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RESEARCH@

URC E-NEWSLETTER 2023

IN THIS ISSUE:

UNIVERSITY OF PERADENIYA

EUROPEAN GRANTS

HORIZON-CL5-2023-D2-02 - cross-sectoral solutions for the climatic transition

Horizon Europe, under Global Challenges and European Industrial Competitiveness, and its climate, energy and mobility cluster, invites applications for HORIZON-CL5-2023-D2-02 - cross-sectoral solutions for the climate transition. This supports proposals that contribute to a clean and sustainable transition of the energy and transport sectors towards climate neutrality facilitated by innovative cross-cutting solutions. Funding is available under the following topics:

- HORIZON-CL5-2023-D2-02-01 - advanced materials and cells development enabling large-scale production of Gen4 solid-state batteries for mobility applications;
- HORIZON-CL5-2023-D2-02-02 - new approaches to develop enhanced safety materials for gen 3 li-ion batteries for bobility applications;
- HORIZON-CL5-2023-D2-02-03 - creating a digital passport to track battery materials, optimize battery performance and life, validate recycling, and promote a new business model based on data sharing.

Proposals must take the form of research and innovation actions, and innovation actions. Research and innovation actions and innovation actions require participation by at least three legal entities; each established in a different EU member state or Horizon Europe associated country. Participants from selected LMICs are automatically eligible for funding.

Closing date :05 September 2023
Award amount :max €8,000,000
Country of applicant institution Sri Lanka included

HORIZON-CL5-2023-D3-02 - sustainable, secure and competitive energy supply

Horizon Europe, under Global Challenges and European Industrial Competitiveness, and its climate, energy and mobility cluster, invites applications for HORIZON-CL5-2023-D3-02 - sustainable, secure and competitive energy supply. This supports proposals that contribute to a more efficient, clean, sustainable, secure and competitive energy supply through new solutions for smart grids and energy systems based on more performance renewable energy solutions. Funding is available under the following topics:

- HORIZON-CL5-2023-D3-02-01 - development of near zero-emission biomass heat and/or CHP including carbon capture;
- HORIZON-CL5-2023-D3-02-02 - novel thermal energy storage for CSP;
- HORIZON-CL5-2023-D3-02-03 - industrial manufacturing for lower-cost solar thermal components and systems;
- HORIZON-CL5-2023-D3-02-04 - innovative components and configurations for heat pumps;
- HORIZON-CL5-2023-D3-02-05 - advanced exploration technologies for geothermal resources in a wide range of geological settings;
- HORIZON-CL5-2023-D3-02-06 - smart use of geothermal electricity and heating and cooling in the energy system;
- HORIZON-CL5-2023-D3-02-07 - development of next generation advanced biofuel technologies;
- HORIZON-CL5-2023-D3-02-08 - development of microalgae and/or direct solar fuel production and purification technologies for advanced aviation or shipping fuels;

- HORIZON-CL5-2023-D3-02-09 - demonstration of sustainable hydropower refurbishment;
- HORIZON-CL5-2023-D3-02-10 - development of innovative power take-off and control systems for wave energy devices;
- HORIZON-CL5-2023-D3-02-11 - advanced concepts for crystalline Silicon technology;
- HORIZON-CL5-2023-D3-02-12 - large area Perovskite solar cells and modules;
- HORIZON-CL5-2023-D3-02-13 - operation, performance and maintenance of PV systems;
- HORIZON-CL5-2023-D3-02-14 - digital twin for forecasting of power production to wind energy demand;
- HORIZON-CL5-2023-D3-02-15 - critical technologies to improve the lifetime, efficient decommissioning and increase the circularity of offshore and onshore wind energy systems;
- HORIZON-CL5-2023-D3-02-16 - accelerating the green transition and energy access in Africa.

Proposals must take the form of research and innovation actions, and innovation actions. Research and innovation actions and innovation actions require participation by at least three legal entities; each established in a different EU member state or Horizon Europe associated country. Participants from selected LMICs are automatically eligible for funding.

Closing date 05 September 2023
Award amount max €8,000,000
Country of applicant institution Sri Lanka included

HORIZON-CL5-2023-D4-02 - efficient, sustainable and inclusive energy use

- Horizon Europe, under Global Challenges and European Industrial Competitiveness, and its climate, energy and mobility cluster, invites applications for HORIZON-CL5-2023-D4-02 - efficient, sustainable and inclusive energy use. This supports projects that contribute to the goal of ensuring efficient and sustainable use of energy, accessible for all through a clean energy system and a just transition. Funding is available under the following topics:
- HORIZON-CL5-2023-D4-02-01 - innovative uses of lifecycle data for the management of buildings and buildings portfolios;

- HORIZON-CL5-2023-D4-02-02 - solutions for the identification of vulnerable buildings and people-centric built environment, and for improving their resilience in disruptive events and altered conditions in a changing climate;
- HORIZON-CL5-2023-D4-02-03 - demonstrate built-environment decarbonisation pathways through bottom-up technological, social and policy innovation for adaptive integrated sustainable renovation solutions;
- HORIZON-CL5-2023-D4-02-04 - fast-tracking and promoting built environment construction and renovation innovation with local value chains;
- HORIZON-CL5-2023-D4-02-05 - supporting the creation of an accessible and inclusive built environment.

Depending on the topic, proposals must take the form of coordination and support actions or innovation actions. Coordination and support actions require one or more legal entities established in an EU member state, Horizon Europe associated country or, in exceptional cases, another third country. Innovation actions require participation by at least three legal entities; each established in a different EU member state or Horizon Europe associated country. Participants from selected LMICs are automatically eligible for funding.

Closing date 05 September 2023
Award amount max €6,000,000
Country of applicant institution Sri Lanka included

HORIZON-CL5-2023-D6-01 - safe, resilient transport and smart mobility services for passengers and goods

Horizon Europe, under Global Challenges and European Industrial Competitiveness, and its climate, energy and mobility cluster, invites applications for HORIZON-CL5-2023-D6-01 - safe, resilient transport and smart mobility services for passengers and goods. This supports projects that contribute to safe, seamless, smart, inclusive, resilient and sustainable mobility systems for people and good thanks to user-centric technologies and services including digital technologies and advanced satellite navigation services. Funding is available under the following topics:

- HORIZON-CL5-2023-D6-01-01 - user-centric development of vehicle technologies and solutions to optimise the on-board experience and ensure inclusiveness;
- HORIZON-CL5-2023-D6-01-02 - generation of scenarios for development, training, virtual testing and validation of CCAM systems;
- HORIZON-CL5-2023-D6-01-03 - infrastructure-enabled solutions for improving the continuity or extension of Operational Design Domains;
- HORIZON-CL5-2023-D6-01-04 - integrating European diversity in the design, development and implementation of CCAM solutions to support mobility equity;
- HORIZON-CL5-2023-D6-01-05 - CCAM effects on jobs and education, plans for skills that match the CCAM development, and prerequisites for employment growth;
- HORIZON-CL5-2023-D6-01-06 - zero-emission e-commerce and freight delivery and return choices by retailers, consumers and local authorities;
- HORIZON-CL5-2023-D6-01-07 - operational automation to support multimodal freight transport;
- HORIZON-CL5-2023-D6-01-08 - future-proof GHG and environmental emissions factors for accounting emissions from transport and logistics operations;
- HORIZON-CL5-2023-D6-01-09 - climate resilient and safe maritime ports;
- HORIZON-CL5-2023-D6-01-10 - better infrastructure safety on urban and secondary rural roads throughout a combination of adaptable monitoring and maintenance solutions;
- HORIZON-CL5-2023-D6-01-11 - aviation safety - Uncertainty quantification for safety and risk management;
- HORIZON-CL5-2023-D6-01-12 - new ways of reducing serious injuries and the longterm consequences of road crashes;
- HORIZON-CL5-2023-D6-01-13 - support for dissemination events in the field of transport research.

Depending on the topic, proposals must take the form of coordination and support actions, research and innovation actions, or innovation actions. Coordination and support actions require one or more legal entities established in an EU member state, Horizon Europe associated country or, in exceptional cases, another third country. Research and innovation actions and innovation actions require participation by at least three legal entities; each established in a different EU member state or Horizon Europe associated country. Participants from selected LMICs are automatically eligible for funding.

Closing date 05 September 2023
Award amount max €20,000,000
Country of applicant institution Sri Lanka included

HORIZON-HLTH-2023-DISEASE-07 - partnerships in health

Horizon Europe, under Global Challenges and European Industrial Competitiveness, and its health cluster, invites applications for HORIZON-HLTH-2023-DISEASE-07 - partnerships in health. This supports proposals that set out a credible pathway to contributing to tackling diseases and reducing disease burden. Funding is available under the following topic:

- HORIZON-HLTH-2023-DISEASE-07-01 - European partnership on rare diseases

Proposals must take the form of co-fund actions. Co-fund actions require one or more legal entities, provided that one is established in an EU member state or Horizon Europe associated country. Participants from selected LMICs are automatically eligible for funding.

Closing date 19 September 2023
Award amount max €50,000,000
Country of applicant institution Sri Lanka included

HORIZON-HLTH-2024-DISEASE-03-two-stage - tackling diseases

- Horizon Europe, under Global Challenges and European Industrial Competitiveness, and its health cluster, invites applications for HORIZON-HLTH-2024-DISEASE-03-two-stage - tackling diseases. This supports proposals that set out a credible pathway to contributing to tackling diseases and reducing disease burden. Funding is available under the following topics:
- HORIZON-HLTH-2024-DISEASE-03-08- two-stage - comparative effectiveness research for healthcare interventions in areas of high public health need;
- HORIZON-HLTH-2024-DISEASE-03-11- two-stage - pandemic preparedness and response, adaptive platform trials for pandemic preparedness;
- HORIZON-HLTH-2024-DISEASE-03-13- two-stage - validation of fluid-derived biomarkers for the prediction and prevention of brain disorders;
- HORIZON-HLTH-2024-DISEASE-03-14- two-stage - tackling high-burden for patients, under-researched medical conditions.

Proposals must take the form of research and innovation actions. Research and innovation actions require participation by at least three legal entities; each established in a different EU member state or Horizon Europe associated country. Participants from selected LMICs are automatically eligible for funding.

Closing date 19 September 2023
Award amount max €10,000,000
Country of applicant institution Sri Lanka included

HORIZON-HLTH-2024-ENVHLTH-02-two-stage - environment and health

Horizon Europe, under Global Challenges and European Industrial Competitiveness, and its health cluster, invites applications for HORIZON-HLTH-2024-ENVHLTH-02-two-stage - environment and health. This supports proposals that set out a credible pathway to contributing to living and working in a health-promoting environment. Funding is available under the following topic:

- HORIZON-HLTH-2024-ENVHLTH-02-06- two-stage - the role of environmental pollution in non-communicable diseases: air, noise and light and hazardous waste pollution.

Proposals must take the form of research and innovation actions. Research and innovation actions require participation by at least three legal entities; each established in a different EU member state or Horizon Europe associated country. Participants from selected LMICs are automatically eligible for funding.

Closing date 19 September 2023
Award amount max €8,000,000
Country of applicant institution Sri Lanka included

HORIZON-EIE-2023-CONNECT-02 - Interconnected Innovation Ecosystems

Horizon Europe, under Horizon Europe: Innovative Europe, and European innovation ecosystem, invites applications for HORIZON-EIE-2023-CONNECT-02 - Interconnected Innovation Ecosystems. This supports proposals that set out a credible pathway to strengthening robust interconnected innovation ecosystems and creating a favourable environment to promote the scalability potential of businesses. Funding is available under the following topics:

- HORIZON-EIE-2023-CONNECT-02-01 - Stimulating Experimentation Practices;
- HORIZON-EIE-2023-CONNECT-02-02 - Specialist Advisory Services to build capacities on innovation procurement.

roposals must take the form of coordination and support actions. Coordination and support actions require one or more legal entities established in an EU member state, Horizon Europe associated country or, in exceptional cases, another third country. Participants from selected LMICs are automatically eligible for funding.

Closing date 21 September 2023
Award amount max €1,000,000
Country of applicant institution Sri Lanka included

URC NEWS

Multidisciplinary Research Symposium was held on 09th February 2023, to evaluate the mid-year progress of researches who received Multidisciplinary Research Grant. The chief guest of the event was Prof.Terence Madujith, Deputy Vice-Chancellor, University of Peradeniya. Progress of all the granted projects was physically evaluated by a board of Evaluators at the program. Principal investigators, Co-Investigators have participated to this event by physically as well as virtually to present their projects.

The URC is working towards achieving a lasting difference to the University's pursuit of excellence in research; developing and implementing strategies and policies to deliver quality research outputs, outcomes, and impacts; leading and supporting bidding and winning research grants; and enhancing multidisciplinary research within the University. Having the above objectives in mind, the URC established a multidisciplinary grant scheme in year 2022 with the participation of two or more faculties within the university. The funding for these grants mainly came from the University. The URC also would like to acknowledge the PGIS for their support for two grants.

Abstracts of the projects presented

DEVELOPMENT OF A RAPID MOLECULAR TOOL FOR DETECTION AND ACCURATE IDENTIFICATION OF QUARANTINE WEEDS

Investigators:
V.N.S. Sirimalwatta1, N.U. Jayawardana1, D.M.D. Yakandawala2, K.M.G.G. Jayasuriya2, Kittisak Buddhachat3, D.T.S.V. Kumari.

1. Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka
2. Department of Botany, Faculty of Science, University of Peradeniya, Peradeniya, Sri Lanka
3. Department of Biology, Naresuan University, Thailand

Abstract:
Invasive alien species greatly affect the biodiversity and functioning of ecosystems around the world. It is essential to minimize their spread to overcome the negative impacts on ecosystems. The National Plant Quarantine Service (NPQS), is the governing body for prevention and early identification of IAW (Invasive Alien Weeds) in export-ready and imported commodities in Sri Lanka. Conventional weed testing methods are time-consuming, less reliable, and require large samples. Therefore, the main objective of this project is to develop a tailor-made, cost-effective molecular diagnostic tool that enables rapid and reliable identification of different species of weeds in consignments at NPQS. Thirty-three invasive weed species were used in the initial screening process. Ten IAW-prioritized weed species were selected based on the frequency of misidentification, invasiveness, and reports of being an adulterant or contaminant of economically important products. The remaining twenty-three species were the most frequently encountered quarantine weeds at the NPQS in Sri Lanka over a ten-year period. Since the currently used grow-out tests require a minimum of 21 days to issue a phytosanitary certificate, different treatments to accelerate seed germination were tested on the IAW-prioritized weed species. Eight weed species (4 replicates 25 seeds in each replicate) were treated with KNO3 (0.1% and 0.4%), and Gibberellic acid (100 mg/l, 500 mg/l, and 1000 mg/l). Seeds from eight species were exposed to heat at 50°C for 10, 30, and 60 minutes and germination experiment is currently underway. Morphological characterization of four IAW and three quarantine weed species is currently being done in order to prepare a seedling guide for the early identification of weeds. DNA extractions from nine IAW have been completed. PCR (rbcL and matK) will be done for molecular characterization of quarantine weeds and some IAW species. Gene alignments of rbcL and matK were used to design Bar-HRM primers. Multiplex Bar-HRM will be performed to obtain a melting curve profile enabling rapid detection of weeds.

Keywords: Bar-HRM, IAW, quarantine weeds

APPLICATIONS OF WHITE LIGHT IMAGES AND ARTIFICIAL INTELLIGENCE FOR THE EARLY DETECTION OF ORAL CANCER IN SRI LANKA

Investigators:
Prof. Ruwan D. Jayasinghe1, Dr. P.V.K.S Hettiarachchi1, Dr. R.M.S.G.K Rasnayake1, Dr. N. S Piyarathne1, Prof. Roshan G. Ragel2, Dr. Isuru B. Nawinne2

1. Department of Oral Medicine and Periodontology, Faculty of Dental Sciences
2. Department of Computer Engineering, Faculty of Engineering

Abstract:

Oral cancer (OCA) is the number one cancer in the male population in Sri Lanka. More than 80% of OCA are diagnosed at an advanced clinical stage, where curative treatment is questionable. Most OCA are preceded by a pre-cancer stage collectively identified as oral potentially malignant disorders (OPMD). Prediction of malignant transformation of OPMD is inconsistent via conventional approaches. Early detection strategies are currently in need to reduce the mortality, morbidity, and economic burden associated with OPMD and OCA. This project aims to explore different applications of white light images, software applications, and artificial intelligence for the early detection of OCA in Sri Lanka. The methodological approaches include feasibility testing and implementation of MeMoSA software developed by Cancer Research Malaysia for use in Sri Lanka, identifying gaps to upgrade existing software features, establishing a white light image database of oral lesions, and building tools for automatic classification of oral lesions. Achievements to date include the establishment of an MOU between Cancer Research Malaysia and the University of Peradeniya (UoP), hosting the MeMoSA software at UoP, constructing a preliminary database with over1500 native white light images of the oral cavity, building a classification model using DenseNet to discriminate OPMD from control images with 70% accuracy, and contrive a tool to isolate oral cavity from images using the UNet model. The current results of this project are promising towards the successful application of white light images and software tools for the prediction of malignant transformation of OPMD and to aid in early detection of OCA in Sri Lanka, with possible applications to reduce the global OCA burden

MICROBES AS BIO-LARVICIDES AND FITNESS INDICATORS OF DENGUE VECTOR MOSQUITOES IN SRI LANKA

Investigators:
W.A.P.P. de Silva1, T.C. Weeraratne1, Prof. Faseeha Noordeen2, Dr. Ruchika Fernando3, Prof. Michael Strand4

1.Department of Zoology, Faculty of Science
2.Department of Microbiology, Faculty of Medicine
3.Department of Public Health and Pharmacology
4.Entomology Department at University of Georgia

Abstract:
Vector-borne diseases account for more than 17% of all infectious diseases in the world including Dengue and Dengue hemorrhagic fever. The controlling of dengue diseases is challenging with the outcompeting dengue vector mosquitoes. The control of dengue vectors is mainly done by chemical insecticides, which have many drawbacks including resistance against commonly used insecticides. In this study, we proposed to investigate the microbes associated with mosquitoes and the impact of those microbes on the fitness and vectorial capacity of Aedes aegypti and Aedes albopictus. Mosquito samples of Aedes aegypti and Aedes albopictus were collected from Kandy, Mathale, Dambulla, Kekirawa, Polonnaruwa, and Badulla areas, and colonies were established. Body measurements were taken for 50 individuals from each location to determine the variations in body morphology of different mosquito populations. 30 individual mosquitoes (five individuals from each location) were surface sterilized and mid-gut contents were cultured on nutrient agar media. Morphologically distinct microbial colonies were subcultured on agar plates to obtain pure cultures. Axenic larvae were prepared following the procedures established by Strand lab, UGA and they were inoculated with mixed microbe cultures.

Results confirmed the noticeable morphological variations between different Aedes populations and species. Microbe cultures confirmed the presence of both bacteria and fungi in the mid-gut contents of mosquitoes. The growth pattern of axenic larvae reveals the effect of mosquito microbes on the growth and development of Aedes larvae.

Overall, the preliminary results support the hypothesis that the effect of microbes on the growth and development of Aedes mosquitoes. The end findings of the study will identify the microbial composition of Aedes aegypti and Aedes albopictus and the novel microbes that affect mosquito development and vectorial capacity.

Impacts of land-use changes and soil erosion on water quality and aquatic macro-invertebrate community responses in a small mountainous catchment in Mahaweli River Basin

Investigators:
Tilak Hewawasam1, Chandramali Jayawardana3 and Rohana Chandrajith2, Iresha Sumudumali and Nilmini Ekanayaka

1. Department of Geography, Faculty of Arts
2.Department of Geology, Faculty of Science
3.Department of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka

Abstract:
The Upper Mahaweli is an important watershed of the Central Highlands where land is highly vulnerable to soil erosion and landslides due to improper land management. During the last few decades, considerable land cover changes have occurred in the upper Mahaweli watershed due to anthropogenic influences. Increased soil erosion in catchments contributes to the alteration of surface and groundwater geochemistry and in-stream ecological processes. Therefore, the proposed study aimed at evaluating the geochemistry of surface water, groundwater, and macro-invertebrate community composition in Atabage Oya in the Mahaweli watershed in response to land use activities of the catchment and accelerated soil erosion. Further, the study also aimed at developing biomonitoring tools for evaluating water quality variation of the streams.

Through a reconnaissance survey, fifteen (15) creeks with different land use practices were selected for the study. The percentages of land cover within each micro catchment were quantified under GIS tools. Water samples were collected on a monthly basis from the selected creeks for analysing major cations, anions, and trace metals. Samples were also collected for analysing stable isotopes ($\delta 2H$, $\delta 18O$) and pesticide residues. Macro-invertebrates in creeks were collected along with the other water quality parameters during the wet season and species were identified at the lowest possible taxonomic level.

Variation of water quality and the composition of macro-invertebrate community in response to catchment land use were estimated and one research abstract was produced using the results obtained so far. Results revealed that water quality variables such as turbidity, conductivity, total dissolved solids (TDS), total suspended solids (TSS), nitrate, chloride, sulphate, and fluoride negatively correlate with catchment forest cover while positively correlate with tea and paddy cultivations. The Hilsenhoff Biotic Index (HBI), developed using macro-invertebrates, negatively correlated with paddy cultivations. Bivariate regression analysis indicated that the average nitrate concentration significantly decreases with the increase in forest cover, while it significantly increases with an increase in the percentage of tea cultivation.

Further, the evaluation and interpretation of geochemical processes and surface and groundwater interactions of the catchment, development of bio indices for monitoring pesticide impacts are still to be completed because some measurements have to be done in laboratories abroad. The findings of the study will be useful for the evaluation of the impacts of a catchment due to land use changes on surface water and groundwater quality and ecological health in a medium-scale catchment and to plan mitigation measures for catchment improvement.

PREDICTING THE INCIDENCE OF SUBCLINICAL MASTITIS IN DAIRY COWS USING MACHINE LEARNING TECHNIQUES

Investigators:
R.M.S.B.K. Ranasinghe1, D. Herath2, C.K. Walgampaya3, R.M.C. Deshapriya4

1. Department of Basic Veterinary Sciences, Faculty of Veterinary Medicine and Animal Science
2. Department of Computer Engineering, Faculty of Engineering
3. Department of Engineering Mathematics, Faculty of Engineering
4. Department of Animal science, Faculty of Agriculture

Abstract:
Subclinical mastitis (SCM) is more common than clinical mastitis and causes huge economic losses to the dairy industry due to its asymptomatic nature. Early diagnosis of SCM and the diseased cows is, therefore, essential to minimize these economic losses. This study aims to develop a model to predict the incidence of sub-clinical mastitis using machine learning techniques based on individual cow data (breed, lactation number and days in milk), milk production (average daily milk yield, 305 days milk yield and peak day in milk) and milk composition data (fat, SNF, protein, lactose, density, pH, temperature, and electrical conductivity) and somatic cell count of milk. Samples were collected from a large-scale dairy herd in the upcountry. The herd was visited during afternoon milking and two samples of fore milk were collected from each cow. Milk composition was measured at farm premises. The other samples were transported in cool condition and the somatic cell count was measured at the dairy technology laboratory of the Department of Animal Science. Data of Individual cows and milk production were obtained from farm records. A total of 744 samples were collected and the data from 241 cows were included in the analysis. Around 47% of cows showed a somatic cell count of more than 200 000 cells/mL. Exploratory Data Analysis (EDA) on the dataset was performed to identify the distribution of the data and correlations of the variables. Further, a baseline data analysis was performed using linear regression. The analysis with linear regression, identifying the most important features (fat, electrical conductivity, and freezing point) resulted in an R-squared (R2) of 9.3%. This work will be extended with a larger population including further analysis of data with the aim of improving dairy farm productivity in Sri Lanka.

PREVALENCE OF METABOLIC SYNDROME AND ITS COMPONENTS AMONG STUDENTS AT PERADENIYA UNIVERSITY

Investigators:
D.M.P.U.K. Ralapanawa1, B.R. De Silva1, H.M.R.K.G Nandasena2, S.U.B.Tennakoon3, K.H. Gamage

1.Department of Medicine, Faculty of Medicine
2.Department of Nursing, Faculty of Allied Health Sciences
3.Department of Community Medicine, Faculty of Medicine

Abstract:
University students are a distinct group, who are possibly more prone to develop Metabolic syndrome (MetS) due to their unique physical, social, and emotional characteristics. Developing MetS and its components at a young age may lead to serious complications in later stages of life. The main aim of this research is to determine the prevalence of MetS and its five criteria among students of the University of Peradeniya, Sri Lanka.

Healthy University students were selected by simple random sampling as participants from each faculty at the University of Peradeniya with a target sample size of 1200. Following informed consent, demographic data were collected through a Google form-based questionnaire. On a separate day, Blood pressure, anthropometric measurements, and blood tests for fasting blood sugar and lipid profile were performed. MetS was diagnosed according to AHA/NHLBI criteria.

Out of 500 participants, 58.4 were found to have at least one criterion of MetS and 36.6% of students were found to have two or more criteria. Of the participants, 8.2% fulfilled the criteria for the diagnosis of MetS with a male predominance (54.1%).

Low HDL was the highest prevalent factor (64%) where the majority were females (69%), followed by high waist circumference which was observed among 50% of students. Elevated triglyceride levels were seen among 23.6% of students. The least prevalent criterion detected was having elevated fasting blood sugar levels (1.0%).

There was a considerable prevalence of MetS and its criteria among the University student population. Screening for MetS within this population aids in early detection. Arranging proper medical follow-up would ultimately lead to a reduction in serious complications and thereby reduce the burden on the health sector.

INTERNET OF THINGS (IOT) FOR SMART AGRICULTURE: ASSESSMENT OF A LOW-COST LOW POWER IOT SYSTEM USING AGRONOMIC PARAMETERS, IMAGE ANALYSIS, AND MACHINE LEARNING

Investigators:
Asitha U. Bandaranayake1, Roshan G. Ragel1, P.C.G. Bandaranayake2, K.S.P. Amaratunga3, Prabhath C. Gunathilake4, Nuwan Jaliyagoda, Semini Devapriya

1.Department of Computer Engineering, Faculty of Engineering
1.Agricultural Biotechnology Centre, Faculty of Agriculture
2.Department of Agricultural Engineering, Faculty of Agriculture
3.Department of Statistics and Computer Science, Faculty of Science

Abstract:
Rapid adaptation of technological advancements such as the Internet of Things (IoT) and artificial intelligence has become a vital part of every field. Examples of such intelligent IoT applications in smart agricultural systems are crop monitoring, management, prediction, and greenhouse automation. Two of the main challenges of Intelligent IoT systems for the agriculture sector are the cost of the commercially available systems and the lack of experimental data collected in real-world settings. In this research the performance of locally developed low-cost, low-power IoT systems generating real-time experimental data under controlled and non-controlled systems will be investigated.

A rule-based model was developed for the semi-controlled and controlled systems. Two polytunnels were used; one with a controlling system, which kept the internal temperature below a given set point using air exhausting and evaporative cooling. The other polytunnel allowed natural ventilation to maintain the internal temperature. The statistical analysis was done by averaging sensor data for sunny and rainy days, and with and without plants inside.

The controlling system was generally successful in regulating the interior temperature under the predetermined conditions. Another finding was that the plants inside the polytunnels contribute more to temperature regulation. The controlling system was unable to keep the internal environment temperature below the predetermined points without plants inside.

With adequate data, more intelligent decision-making systems based on machine learning and deep neural networks can be added to the controller logic. This system can be used to assess the performance of crops in response to the set temperatures in terms of agronomy, physiology, anatomy, biochemistry, and quality and quantity of yield. Further improvements are possible with the integration of a nutrient management system, a light management system, and an image-capturing system.

MORPHOLOGICAL, BIOCHEMICAL AND MOLECULAR CHARACTERIZATION OF NUTMEG (MYRISTICA FRAGRANS HOUTT.) GERMPLASM IN SRI LANKA

Investigators:
D.V. Jayatilake1, G.A.D. Perera2, N.W.I.A. Jayawardana3, H.A.P.W. Hettiarachchi4, I.S. Thamali1, D.G.H.M.K. Dissanayake5, R.M.S.D.L. Abeyrathne, K.A.D.T.L. Wanigarathna, J.A.M.S.R. Perera, I. Madola, S. Rebeira, A.D.N.T. Kumara, S.B. Karunarathne, , L.D.B. Suriyagoda, and B.D.R. Prasantha

1.Department of Agricultural Biology, Faculty of Agriculture
2.Department of Botany, Faculty of Science
3.Department of Animal and Food Sciences, Faculty of Agriculture
4.Department of Biosystems Technology, Faculty of Technology, South Eastern University of Sri Lanka
5.Genetics & Plant Breeding Division, Export Agriculture Research Station

Abstract:
Nutmeg (Myristica fragrans Houtt.) is a perennial tree commonly found in Kandyan homegardens of Sri Lanka. The mace and the kernel of nutmeg are of ethnobotanical importance, especially as a spice. Here, we report the preliminary findings of a genetic diversity assessment and biochemical profiling of Sri Lankan nutmeg, and an attempt to determine sex at an immature stage. Sampling was done on 165 plants collected from Kandy, Matale and Kegalle districts and their diversity was assessed based on 31 fruit, mace, kernel and flower characters. A hierarchical cluster analysis was done using 65 plants with complete data, where a pronounced diversity was observed. To assess the genetic diversity, 14 simple sequence repeat (SSR) markers were optimized, and on a panel of 13 plants, 2-5 alleles were detected reflecting a high genomic diversity in Sri Lankan nutmeg. Based on the available barcoding gene sequences in NCBI for Myristica spp., chloroplast gene trnH-psbA was selected to reconstruct phylogenetic relationships of Myristica spp. including the Sri Lankan spp. Using gas chromatography-mass spectrometry (GC-MS), biochemical profiles of mace, kernel and peel extracts were developed. Using the randomly amplified polymorphic DNA (RAPD) marker OPE-11, the previously identified female-specific 416-bp fragment was isolated for the development of a sequence characterized amplified region (SCAR) marker to improve reproducibility and specificity. Further, through GC-MS unique chemicals in leaf extracts in male and female/monoecious plants were identified. However, no significance was observed between the sexes ($p>0.05$) with respect to leaf morphology. Through niche modeling using MaxENT, predictions were made to identify potential other growing areas for nutmeg in Sri Lanka. The study is aimed at appreciating the unique diversity of the nutmeg germplasm in Sri Lanka and generating knowledge for improving nutmeg germplasm to promote its cultivation as a crop to generate additional household income.

RADIATION SHIELDING FOR MEDICAL PROCEDURES: SYNTHESIS OF A COST-EFFECTIVE, LEAD-FREE MATERIAL

Investigators:
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1.Department of Physics, Faculty of Science
2.Nuclear Medicine Unit, Faculty of Medicine
Department of Radiography/ Radiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka

Abstract:
In nuclear medicine radiopharmaceuticals are used to specific tumor targets by delivering radiation to treat or control cancer. However, post-treatment patients can be a threat to the public, family members, and medical staff as they become a source of radiation. The gamma radiation can be blocked by concrete or lead, which are traditional materials used for shielding. Out of these, the former is cumbersome, while the latter is toxic, brittle and heavy, hence an alternative is imperative. Naturally available minerals in Sri Lanka such as Apatite and Zircon have radiation shielding ability to a certain extent, when combined appropriately. Samples containing Zircon or Apatite were synthesized using epoxy resin as a matrix. The radiation shielding ability of these samples was investigated using gamma photons with an energy of 662 KeV (Cs -137) and a NaI(Tl) scintillation detector.

The Results show that a higher weight percentage of the minerals results in an increase in the shielding of the sample. However, the flexibility is reduced as a consequence of the increased mineral concentration. The best balance between flexibility and shielding properties was observed for the samples with Apatite 60 wt% and Zircon with 80 wt%. A layered structure comprising four Zircon 80% wt layers each 4 mm thick, showed the highest shielding efficiency of 33% for 662 KeV gamma radiation. The particle diameter of both Zircon and Apatite used in these samples was 150 µm. These results will be investigated further by varying particle size and using gamma sources emitting photons at different energies.

Keywords: Radiation shielding, lead-free material, radiopharmaceuticals, natural minerals

IDENTIFICATION AND QUANTIFICATION OF CHEMICAL AND MICROBIAL CONTAMINATIONS IN THE WATERSHED OF MAHAWELI RIVER TO ENSURE A SAFE DRINKING WATER SUPPLY

Investigators:
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2.Department of Microbiology, Faculty of Medicine
3.Department of Veterinary Public Health and Pharmacology, Faculty of Veterinary Medicine & Animal Science
4.China-Sri Lanka Joint Research and Demonstration Centre for Water Technology

Mahaweli river is the main drinking water source for the people live in Kandy district. WHO Water Safety Plans emphasize river management for safe delivery of drinking water. Present study was conducted to identify bacterial, pathogenic protozoan and chemical pollutant loads in both raw and treated water at 18 water treatment plants (WTPs) along the Mahaweli river and its major tributaries between Kotmale and Victoria reservoirs. Water samples were collected during dry (June) and wet (September) seasons in 2022. Onsite measurements were taken for pH, turbidity and electroconductivity. Anion and heavy metal concentrations were determined by ion chromatography (IC) and Inductive Coupled Plasma Mass Spectrometry (ICP-MS) respectively. Pesticide analysis was by High Performance Liquid Chromatography (HPLC). Membrane filtration followed by culturing techniques were used to determine total bacteria counts, coliforms and fecal coliforms. Sub-cultured Escherichia coli were tested for antibiotic susceptibility to amoxicillin, streptomycin, tetracycline, sulfonamide, ciprofloxacin and ceftazidime, which represent antibiotic classes commonly used in Sri Lanka. Pathogenic protozoa were investigated by microscopic techniques.

Results showed higher microbial pollution towards the lower part of the river especially downstream to the Kandy South WTP. Although the pathogenic protozoan Giardia was absent in all the samples tested, Cryptosporidium was present in the raw water of the lower part of the river segment. Antimicrobial resistance of E. coli was highest against amoxicillin followed by tetracycline and sulfonamide. Multi drug resistance was observed from Thalawakelle, Pundaluoya, Nawalapitiya and Paradeka. Anion and heavy metal concentrations, pH, turbidity and electroconductivity were within the safety limits of SLS 614-2013. Traces of the pesticides MCPA and cypermethrin were detected from Pundaluoya, Nawalapitiya and Paradeka. Results are expected to be analyzed against the land use pattern of the area. The knowledge gather through this study will be vital to plan safe delivery of drinking water.

DESIGN AND IMPLEMENTATION OF MICROENVIRONMENT CONDITIONS FOR TEA AND ORNAMENTAL FOLIAGE PLANTS USING PRECISION AGRICULTURE SYSTEMS POWERED BY SOLAR PHOTOVOLTAICS

Investigators:
Prof. A.J. Mohotti1, Prof. J.B. Ekanayake2, Prof. L. Samaranayake2, Prof. C.K. Beneragama1, Dr. K.M. Mohotti3, Dr. H.M.P.C. Kumarihami1, Prof. B.M.L.D.B. Suriyagoda1, Dr. S. Weerasooriya3, Mr. U.M. Sooriyabandara

1.Department of Crop Science, Faculty of Agriculture
2.Department of Electrical and Electronic Engineering, Faculty of Engineering
3.Tea Research Institute
4.Department of Agricultural Economics and Business Management, Faculty of Agriculture

Abstract:
Due to the increasing population growth, the demand for food and energy is escalating while the land area available for cultivation increasingly becomes limiting. Further, climate change and the high demand and cost for fossil fuels prompt the use of renewable energy with reduced emissions. Photovoltaic (PV) systems offer great potential for the efficient capture of solar energy in tropical countries such as Sri Lanka which receives abundant sunshine. However, at present, photovoltaic (PV) systems require a 6 m2/kW, limiting the area which may be used for agricultural and other purposes. In this study, we investigate the possibility of (i) efficient utilization of solar energy in the cultivation of economically important crops i.e. tea and ornamental foliage plants, using precision agriculture principles, and (ii) feeding the excess solar energy to the national grid.

Here, the photovoltaic (PV) system is mounted on a structure above the plant canopy which captures solar energy. Using the harnessed solar energy, our electronics provide accurately controlled LED lighting to the plants as per their requirements for growth and photosynthesis.The required electronics have been designed, developed, tested, and verified in this project to vary the wavelength and the intensity of the light obtained from the individually addressable tri-color (Red, Green, and Blue) LED lights to the plants. The device developed for this purpose has been calibrated using a spectroradiometer. The energy from solar PV generation is stored in a battery in the prototype system, which is used by the LED lighting system. The prototype system is being implemented at the Tea Research Institute, Hanthana using a 2.8 kW solar PV system.

Keywords
Addressable LEDs, Microenvironment, Ornamental foliage, Photovoltaics, Photovoltaic systems.

RESEARCH GRANTS

American Association of Law Libraries (AALL), US

The fund provides a secure financial base, enabling the LexisNexis Research Grant Jury to carry out the Association's Research Agenda. That agenda encompasses research in the major topic areas of provision of legal information services, law library collections, legal research, the profession of law librarianship, and law library administration.

The grant will fund one or more projects of value to those professions that create, disseminate, or use legal and law-related information. The AALL Research Grant program aims to stimulate a diverse range of scholarship in any format.

Closing date 01 May 2023
Award amount min USD 5,000
Country of applicant institution Unrestricted
Website https://www.aallnet.org/education-training/grants/research-grants/

Waltham Foundation, GB

The Waltham Foundation invites proposals for its research awards. These support research projects that advance the understanding of the nutrition, behaviour, health and welfare of companion animals globally. The 2021 funding call is open for projects whose outcomes will contribute to a better world for pets, rather than constraining the scope by scientific area.

Closing date 01 May 2023 (Forecast)
Award amount max £25,000
Country of applicant institution Unrestricted
Website https://www.waltham.com/grants-awards

ECCO global grant

The European Crohn's and Colitis Organisation (ECCO) offers the new ECCO Global Grant to expand and strengthen the global network of ECCO through research partnerships between centres from ECCO Member Countries and non-ECCO Member low income or lower-middle income countries.

ECCO Global Grants seek to extend the outreach and global perspective of IBD research and may focus on aspects of IBD pathogenesis (e.g. environmental impact, genetics), epidemiology and/or clinical care, among others.

Applications must be multicentre and address knowledge gaps and/or unmet needs relevant to low and lower-middle income countries and feature strong contributions from these countries.

Closing date 01 May 2023
Award amount max €300,000
Country of applicant institution Lower-Middle Income Countries; Low Income Countries (World Bank)
Website https://www.ecco-ibd.eu/science/fellowships-and-grants.html

Gabriella E. Molnar-Swafford Pediatric PM&R Research Grant

Award is a grant for research on a topic related to Pediatric Rehabilitation Medicine. Focus will be on individuals with physical disability, under the age of 21, for the best practices, models of care and outcomes. Special consideration will be given to applications focused on outcomes research.

Closing date 01 May 2023
Award amount min USD 10,000
Country of applicant institution Unrestricted
Website http://foundationforpmr.org/research-grants-2/gabriella-e-molnar-swafford-pediatric-research-grant/

Environmental Research & Education Foundation (EREF), US

The sustainability movement has reached the business models of nearly every industry in the United States, and many companies, municipalities and states have set aggressive sustainability goals that include how waste streams are being managed. The EREF Board of Directors has set an initiative to ensure research funded reflects EREF's long-term strategic plan to address all areas of integrated solid waste management, with a strong focus towards research that increased sustainable solid waste management practices.

Pre-proposal topics must relate to sustainable solid waste management practices and pertain to the following topic areas:

- Waste minimization
- Recycling
- Waste conversion to energy, biofuels, chemicals or other useful products. This includes, but is not limited to, the following technologies:
  - Waste-to-energy
  - Anaerobic digestion
  - Composting
  - Other thermal or biological conversion technologies
- Strategies to promote diversion to higher and better uses (e.g. organics diversion, market analysis, optimized material management, logistics, etc.)
- Landfilling

Desirable aspects of the above topics, in addition to or as part of hypothesis driven applied research, also include: economic or cost/benefit analyses, feasibility studies for untested technologies or management strategies, life cycle analysis or inventory, and analyses of policies that relate to the above.

Closing date 01 May 2023 (Forecast)
Award amount max USD 15,000 - 500,000
Country of applicant institution Unrestricted
Website https://www.erefdn.org/research-grants-projects/how-to-apply-for-grant/

Sector innovation and development grants - composite grants

The Canada Council for the Arts invites applications for its sector development composite grants under its supporting artistic practice funds. These support the planning, development or implementation of projects that strengthen the arts sector in Canada. Eligible activities include:

- representation or management services for a stable roster of three or more Canadian artists, groups or organisations;
- production, management and platform services for a number of Canadian artists, groups or organisations;
- publishing critical and interpretative magazines that support one or more artistic practice;
- developing new approaches to organisational models and management practices;
- opportunities for shared learning and networking, resource exchange or other forms of collaboration including mentorship programmes;
- organising conferences, symposia and workshops

sector research;

- Implementing and adapting to new technologies;
- organisations not presently receiving core funding and that have been validated as belonging to a designated priority group can apply for organisational capacity-building projects - the designated priority groups include applicants from culturally diverse, Deaf and disability, official language minority, and Indigenous communities.

Activities must have an impact in the arts sector beyond a personal gain or benefit to the main applicant's group or organisation.

Applicants must be cultural connectors, artistic groups and collectives, First Nations, Inuit or Métis groups or collectives, architectural groups and collectives, artistic organisations, First Nations, Inuit or Métis organisations, national arts service organisations, support groups, organisations and shared platforms, festivals, presenters and touring networks, book and magazine publishers, or agencies and management service organisations. They must have received at least one composite or two project grants from the Canada Council in the last five years.

Generally, the maximum grant amount is CA$50,000 per year. In exceptional circumstances up to CA$100,000 per year up to a maximum of $300 000 over 3 years. Higher amounts may be considered for activities that have elevated costs due to the duration of the project, number of people involved, or technical or other requirements related to the artistic practice.

Closing date 04 May 2023 (Forecast)
Award amount max CAD 300,000
Country of applicant institution Unrestricted
Website https://canadacouncil.ca/funding/grants/supporting-artistic-practice/sector-innovation-and-development

Large Research Grants on Education Program

The Large Research Grants on Education Program supports education research projects that will contribute to the improvement of education, broadly conceived. This program is “field-initiated,” meaning that proposal submissions are not in response to a specific request for a particular research topic, discipline, design, or method. Our goal for this program is to support rigorous, intellectually ambitious and technically sound research that is relevant to the most pressing questions and compelling opportunities in education. We seek to support scholarship that develops new foundational knowledge that may have a lasting impact on educational discourse.

Closing date 04 May 2023 (Forecast)
Award amount max USD 125,000 - 500,000
Country of applicant institution Unrestricted
Website https://www.spencer.org/grant_types/large-research-grant

Racial Equity Special Research Grants

In honor of the Spencer Foundation's 50th Anniversary, the Foundation has launched The Racial Equity Special Research Grants program to support education research projects that will contribute to understanding and ameliorating racial inequality in education. We are interested in funding studies that aim to understand and disrupt the reproduction and deepening of educational inequality in education, and which seek to remake and imagine anew forms of equitable education. Thus, we are also interested in research projects that are working toward transforming systems by reimagining educational opportunities in a multiplicity of education systems, levels, settings, and developmental ranges and that reach beyond documenting conditions and paradigms that contribute to persistent racial inequalities.

our goal for this program is to support rigorous, intellectually ambitious, and technically sound research that is relevant to the most pressing questions and compelling opportunities in relation to racial equity in education. As with other Spencer grant programs, this program is “field-initiated” in that proposal submissions are not required to be developed around a particular research topic, discipline, design, method, or geographic location

Closing date 18 May 2023 (Forecast)
Award amount max USD 75,000
Country of applicant institution Unrestricted
Website https://www.spencer.org/grant_types/racial-equity-special-research-grants

Think Tanks

Mind & Life Think Tanks are self-organized gatherings designed to foster insight and inspire action around an area of inquiry that bridge contemplation, research, and action. Small groups–of scientists, scholars, changemakers, contemplative practitioners, and applied professionals–convene to workshop a topic with well-defined outcomes and potentially high impact.

Proposals must demonstrate relevance to the mission of the Mind & Life Institute. We have a particular interest in supporting projects that examine the role of contemplative practices in the following three focus areas: personal well-being, compassionate communities, and/or human-earth connections. In this context, “contemplative” practices are defined in a broad sense–including various forms of meditation, embodied or movement-based practices, introspection and awareness of mind-body states, reflective writing, contemplative prayer, etc.

Closing date 19 May 2023 (Forecast)
Award amount max USD 15,000
Country of applicant institution Unrestricted
Website https://www.mindandlife.org/grants/think-tanks/

Fellowships

Visiting Senior Fellowship Program

The Center for Advanced Study in the Visual Arts announces its program for visiting senior fellowships. All of the fellowships are for full-time research, and scholars are expected to reside in Washington and to participate in the activities of the Center throughout the fellowship period. Lectures, colloquia, and informal discussions complement the fellowship program. Each visiting senior fellow is provided with a study. In addition, fellows who relocate to Washington are provided with housing in apartments near the National Gallery, subject to availability. Fellows have access to the notable resources represented by the art collections, the library, and the image collections of the National Gallery of Art, as well as to the Library of Congress and other specialized research libraries and collections in the Washington area.

Fields of Study

Leonard A. Lauder Visiting Senior Fellowships for 2022–2023 support research in the history, theory, and criticism of the visual arts of any period or culture. The Center encourages applications in underrepresented fields.
Paul Mellon and Ailsa Mellon Bruce Visiting Senior Fellowships are intended to support research in the history, theory, and criticism of the visual arts (painting, sculpture, architecture, landscape architecture, urbanism, prints and drawings, film, photography, decorative arts, industrial design, and other arts) of any geographical area and of any period. Visiting senior fellowship applications are also solicited from scholars in other disciplines whose work examines artifacts or has implications for the analysis and criticism of visual form.

Closing date 21 March 2023 (Forecast)
Award amount max USD 12,500
Country of applicant institution Unrestricted
Website https://www.nga.gov/research/casva/fellowships/visiting-senior-fellowships.html

AACR Cancer Disparities Research Fellowships

The AACR Cancer Disparities Research Fellowship represents an effort to encourage and support postdoctoral or clinical research fellows to conduct cancer disparities research and to establish a successful career path in this field. The proposed research may be in basic, translational, clinical, or population sciences and must have direct applicability and relevance to cancer disparities.

Closing date 23 March 2023
Award amount max USD 120,000
Country of applicant institution Unrestricted
Website https://www.aacr.org/grants/aacr-cancer-disparities-research-fellowship/

Newton International Fellowships - Natural Sciences

These fellowships are for non-UK scientists who are at an early stage of their research career and wish to conduct research in the UK. Research must be within the Royal Society's remit of natural sciences, which includes but is not limited to biological research, chemistry, engineering, mathematics and physics.

This scheme focuses on early career international researchers. The aims of this scheme are as follows:

- To support the development and training of postdoctoral researchers at an early stage of their career from any country outside the UK, by providing an opportunity to work at a UK research institution for two years.
- To ensure the best postdoctoral researchers across all relevant disciplines from around the world are supported in the UK.
- To foster long-term relations between Newton International Fellows and the UK research base through the establishment of an alumni programme for former Fellows of this Scheme. The alumni programme includes the possible provision of further funding for Newton International Fellows for follow-on activities, to enable links with UK-based researchers to be maintained and developed.

Submissions from clinically qualified scientists may be considered. The Society does not support clinical or interventional research on humans at the individual or group level, social sciences or humanities, unless otherwise stated.

It is expected that your host organisation gives you the necessary departmental and institutional support to complete your Fellowship successfully, including adequate office and laboratory space and access to essential equipment, software and facilities. Newton International Fellows should be appointed on terms that are no less favourable than those of comparable posts in the host organisation

This scheme is jointly run by the British Academy and the Royal Society.

Closing date 28 March 2023
Award amount max £60,000
Country of applicant institution Sri Lanka included
Website https://royalsociety.org/grants-schemes-awards/grants/newton-international/

Research Fellowship Program - Pediatric Dermatology Research Alliance

Childhood skin diseases are associated with severe burden on patients, families, and health care providers. Despite this burden, effective treatments remain sparse and the pace of research slow. To help overcome these challenges, the PeDRA Research Fellowship program supports one year of mentored research for post-graduate trainees and medical students in the field of pediatric dermatology.
The Research Fellowships program is driven by PeDRA's mission to create, inspire, and sustain research to prevent, treat, and cure childhood skin disease. Fellowships are intended to support the development of the next generation of physician scientists and the advancement of active research projects in the field of pediatric dermatology.

Closing date 30 March 2023
Award amount max USD 20,000
Country of applicant institution Unrestricted
Website https://pedraresearch.org/2023/01/17/research-fellowship-program/

Fernand Braudel senior fellowships

The European University Institute invites applications for the Fernand Braudel senior fellowships. These enable established academics with an international reputation to pursue their research at the EUI. Fellowships are offered at the following departments: economics; law; history and civilisation; political and social sciences.

Established academics of any nationality may apply. They must have an international reputation and a good knowledge of English, as well as a good knowledge of any other language relevant to their proposed research.\

Fellowships are for up to 10 months.

Closing date 30 March 2023
Award amount max €30,000
Country of applicant institution Unrestricted
Website https://www.eui.eu/apply?id=fernand-braudel-senior-fellowships

International Fellowships - Japanese Association of University Women

The objective of this program is to allow promising non-Japanese women researchers/graduate students to conduct research in Japan by providing them with a fellowship. They will be able to spend a period of time in residence in a research institute /university in Japan.

Closing date 31 March 2023
Award amount max JPY 500,000 - 1,000,000
Country of applicant institution Sri Lanka included
Website https://www.jauw.org/scholarship-information/international/

ICO-Allergan advanced research fellowship

The International Council of Ophthalmology, in partnership with Allergan, invites applications for the ICO-Allergan advanced research fellowship. This enables a young ophthalmologist to continue basic or clinical research at a chosen university, preferably in a foreign country to where they live. Applications will be accepted for research work in the following areas: glaucoma; neuro-ophthalmology; paediatric ophthalmology; retina; tumours; uveitis; dry eye; cornea.

The fellowship is open to candidates located in any country who are under 40 years of age at the time of applying. They must also have a minimum of one year of research training and be reasonably fluent in the language of the fellowship training centre. Preference is given to applicants from countries with ophthalmologic societies that are members of the ICO.

Closing date 31 March 2023
Award amount max USD 50,000
Country of applicant institution Unrestricted
Website https://icoph.org/ico-fellowship/#types-of-fellowships

Fellowship receivers

I will be visiting Israel from February to April 2023 as a Lady Davis visiting professor fellow to carry out research and teaching in remote sensing. My host institution is the Technion - Israel Institute of Technology, the premier engineering education institute in the Israel. The Lady Davis Fellowship Trust provides fellowships to foreign scholars to do research and teach in the Hebrew University of Jerusalem or in the Technion – Israel Institute of Technology. Fellowships can be in the form of visiting professorships, post-doctoral scholars, and postgraduate students. All nationalities are eligible to apply to fellowships. Further information can be obtained from http://ldft.huji.ac.il/ . If you are planning to apply to visiting professorship or post-doctoral scholar fellowship, directly contact the respective department you are planning to visit. Finally, I would like to acknowledge the University Research Council news letter for providing the information regarding the Lady Davis fellowships. Without that information I wouldn't have applied for this fellowship.

Prof. H.M.V.R. Herath
Department of Electrical and Electronic Engineering

UNIVERSITY OF PERADENIYA

PROF.LAKSHMAN SAMARANAYAKA AWARDS – 2023

CALL FOR APPLICATIONS FOR PROF.LAKSHMAN SAMARANAYAKA AWARDS

The University Research Council [URC] is pleased to call for applications for Prof.Lakshman Samaranayaka awards – 2023. This year we are calling applications from the academic staff members of the Faculties of Dental Sciences, Engineering, and Science who satisfies the following eligibility criteria:

- For Dental Sciences – minimum h index is 20
- For Pure Sciences except mathematics - minimum h index is 17
- For Engineering - minimum h index is 14
- For Mathematics - minimum h index is 11

Application Deadline: The duly filled applications should be received by the URC on or before 15th of March 2023.

The prescribed format for the application can be obtained from the Secretary University Research Council <secretaryurc@gs.pdn.ac.lk>.

Publication Supporting Fund

Research Publication Facilitation Fund [RPFF]
University of Peradeniya

The University Research Council [URC] is pleased to announce that it has initiated a scheme to provide financial assistance up to a maximum of USD 1000.00 per year for the researchers of University of Peradeniya to facilitate publishing their research findings in high-ranking peer reviewed journals.

Financial Assistance:

USD 500 per author up to a maximum of **USD 1000** per paper per year.

Eligibility Criteria

- The applicant should be a permanent staff member of the University of Peradeniya and one of the authors of the journal article.
- The University of Peradeniya should have been identified as the sole affiliation or one of the affiliations. Journal articles which do not carry the University of Peradeniya as an affiliation are not eligible for funding.
- The journal should be indexed in one of the following Web of Science indexes:
  - Science Citation Index Expanded (SCIE)
  - Social Sciences Citation Index (SSCI)
  - Arts & Humanities Citation Index (AHCI)
- The impact factor of the journal should be 2 or higher
- The corresponding author of the journal article should have used the institutional e-mail address (pdn.ac.lk or any variant)
- None of the applicants should have used this facility within the current calendar year

The URC reserves the right to amend the eligibility criteria. The article processing charge will be reimbursed subject to the availability of funds.

Procedure

The applicant should fill in an application form and submit the same to the Director, URC through the Head of the Department and the Dean of the Faculty along with the original copy of the receipt for the payment of page charges and a copy of the journal article. The article should have been published either online or printed with a valid DOI in the journal within the year of concern.

The application can be downloaded from
https://www.pdn.ac.lk/centers/urc/doc/Application%20For%20RPFF_URC_2021.pdf

Important:

The author/s other than the corresponding author affiliated to the University of Peradeniya are encouraged to use the official e-mail address with pdn domain name provided by the University of Peradeniya.

more information

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Looking forward to your contributions to the March edition

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