Technical Officer (up to 04.12.2023)
Mr. Herath H.M.A.B.	Chief Technical Officer
Mr. Hasun S.M.M.	Primary level-unskilled
Library	
Ms. Tilakaratne T.C.P.K.	Senior Assistant Librarian
Ms. Witharana R.M.	Library Assistant Gr. III
Procurement & Laboratory Stores Division	
Ms. Perera W.D.S.P.	Laboratory Manager
Ms. Chandrakanthi G.W.R.P.	Senior Staff Assistant- Stenographer (up to 28.02.2023)
Ms. Sumanaratne H.M.T.L.	Management Assistant Gr. III
Research Office	
Dr. Rajakaruna S.	Scientific Officer
Science Education & Dissemination Unit	
Dr. Tilakaratne C.T.K.	Coordinator-SDU (up to 26.01.2023)
Ms. Samarakoon K.I.K.	Stenographer Gr. I
Mr. Bandara G.C.K.S.	Technical Officer Gr. III
Ms. Herath H.M.G.N.N.	Management Asst. Gr. III
Mr. Senevirathne M.C.V.B.	Audio Visual Assistant
Mr. Malwewa M.G.D.K.	Office Aid Gr. III

DIRECTOR



Prof. Saluka R. Kodithuwakku
Director, National Institute of Fundamental Studies (NIFS)

SECRETARY



Ms. M.P.W. Shiromani (from 01.11.2023)
Secretary/Secretary to the Board of Governors (NIFS)



Ms. Sagarika D.K. Mediwaka
(from 10.01.2022 to 10.03.2023)
Secretary/Secretary to the Board of Governors (NIFS)



Ms. Samanthi Herath
(from 02.05.2023 to 31.10.2023)
Secretary/Secretary to the Board of Governors (NIFS)

OFFICE OF THE DIRECTOR



From left: Mr. A.G.J.S. Bandara, Ms. D.M.A.D.E. Liyanage, Ms. M.D.J. Kasthuri, Ms. O.W.K. Seneviratne, Mr. A.G.S.T. Gunathilake,

ACCOUNTS DIVISION



From left: Mr. M.K.D. Keshan, Ms. H.M.C.W. Senarath, Ms. R.M.V.P. Ratnayaka, Mr. L. Ekanayake, Mrs. P.S.S. Samarakkody (Seated), Ms. M.K. Nissanka, Ms. M.P.P. Guruge, Ms. K.G.T. Pamukshi, Mr. B.J. Weerasooriya

ADMINISTRATION DIVISION



From left: Mr. D.G. Gunathilake, Mr. A.V.A.P. Kumara, Mr. D.G.K. Dorakumbura, Mr. H.A.D.N. Jayasinghe, Mr. U.B.R.S. Udapitiya, Mr. P.G.N.S. Wijewardena, Mr. A.G.S.T. Gunathilake, Ms. R.P.M. Weerasooriya, Ms. C.L.S. Illangakoon, Mr. M.G.D.K. Malwewa, Mr. M.A.G. Somananda, Mr. K.G.T.B. Gunasekara, Mr. D.W.G.A.C. Dodamwela, Mr. D.M.D.B. Dissanayake, Mr. T.R. Peiris, Ms. C. Ranasinghe

COMPUTER DIVISION



From left: Mr. M.C.V.B. Senevirathne, Ms. S.S.K. Sakalasooriya, Mr. W.M.R.B. Weerakoon

INSTRUMENTS & MAINTENANCE DIVISION



From left: Mr. S.M.M. Hasun, Mr. M.N.B. Kulathunga, Mr. H.M.A.B. Herath

INTERNAL AUDIT DIVISION



Ms. W.W.M.I. Madhushani

LIBRARY



From left: Mr. D. Bandara, Ms. T.C.P.K. Tilakaratne, Ms. R.M. Witharana

PROCUREMENT & LABORATORY STORES DIVISION



*From left: Ms. G.W.R.P. Chandrakanthi, Ms. W.D.S.P. Perera (Seated)
Ms. H.M.T.L. Sumanarathne*

RESEARCH OFFICE



Dr. S. Rajakaruna

SCIENCE EDUCATION & DISSEMINATION UNIT



*From left: Mr. G.C.K.S. Bandara, Mr. M.C.V.B. Senevirathne, Ms. K.I.K. Samarakoon,
Dr. C.T.K. Tilakaratne, Ms. H.M.G.N.N. Herath, Mr. M.G.D.K. Malwewa*

ANNUAL RESEARCH REVIEW



National Institute of Fundamental Studies, Hantana Road
Kandy, Sri Lanka

