

Annual Research Symposium 2024 University of Colombo

Postgraduate Technical Sessions

Faculty of Science

Tuesday, the 5th of November 2024

Inauguration Programme (Venue: **ILC Auditorium, Faculty of Science**)

08.15 - 08.45 am	Registration of participants
08.45 - 08.55 am	Lighting of the Oil Lamp and National Anthem
08.55 - 09.00 am	Welcome address by the Dean, Faculty of Science, Senior Professor Upul Sonnadara
09.00 - 09.30 am	Keynote address by Dr. S. R. S. N. Sudasinghe, Director General, National Science Foundation, Sri Lanka
09.30 - 10.30 am	Machine Learning Strategies for Research Enhancement by Dr. Pemantha Lakraj, Dr. Dilanga Siriwardane and Dr. Sameera Viswakula
10.30 - 10.35 am	Vote of thanks by Co-coordinators of the programme
10.35 - 11.00 am	Refreshments

Schedule of the Technical Sessions:

Time	TRACK 1: CHEMISTRY (Venue: NCLT) Chairperson: Dr. S. M. Vithanarachchi	Name of the presenter
11.00 - 11.15 am	<i>Designing Surface Enhanced Raman Scattering (SERS) Substrates Using Citrate-capped and Cysteamine-capped Gold Nanoparticles to Modify Glass Substrate and Polystyrene Well Plates</i> <i>D. Rodrigo, S. Gunewardene, H. Jayaweera, N. Abeyasinghe</i>	D. Rodrigo
11.15 - 11.30 am	<i>Determination of Antioxidant and Antimicrobial Activities of Different Parts of Leucas zeylanica (Gata Thumba) Plants</i> <i>M. S. D. Fernando, C. Hettiarachchi</i>	M. S. D. Fernando
11.30 - 11.45 am	<i>Fitness Evaluation of Two Component Release of Insects Carrying Dominant Lethality (RIDL) Based Transgenic Aedes aegypti Mosquito Lines</i> <i>P. V. D. Dilani, R. S. Dassanayake, H. M. Dilruk, M. Hapugoda, F. Zurita, C. Hettiarachchi, Y. I. N. Silva Gunawardene</i>	P. V. D. Dilani
11.45 am - 12 noon	<i>Evaluation of Kithul Treacle as a Potential Substrate to Grow Monascus purpureus in Preparation of Monascus-fermented Black Tea</i> <i>U. P. S. Hasara, P. Subasinghe, G. Abewickrama, C. Hettiarachchi, M. N. Kaumal</i>	U. P. S. Hasara
12.00 - 12.15 pm	<i>Optimized PEI Mediated Reverse Transfection Methodology for Transient Transfection of HEK293 Cells</i> <i>K. Sirisena, K. J. Wijesinghe</i>	K. Sirisena
12.15 - 12.30 pm	<i>Preparation and Characterization of Solid Lipid Nanoparticles Loaded with Ceylon Citronella Oil as a Potent System for Slow-releasing Mosquito Repellent</i> <i>C. M. Lokuge, H. I. C. De Silva, H. D. Weeratunge, G.A S. Premakumara</i>	C. M. Lokuge
12.30 - 12.45 pm	<i>Synthesis of Alpha-pinene Peroxide from Alpha-pinene Using Singlet Oxygen [$O_2(^1\Delta_2g)$]</i> <i>K. H. L. T. Jayasekara, D. T. U. Abeyunga</i>	K. H. L. T. Jayasekara
12.45 - 1.00 pm	<i>Fabrication of a Chitosan/Alginate/TiO₂ Based Carrier System for the Encapsulation of Gibberellic Acid and Investigating Their Release Profiles</i> <i>D. N. A. Arachchi, R. M. De Silva, K. M. N. De Silva</i>	D. N. A. Arachchi
01.00 - 01.15 pm	<i>Development of a Fluoride Riboswitch-based Whole-cell Biosensor for Detecting Fluoride in Drinking Water</i> <i>K. A. D. Kaushalya, W.M. R. Ariyaratne, G. N. Silva</i>	K. A. D. Kaushalya

Time	TRACK 2: BIOLOGY (Venue: NBLT) Chairpersons: Prof. M. R. Wijesinghe and Prof. H. D. D. Bandupriya	Name of the presenter
11.00 - 11.15 am	<i>Evaluation of Network-based Function Prediction Algorithms on Oryza sativa japonica Protein-Protein Interaction Data</i> M. A. S. U. Piyatissa, T. L. S. Tirimanne, S. P. C. Fernando	Senuri Piyatissa
11.15 - 11.30 am	<i>Hanthana Mountain Range: A Sanctuary for Sri Lankan Lichens</i> H. Dangalla, C. M. Nanayakkara, R. G. U Jayalal, D. Q. Dai, N. Wijayawardane	Hasanka Dangalla
11.30 - 11.45 am	<i>Endophytic Fungi of the Mangrove Plant Avicennia marina in the Batticaloa Lagoon of Sri Lanka: Diversity and Their Bioactivities</i> K. Thushanthan, T. Mathiventhan, H. I. U. Caldera, N. N. Wijayawardene, K. G. S. U. Ariyawansa	Kishani Thushanthan
11.45 am - 12 noon	<i>Plant Growth Promoting Capabilities of Endophytic Fungal Isolates from Terminalia arjuna</i> J. S. Gnanarathne, S. S. Ediriweera	Jithni Gnanarathne
12.00 - 12.15 pm	<i>Drivers of Land Use Land Cover Changes in Wilpattu National Park and the Surrounding Area</i> H. Dahanayake, D. D. G. L. Dahanayaka, P. Hudson, D. D. Wickramasinghe	Harsha Dahanayake
12.15 - 12.30 pm	<i>The Role of e-Waste Pickers in Wattala and Kolonnawa Local Authority Areas: Contribution to the Circular Economy</i> S. Kumari, D. D. Wickramasinghe, S. Wijesinghe, J. Trafford, M. Petterson	Sujeewa Kumari
12.30 - 12.45 pm	<i>Changes in Total Antioxidant Activities of Sri Lankan Rice (Oryza sativa L.) During Domestic Cooking and Antioxidative Benefits of Rice Consumption in the Daily Diet</i> J. W. Gunawarana, C. Witharana, N. D. A. Wageesha, S. A. Gunawardana, I. C. Perera	Jayani Wathsala Gunawardana
12.45 - 1.00 pm	<i>Role of FLT3 Receptor in Peripheral White Blood Cells of Newly Diagnosed Diffuse Large B Cell Lymphoma Patients and Healthy Individuals: A Preliminary Study</i> C. K. Nandasena, P. W. D. C. C. Jayathilake, S. Suresh, A. D. De Silva, I. C. Perera, D. U. Kottahachchi	Chamila Nandasena
1.00 - 1.15 pm	<i>Isolation and Identification of Long Chain n-Alkane Degrading Bacteria from Crude Oil-contaminated Soil in Sapugaskanda, Sri Lanka</i> P. D. N. V. Alwis and I. C. Perera	Vidumini Alwis

Time	TRACK 3: PHYSICAL SCIENCES & NUCLEAR SCIENCE (Venue: SCL-B (Department of Statistics Building)) Chairperson: Dr. K. A. D. Deshani	Name of the presenter
11.00 - 11.15 am	<i>Violation-based Feature Selection for Isolation Forest</i> <i>D. M. Dissanayake, R. Navarathna, S. Viswakula</i>	D.M. Dissanayake
11.15 - 11.30 am	<i>Comprehensive Analysis of S-wave Intensity Prediction in New Zealand Earthquakes: A Multilevel Modeling Approach</i> <i>E. V. T. Eranthi, G. P. Lakraj</i>	E.V.T. Eranthi
11.30 - 11.45 am	<i>Factors Affecting Grade 11 Students' Academic Performance in Mathematics at a Homagama Zone School</i> <i>N. D. Kumarasinghe, R. A. B. Abeygunawardana</i>	N.D. Kumarasinghe
11.45 am - 12 noon	<i>Dynamics of Bridged Water Molecules in the Vicinity of a Collagen Microfibril</i> <i>S. Rangana, W. A. M. Madhavi</i>	W. A. M. Madhavi
12.00 - 12.15 pm	<i>Investigation of ⁶⁰Co BEBIG High Dose Rate Brachytherapy Dose Distribution in Different Media Using GEANT4 Monte Carlo Simulation</i> <i>M. Jayakody, J. Jeyasugiththan, S. W. Peterson, C. Rajasooriyar, A. Chougule</i>	M. Jayakody
12.15 - 12.30 pm	<i>Mathematical Modelling of Automatic Tube Current Modulation in Computed Tomography Using a Customised Phantom</i> <i>U. Hishaam, J. Jeyasugiththan, S. Viswakula, D. M. Satharasinghe, T. Amalaraj, A. Pallewatte, S. Peterson</i>	U. Hishaam