



**12th Ruhuna International Science and Technology
Conference**

22nd of January 2025

PROGRAM

**Faculty of Science
University of Ruhuna
Matara, Sri Lanka**

Inauguration Session
Venue: New Senate Room, University of Ruhuna

08:00 am	Arrival of the Chief Guest & Guests of Honour
08:05 am	Lighting the Traditional Oil Lamp
08:10 am	University Anthem
08:15 am	Welcome Address by Dr. A.W.L. Pubudu Thilan, Chairperson/RISTCON2025
08:20 am	Address by the Chief Guest, Senior Professor R. M. U. S. K. Rathnayaka, the Competent Authority, University of Ruhuna
08:30 am	Keynote Speech by Professor Archana Sharma Physicist and Senior scientist European Organization for Nuclear Research (CERN) Geneva Switzerland “Empowering the Future: Research and Innovation for Global Impact”
09:20 am	Address by Professor D. H. N. Munasinghe, Dean, Faculty of Science, University of Ruhuna
9:30 am	Felicitation of Retired Academic Staff Members
9:55 am	Vote of Thanks by Dr. K.D. Prasangika, Joint Secretary/RISTCON 2025
10:00 am	National Anthem

Oral and Poster Sessions

Program Summary

10: 30 am– 12:00 pm	Oral Sessions - I
12.00 pm – 1.00 pm	Lunch Break
1.00 pm – 1.30 pm	Plenary Speech I (Venue: Auditorium, Faculty of Fisheries & Marine Sciences)
1.30 pm – 2.00 pm	<p>“Zoonotic Diseases and Vector-Host Dynamics: Key Research Priorities and Control Strategies for Public Health in Tropical Regions”</p> <p>Professor W. A. Priyanka P. De Silva</p> <p>Professor in Zoology Department of Zoology University of Peradeniya Sri Lanka</p> <p>Plenary Speech II (Venue: Auditorium, Faculty of Fisheries & Marine Sciences)</p> <p>“Microwave-Assisted Preparation of Lanthanide-Based Nanoparticles for Luminescent and Biomedical Applications”</p> <p>Professor Channa De Silva Professor of Chemistry Head of the Department Department of Chemistry & Physics Western Carolina University, USA</p>
2.00 pm– 3.45 pm	Oral Sessions - II
3.45 pm – 4:30 pm	Poster Session
4:30 pm	Program Conclusion

Oral Presentations - Morning Session

Category		Life Sciences
Session		1
Time		10:30 AM
Venue		LCTU-2 (Science Faculty Complex)
Session Chair		Professor W. A. Priyanka P. De Silva
Panel Member 1		Professor D.H.N. Munasinghe
Panel Member 2		Professor Hemantha Wegiriya
Convener		Mr. R.R.M.U.N.B. Rathnayake
Time	ID	Title
10:30AM-10:45AM	5	Diversity and abundance of soil nematode community associated in bitter-gourd (<i>Momordica charantia</i> L.) fields maintained with conventional and good agricultural practices (GAP) <i>T.I.S.C. Dribargs, W.T.S. Dammini Premachandra</i>
10:45AM-11:00AM	122	Circulating 5 α -dihydroprogesterone (5 α -DHP) and progesterone concentrations during pregnancy: A case study of a Bengal tigress (<i>Panthera tigris tigris</i>) in a safari park in Sri Lanka <i>Gunawardena OB, Ediriwarne P, De Silva STD, Madumadhawa MHD, Pathirana E, Pathirana IN</i>
11:00AM-11:15AM	8	Presence and dietary profile of Fishing Cats in Kirala Kale Sanctuary, Matara, Southern Sri Lanka. <i>Perera K.A.A.N.S., De Silva M.P.K.S.K., and Chathuranga W.G.D.</i>
11:15AM-11:30AM	13	A study on the intestinal parasitic community in albino rats <i>Marasinghe M.P.W., Sudarshanie K.A.M.</i>
11:30AM-11:45AM	42	Effects of waterborne Sodium Dodecyl Sulphate on behavior and erythrocyte nuclear morphology of tilapia (<i>Oreochromis niloticus</i>) juveniles <i>Bandara M.M.M.C., Gunawickrama S.H.N.P., Edusuuriya M. and Gunawickrama K.B.S.</i>
11:45AM-12.00PM	84	Effects of the aquatic and roosting avifauna on the water quality of the selected freshwater ecosystems in Southern Sri Lanka. <i>Deshapriya, P.H.K.S.M., Guruge, W.A.H.P., Chathuranga W.G.D.</i>

Oral Presentations - Morning Session

Category		Physical and Chemical Sciences
Session		2
Time		10:30 AM
Venue		LCTU-3 (Science Faculty Complex)
Session Chair		Professor Archana Sharma
Panel Member 1		Dr. J.A.P. Bodhika
Panel Member 2		Dr. Mahesh Kodikara
Convener		Ms.Thilini Dananjani
Time	ID	Title
10:30AM-10:45AM	67	AI for Monitoring Urban Growth and Its Effects on Green Spaces and Biodiversity: Focus on Sri Lanka <u>Weerasinghe B.P.G.S.Y</u>
10:45AM-11:00AM	75	A NOVEL TECHNIQUE TO IDENTIFY SHOULDER IMPINGEMENT SYNDROME (SIS) USING MRI <u>Senadeera N.T., De Silva W.M.K., Hewavithana P.B., Jayatilake M.L., Vijithananda S.M., Hareendra Upul P.D.S. , Perera U.L.L.S., Arambepola P.K.</u>
11:00AM-11:15AM	101	Purification and Surface Modification of Anode Materials from Spent Li-ion Batteries as a Recycling Approach <u>Mohansingh K , Hewathilake H.P.T.S, Amaraweera T.H.N.G, Wijayasinghe H.W.M.A.C</u>
11:15AM-11:30AM	135	Optimization and Performance Evaluation of Dye-Sensitized Solar Cells Using Cockscomb Flower Extract as a Natural Sensitizer <u>Aberathne E.M.K.K , Anuththara H.N , Wijewardane H.O, Kumari J.M.K.W</u>
11:30AM-11:45AM	170	Fabrication of Writable and Printable Superhydrophobic Paper via Dip-Coated Silica-Based Treatment <u>Samanmali V.G.C.1 , Rathnayake A.R.M.A.M. , Dharmaweera N. , Mantilaka M.M.M.G.P.G. , Bandara T. , De Silva R.T.</u>
11:45AM-12:00PM	178	Effects of partial replacement of commercial carbon black by recovered carbon black (rcb) in rubber compounding <u>Araliya H Jayawickrama, Dhammika Weerathunga, W.D.M. Sampath , Samantha A Ranaweera</u>

Oral Presentations - Morning Session

Category		Mathematics and Statistics
Session		3
Time		10:30 AM
Venue		LCTU-4 (Science Faculty Complex)
Session Chair		Prof. P.A. Jayantha
Panel Member 1		Mrs. K.C.N. Shanthidevi
Panel Member 2		Dr. M.K.Abeyrathne
Convener		Mr. Gayan Sanjeewa
Time	ID	Title
10:30AM-10:45AM	118	An Algorithm for Rainbow Coloring of the Extended Version of Flower Graph <i>Dheerasinghe G.W.M.M.K. , Ranasinghe P.G.R.S. (online)</i>
10:45AM-11:00AM	120	A Natural Uniform Structure on Inductive Groupoids <i>Randunu M.W.S,Chathuranga K.M.N.M , Athapattu A.M.C.U.M</i>
11:00AM-11:15AM	134	Integer and fractional order reaction diffusion systems for spatial and temporal pattern dynamics of cancer cells <i>Navodya E.A.S., Somathilake L.W.</i>
11:15AM-11:30AM	146	Developing a Mathematical Modelling Approach to Investigate Coastal Lagoon Salinity: A Case Study of Nayaru Lagoon <i>Rajapaksha R.P.D.T.H., Jayathilaka R.M.R. , Fernando M.C.S., Perera H.A.S.D., Abeyratne M.K., Hansani K.G.P.</i>
11:30AM-11:45AM	155	Ordinary Kriging model approach for analyzing Covid-19 positive spread in Sri Lanka <i>Nandani E.J.K.P. , Jayarathna B.K.V., Nanayakkara N.G.S.S.</i>
11:45AM-12:00PM	160	Identifying Exam Center Locations using an Integer Linear Programming: A Case Study of Finding Optimal Locations of the Examination Centers for the Fifth Grade Scholarship in the Matara Educational Zone <i>Batuvita R.R., Nishantha K. D. P. H. S. , Samarathunga D. M.</i>
12:00PM-12:15PM	180	Analyzing Dengue Cases in Sri Lanka with Zero-Inflated Poisson Regression <i>Thilan A.W.L.P., Liyanage I.C.</i>

Oral Presentations - Morning Session

Category		Computer Science and Engineering
Session		4
Time		10:30 AM
Venue		Science Faculty Board room
Session Chair		Ms.T.D.G.Geethika
Panel Member 1		Ms.M.S.Hiruni Peiris
Panel Member 2		
Convener		Mrs.Binuri Raigamkorale
Time	ID	Title
10:30AM-10:45AM	17	A review of the adequacy of fire safety resources for high-rise buildings in Sri Lanka. <i>Premanath T.H.T.N., Konthesingha K.M.C., Upasiri I.R., Rathnasiri H.M.S.C., Weerasinghe W.P.H.P.</i>
10:45AM-11:00AM	24	A Hybrid CNN-HOG Based Feature Extraction Approach for Tamil Handwritten Village Name Recognition Using SVM <i>Vinusha C. , Ramanan M. , Yasotha R.</i>
11:00AM-11:15AM	48	Transducer system for driving pedals and a traffic sign recognition system to guide prosthetic users <i>Wijesinghe W.G. A.K. , Lakshan K.A.S, Abeywickrama S. S.</i>
11:15AM-11:30AM	60	Preliminary Performance Evaluation and Improvement of a Typical Food Dehydrator <i>Priyashan N.W.P.T.K. , Wickramasinghe M.</i>
11:30AM-11:45AM	73	Thermal and Mechanical Properties of New Wood-Based Eco-Friendly Thermal Insulation <i>Lakshan G.H.S., Nawarathne A.N.S., Srinath K.N.T. , Arafak M.A.M., De Silva K.T.K.M.</i>
11:45AM-12:00PM	94	Design of a Vacuum Brake System for a Suzuki Wagon R Car as an Alternative to the Hydraulic Brake System <i>De Silva K.T.K.M., Wijesiri D.P.D.</i>

Oral Presentations - Morning Session

Category		Life Sciences
Session		5
Time		10:30 AM
Venue		Botany Seminar room
Session Chair		Prof. K Masakorala
Panel Member 1		Dr. T.G. Dayananda
Panel Member 2		Prof. Shirani Manel
Convener		Ms. Kasuni
Time	ID	Title
10:30AM-10:45AM	33	Effect of polyamine seed priming in proline content of <i>Vigna radiata</i> L. seedlings under water stress <i>W.M.D.A.K Weerasekara, R. Wimalasekera</i>
10:45AM-11:00AM	41	Effect of volatiles emitted by three botanicals on second-stage juveniles of root knot nematode, <i>Meloidogyne javanica</i> : An in vitro study <i>Wijerathna W.M.H.U., Dammini Premachandra W.T.S.</i>
11:00AM-11:15AM	57	Evaluation of the production of Biosurfactant from Halophilic bacteria Isolated from Salt Pans in Hambantota, Sri Lanka. <i>Athauda U.S., Rathnayake I.V.N.</i>
11:15AM-11:30AM	66	Characterization of Physicochemical, Nutritional, and Shelf-Life Properties of Ambul Banana (<i>Musa acuminata</i> - AAB) Corm Flour: By-Product of Banana Cultivation D.S.M. Wickramage , M. C. N. Jayasooriya
11:30AM-11:45PM	105	Impact of Tropical Climate Modes (Indian Ocean Dipole and El Niño/Southern Oscillation) on Winter Surface Chlorophyll in the Indian Ocean <i>Kaludewalage Rumesha Madhuwanthi, R.M.G.N. Thilakarathna, Gayan Pathirana, Dong-Geon Lee, Dongxiao Wang</i>
11:45AM-12:00PM	123	Isolation and characterization of black rot-causing bacteria of cabbage, and isolation of its bacteriophage as a biocontrol agent. <i>Adhikari A.M.H.S , Halmillawewa A.P .</i>
12:00PM-12:15PM	191	Mapping the Proteomic Landscape of <i>Aeromonas hydrophila</i> Derived Extracellular Vesicles <i>Mawalle Kankanamge Hasitha Madhawa Dias, Mahanama De Zoysa</i>

Oral Presentations - Morning Session

Category		Physical and Chemical Sciences
Session		6
Time		10:30 AM
Venue		Chemistry Conference room
Session Chair		Professor Channa De Silva
Panel Member 1		Prof. Chinthaka Sanath
Panel Member 2		Dr. Naduna Rathnaweera
Convener		Ms. Fathima Shazeena
Time	ID	Title
10:30AM-10:45AM	18	Effects of Tin (II) chloride (SnCl ₂) exposure on oxidation and interactions with the functional groups of hemoglobin <i>De Zoysa R.R.K. , Rajapaksa G.</i>
10:45AM-11:00AM	21	Investigating Dye Adsorptive Ability of Post-modified Rice Husk-based Biochar-Iron oxide Nanocomposites <i>Samaraweera W.A.D.C.N., Gunatilake S.R., and Rathnayake R.M.A.S.</i>
11:00AM-11:15AM	115	Spatiotemporal variation of microplastics in coastal ecosystems: A Case study in Rekawa Lagoon <i>Somarathna R.G.S.M. , Gangabadage C.S. , Yapa Y.M.A.L.W. , Atapaththu K.S.S.</i>
11:15AM-11:30AM	124	Computational Study of Linear and Nonlinear Optical Properties of Ruthenium Alkynyl Spiropyran Complexes <i>Keshani K.U., Kodikara M.S.</i>
11:30AM-11:45PM	171	Synthesis of Graphene Oxide, Graphitic Carbon Nitride and Iron oxide (GO/ g- C ₃ N ₄ / Fe ₂ O ₃) nanocomposite for textile dye (Reactive Black 5) degradation <i>W.L.N.Chathuranga</i>
11:45AM-12:15PM	173	Investigation of reusability and adsorption isotherms of KOH-activated Tire pyrolysis char for the removal of aqueous Cu ²⁺ and Pb ²⁺ ions <i>Dileepa I.G., Sanjaya, H.L.K, Hewage, J. S</i>

Oral Presentations- Morning Session

Category		Life Sciences (II)
Session		7
Time		10:30 AM
Venue		Chemistry Tutorial room
Session Chair		Senior Professor K.B. Suneetha Gunawickrama
Panel Member 1		Dr.(Mrs.) K.A.M. Sudarshani
Panel Member 2		
Convener		Ms. D. Dharani Galappaththi
Time	ID	Title
10:30AM-10:45AM	12	Use Of Waste Materials to Develop an Innovative Filtration System for Sustainable Household Aquaponics <i>Y.N.M Somarathne, G. Y Jayasinghe, T Perera, R.U Halwatura</i>
10:45AM-11:00AM	38	Histamine variation in selected Scombridae fish in response to environmental exposure over time <i>Perera K.B.S.M.H., Liyanage G.Y., Manage P.M.</i>
11:00AM-11:15AM	77	Current Status and Impending Potential of Siamese Fighter Fish (Betta splendens) Farming: A Survey-based Case Study in Colombo District, Sri Lanka <i>Sathsarana P.K.V., Rathnapala J.M.S.N.</i>
11:15AM-11:30AM	116	A Novel Approach to the Development of a Classification Model for Assessing Osteoporosis using DEXA <i>Dhanapala D.M.C.S.M, De Silva W.M.K., Hewavithana P.B. , Jayatilake M. , Vijithananda S.M. , and Hareendra Upul P. D. S.</i>
11:30AM-11:45PM	119	Behaviors of the Indian Peafowls (<i>Pavo cristatus</i>) affecting animal-induced accidents in the Southern Expressway, Sri Lanka <i>Wickramasinghe T.S. , Dayawansa N.</i>
11:45AM-12:15PM	126	Effect of NaCl Concentration on Enzyme Activities of Halophilic Bacteria in Saltpans, Hambantota, Sri Lanka <i>K.V.D.K.R. Vithana, T.M.U.E. Tennakoon, I.V.N. Rathnayake</i>

Oral Presentations-Evening Session

Category		Life Sciences
Session		1
Time		2:00 PM
Venue		LCTU-2 (Science Faculty Complex)
Session Chair		Senior Professor W.T.S. Dammini Premachandra
Panel Member 1		Prof. H.C.E. Wegiriya
Panel Member 2		Dr.(Mrs.) K.A.M. Sudarshani
Convener		Ms. K.A.A.N.S. Perera
Time	ID	Title
2:00PM-2:15PM	14	Assessing Bird Biodiversity and Ecological Significance Across Anthropogenic Landscapes in the Mathatilla River Valley, Sri Lanka <i>Chathuranga H.N., Senanayake F.R., Chandana M.K.L, Zoysa De.D , Sankalana K.M.V</i>
2:15PM-2:30PM	26	Safety Practices And Factors Influencing To Prevent Occupational Hazards Among Nurses At Teaching Hospital Jaffna. <i>Seruba G, W.D.W. Perera, Thabotharan D, Kamalarupan L</i>
2:30PM-2:45PM	62	Antimicrobial Activity of SSRIs: Exploring Their Impact on Gut Microbiota Using <i>Escherichia coli</i> as a Model Organism <i>Jayakody T. C., Udara Y. M. S., Wanigasekara D.</i>
2:45PM-3:00PM	103	Analysis of Changes in the Mean Rainfall Patterns in Sri Lanka <i>K. Nethmi Chanya Peiris, Gayan Pathirana, K.S.S. Atapaththu, Dongxiao Wang and Tilak Priyadarshana</i>
3:00PM-3:15PM	142	A comprehensive analysis of the ingredients used in the 'Kesharanjana' formulations compiled from 'Thalpathe Piliyam' book series <i>Jayamaha JMDRC, Samarawickrama AG</i>
3:15PM-3:30PM	186	Harnessing <i>Utricularia gibba</i> (Family: Lentibulariaceae): As a Biological Control Method For Dengue Vector Mosquito Larvae <i>Dhananjaya, D.G.S., Munasinghe, D.H.N., De Silva, W.A.P.P., Chathuranga, W.G.D.</i>

Oral Presentations-Evening Session

Category		Physical and Chemical Sciences
Session		2
Time		2:00 PM
Venue		LCTU-3 (Science Faculty Complex)
Session Chair		Snr. Prof. Vajira Bulugahapitiya
Panel Member 1		Prof. W. S. Hemalika
Panel Member 2		Dr. Harshi Manawadu
Convener		Ms. Udesha Keshani
Time	ID	Title
2:00PM-2:15PM	15	Seasonal variations in sugar and phenolic content of black tea (<i>Camellia sinensis</i> L.) in high-grown regions in Sri Lanka. <i>Maggonage V.S., Jayarathne P.S.I.U., Dunsford L. B</i>
2:15PM-2:30PM	81	Impact of solvent-solvent partitioning with hexane on Phenolic compounds, Antioxidant and Anti-inflammatory activities of <i>Cedrela toona</i> Aqueous Wood Extract. <i>Maddumage L.K., Perera H.D.S.M.</i>
2:30PM-2:45PM	106	Utilizing crude rice bran lipase immobilized in alginate extracted from <i>Sargassum ilicifolium</i> for the production of biodiesel <i>Tennakoon S.D, Yapa.Y.M.A.L.W, Atapaththu K.S.S .</i>
2:45PM-3:00PM	108	Development of Herbal Mosquito Repellent Body Lotion Using Essential Oil Extracted from <i>Ocimum sanctum</i> <i>Shazeena M.M.F, Jayasekara H.D , Bulugahapitiya V.P., Manawadu H.C , Chathuranga W.G</i>
3:00PM-3:15PM	141	Preparation of secondary metabolites rich extract of <i>Atalantia ceylanica</i> (Yakinaram) leaves and investigation of some pharmacological properties to transform it into value added products <i>Wijesekara H.P. , Manawadu H.C. , Bulugahapitiya V.P.</i>
3:15PM-3:30PM	148	Evaluation of Antioxidant and Sunscreen Activities of Wood Apple Bark Hydromethanolic Extract and its Herbal Sunscreen Gel <i>Gamage S.U., Dissanayake A.S., and Pathiraja V.M.</i>
3:30PM-3:15PM	177	Effects of p-Hydroxybenzoic Acid, p-Aminobenzoic Acid and Salicylic Acid on Calcium Oxalate Crystal Formation in Synthetic Urine <i>Dhananjani S.T.D., Ranaweera S.A.</i>

Oral Presentations-Evening Session

Category		Mathematics and Statistics
Session		3
Time		2:00 PM
Venue		LCTU-4 (Science Faculty Complex)
Session Chair		Senior Prof. Leslie Jayasekara
Panel Member 1		Prof. B.G. Sampath Aruna Pradeep
Panel Member 2		Dr. N.Yapage
Convener		Mrs. Ruchira Kulasekara
Time	ID	Title
2:00PM-2:15PM	10	Assignment of vehicles based on the arrival time and the processing time at the indoors of a logistics center: A hybridized approach <i>Gnanapragasam S.R. , Daundasekera W.B.</i>
2:15PM-2:30PM	43	Cardiovascular Adaptation Following Tapering Training On Sri Lanka Elite Male Judo Players. <i>Rajasingha R.M.D.L. , Othalawa S.</i>
2:30PM-2:45PM	96	A Preliminary Study of University Admission Cutoff Z-Scores for Engineering and Biosystems Technology <i>Tennakoon T.M.D.I.S., Ranasinghe R.P.K.C.M.</i>
2:45PM-3:00PM	132	Influence Function-Based Confidence Intervals for Robust Versions of Lorenz Curve <i>W.A.R. De Mel., T.L.S.M. Sathsarani</i>
3:00PM-3:15PM	179	A Data-Driven R Shiny Application for Predicting Graduate Admission Chances Using Beta Regression Analysis <i>Arachchi K.A.I.H.K , Thilan A.W.L.P.</i>

Oral Presentations-Evening Session

Category		Computer Science and Engineering
Session		4
Time		2:00 PM
Venue		Science Faculty Board Room
Session Chair		Dr. S.M. Vidanagamachchi
Panel Member 1		Mr.Malaka Pathirana
Panel Member 2		
Convener		Ms. S.W.A.M Upamalika
Time	ID	Title
2:00PM-2:15PM	104	Design of a Heat Exchanger with corrugated tubes for Ethanol Production Line <i>De Silva M. K.T.K., Charuni W.K.P.G.N.</i>
2:15PM-2:30PM	154	Design Optimization of Anaerobic Treatment for Water Hyacinth, Producing Biogas and Bio Fertilizer <i>Ambawatte H.C, Charuni W.K.P.G.N., Elapatha O.K.D.W., Nawodya W.A.T. , Pathirana R.H.K.</i>
2:30PM-2:45PM	188	An Efficient Algorithm to Maintain Convex Layers of a Dynamic Set of Points in the Plane <i>Wijeweera K.R., Kodituwakku S.R.</i>
2:45PM-3:00PM	181	Optimizing Delta Debugging Minimization with Jump Search Algorithm <i>Kapugama K.D.C.G., Lorensuhewa S.A.S, Kalyani M.A.L</i>

Oral Presentations-Evening Session

Category		Life Sciences
Session		5
Time		2:00 PM
Venue		Science Faculty Conference Room
Session Chair		Prof. Shirani Manel
Panel Member 1		Prof. K. Masakorala
Panel Member 2		Dr. R. D. A. Gunasekara
Convener		Miss. Chamika
Time	ID	Title
2:00PM-2:15PM	31	Identification of Mother Palms for WCLWD-Resistant Coconut Clones using Molecular Pathogen Diagnosis <i>Dissanayaka D.M.C.S., Abeysinghe P.D., Dissanayake H.D.M.A.C., De Silva P.H.P.R., Kumara U.D.C.S.</i>
2:15PM-2:30PM	40	Comparative study on the genotoxicity of Sodium benzoate and Sodium metabisulfite on root tips of Allium cepa assay <i>Koggalage V.T., Wimalasekera R.</i>
2:30PM-2:45PM	58	Composition of Soil Seed Banks in Five Selected Tanks, in Kuliyaipitiya, Sri Lanka, with Special Reference to Tank's Parkland/ Ephemeral Wetland <i>Ranasinghe P.M.D.N. , Gama-Arachchige N.S.</i>
2:45PM-3:00PM	83	Efficacy of Ecological Niche Modelling in Predicting Climate Change Impacts on "Kalu Nika" (Litsea iteodaphne (Nees) Hook. f.) <i>Naorunna S.P. , Ranwala S.M.W.</i>
3:00PM-3:15PM	130	Identification of the Cover Crop Pueraria Phaseoloides as a Potential Alternative Host for Circular Leaf Spot Disease (CLSD) of Hevea brasiliensis in Sri Lanka <i>Sandamali H.D.D., Abeysinghe S., Fernando T.H.P.S.</i>
3:15PM-3:30PM	152	Habitat connectivity of neighboring mangrove forests on the southern coast of Sri Lanka: tracking experiment carried out by using mangrove propagules <i>Wickramarathna W.K.K.G., Kodikara K.A.S., Madarasinghe S.K., Abeysinghe N.K., Madhuranga H.A.P., Bandularathna A.M.N.N.</i>

Oral Presentations-Evening Session

Category		Life Sciences
Session		6
Time		2:00 PM
Venue		Botany Seminar room
Session Chair		Prof. Pushpa Abeysinghe
Panel Member 1		Prof. K.A. S. Kodikara
Panel Member 2		Dr. T. G. Dayananda
Convener		Miss. Sewwandi
Time	ID	Title
2:00PM-2:15PM	34	Effects of LDPE mulching generated microplastics on the germination of Phaseolus vulgaris L. <i>Imalka P.D.I., Wimalasekera R.</i>
2:30PM-2:45PM	136	Effect of Training and Pruning Methods on Growth and Yield of Salad Cucumber (Cucumis sativus L.) under Protected House Conditions <i>Hettiarachchi H. R. S. , Kumarasinghe H.K.M.S, and Basooriya B.S.S.</i>
2:45PM-3:00PM	172	Outwelling of dissolved and particulate organic carbon from the Galle/Unawatuna riverine mangrove ecosystem of Southern Sri Lanka. <i>Wijesundara W.M.I.C., Gunathilaka D.U.V. , Madarasinghe S.K., Kankanamge N.K., Jayatissa L.P., Kodikara K.A.S.</i>
3:00PM-3:15PM	176	Effect of iron (Fe ²⁺) stress on yield and yield components of selected high yielding rice varieties under Low Country Wet Zone (LCWZ) field conditions <i>De Silva W.S.R., Masakorala K., Withanawasam D.M.</i>
3:15PM-3:30PM	190	Formulation and Quality Assessment of Mushroom-Based Sausage using Oyster Mushrooms (Pleurotus ostreatus L.) <i>Rasnayaka R.M.H.N., Shanika M.D.N.,Dayananda T.G., Fernando G.S.N. ,Perera A.J.D.</i>

Oral Presentations-Evening Session

Category		Physical and Chemical Sciences
Session		7
Time		2:00 PM
Venue		Chemistry Conference Room
Session Chair		Prof. Sarath Wanniarachchi
Panel Member 1		Prof. Nishantha Kalutharage
Panel Member 2		Dr. Samantha Ranaweera
Convener		Ms. Dinushika Vishwani
Time	ID	Title
2:00PM-2:15PM	35	Synthesis and characterization of iron(III) triethanolamine trigallate complex as a mimic to enterobactin <i>Premasinghe C.N. and Kalutharage N.K.</i>
2:15PM-2:30PM	53	Effect of gum arabic edible coating incorporated cinnamon leaf oil for extending the shelf life of “Ambun banana” (<i>Musa acuminata</i> , AAA) <i>Jayawardhana L.C.K., Wijeweera A.A., Kariyawasam K.M.G.M.M.</i>
2:30PM-2:45PM	59	Smart packaging for food spoilage assessment based on Brassica oleracea anthocyanin loaded purple yam starch films <i>Maduwantha W.M.M., Kariyawasam K.M.G.M.M.</i>
2:45PM-3:00PM	82	Investigation of Indian Ocean Dipole-Induced Rainfall Variability over Sri Lanka <i>Heshani Werellapatha, Gayan Pathirana, Thivin Abeywickrama, Aoyun Xue, Upul Premarathne, Dongxiao Wang.</i>
3:00PM-3:15PM	111	Method development to investigate the food colorants using derivative spectrometry <i>W.J.D.A. Jayawardhana, K.Siriwardana, K.R.R. Mahanama</i>
3:15PM-3:30PM	113	Investigation of Chelation Behavior of Curcumin with Heavy Metal Ions, Cd (II) and Pb (II) <i>Premathilake A.R.A.S., Mahanama K.R.R., Siriwardana K.</i>
3:30PM-4:00PM	139	Investigation of catalytic activity of tire pyrolysis char (TPC) as a heterogeneous Fenton catalyst for the degradation of Reactive Black 5 <i>Vindya J.A., Ranaweera, S. A., Hewage, J. S.</i>

Poster Presentations

Category – Life Science

Venue: Prof. Alwaththagoda Premadasa Auditorium

Time: 3.45 PM

Panel members:

Prof. D.H.N. Munasinghe

Dr. W. M. C. D. Wijekoon

Dr. W.G.D. Chathuranga

Dr. R. D. A. Gunasekara

Dr. Harshi Manawadu

Dr. (Mrs) A. J. D. Perera

ID	Title
6	Synergistic Effects of Biochar and Nitrogen Fertilizer on Soil Properties and Yield of Rice Grown in Low Country Dry Zone of Sri Lanka <i>Kumara K.H.C.H., Siriwardena M.H.U., Fernando K.M.C., Wathugala D.L., Withanawasam D.M.</i>
11	Density and distribution of vector mosquito larvae (Diptera: Culicidae) in fishing boats in the Coastal belt, Galle District, Sri Lanka <i>D. M. D. S. Dissanayake, W. M. C. D. Wijekoon, H. C. E. Wegiriya.</i>
49	The Determinants of Nonadherence to Oral Bisphosphonates in Osteoporosis Management: A Narrative Review <i>Sewwandi L.H.C., Subasinghe H.W.A.S.</i>
55	Macrobenthos Diversity in the Manalkaadu Dune Slacks of Jaffna Sri Lanka <i>Perera K.M.A.R., Bhathiya J.D.S., Bandara R.M.P.S, Amarasekara E.A.K.K.</i>
69	Decaffeination of Coffea arabica Using a Sustainable Solvent Extraction While Preserving Quality <i>Abeywickrama V. D., Madushani R. V. C., Prabodha L.B.L., Karunanayake K.D.S.V.</i>
71	Effect of Diurnal Variation on The Essential Oil Content and Composition of Lemongrass (Cymbopogon citratus (DC.) Stapf) <i>Yasapala G.G.S., Dharmadasa R.M., Gamage D.M.</i>
72	Isolation and characterization of two underutilized tuber starches; Dioscorea alata and Dioscorea esculenta in Sri Lanka <i>Marasinghe M.A.W.N., Liyanage R., Bandara P.C., Dassanayake R.S., Rajapaksha S.M., Jayathunge K.G.L.R..</i>
76	Safe handling practices of anti-neoplastic drugs and associated factors among nurses of selected government hospitals in Sri Lanka <i>Yoganathan T, Thuvaragan S, Rathnayake D.D.S, Gunarathne N.K.G.K, Janith M.A.A</i>
78	Seedling survival of mangrove Rhizophora mucronata L. in dry zone of Sri Lanka; Impact of extreme rainfall <i>Wijeratne GGNK, Gorman D, Beidi Q, Andrieu J, Kodikara KAS</i>

85	Effects of Biofilm Biofertilizer Amended Martian Simulant Soils on Rice Growth <i>Upekshika M.L.P., Gunasekara R.D.A., Jayakody J.A.D.K.N.N., Premarathna M. and Seneviratne G.</i>
91	Effect of Spacing and Pinching on Growth and Flowering Traits of African Marigold (Tagetes erecta) in Dry Zone <i>Sivachandiran S., Gowshika P, Nidarshini S.P.</i>
99	Insights into SDG 6.6; Protecting and Restoring Water-Related Ecosystems through a Bibliometric Analysis <i>Senanayake E.R.M.K., Wijewardene L.N. , Tharindu Bandara, Atapaththu K.S.S.</i>
128	Impact of Environmentally Relevant Concentrations of Acetaminophen Exposure on the Growth and Survival Rate of Zebrafish (Danio rerio) <i>Ishara A. A. A. P. and Rajapaksa, G.,</i>
147	Reproductive performance of Jersey and Jersey x Holstein Friesian crosses in the dry zone of Sri Lanka under a sophisticated intensive cattle management system <i>Thissera W.T.L. , Sinniah J.</i>
153	Carbon content in mangrove forest invaded by Acacia auriculiformis A.Cunn.Ex.Benth;A case study from Rekawa mangrove forest Sri Lanka <i>Kahawaththa D.K.S.S. , Kodikara K.A.S., Gunathilaka D.U.V. , Abeysinghe N.K. , Madhuranga H.A.P.</i>
169	Vertical Distribution of Soil Organic Carbon in Mangroves and Adjacent Build-up Areas <i>Gunathilaka D.U.V. , Kodikara K.A.S. , Wijesundara W.M.I.C. , Rathnayake K.N. , Andrieu J. , Jayatissa L.P.</i>
183	Effects of rice husk-derived biochar (RHB) on the development of iron toxicity tolerance root traits in rice <i>Jayathilaka R.J.M.K.S., Masakorala K.</i>

Category - Physical and Chemical Sciences

Venue: Prof. Alwaththagoda Premadasa Auditorium

Time: 3.45 PM

Panel members:

Dr. Jeewantha Sampath
 Dr. YMALW Yapa
 Dr. Himali Jayasekara
 Dr. Samantha Ranaweera
 Dr. E. M. Ranatunga

ID	Title
32	An Optimized Level-Dependent Shrinkage Function for an Improved DWT-based ECG Noise Filter <i>Ajward A.M.</i>
37	Preliminary Study on Sound Absorption in Loosely Packed Wood Chips with Varying Particle Sizes <i>Bodhika J.A.P., Natasha R.W.D, Chandrasiri T.L.A.N., Jayasooriya A.P.C.C.</i>
46	Noise Pollution Level in the Heart of Matara City 2024 <i>Madhuranga A.V.P.R., Herath S.A.A.T., Fernando M.N.I., Chandrasiri T.L.A.N., Bodhika J.A.P.</i>
54	Treatment of Wastewater Generated from Batik Industry by Fenton Oxidation - A Laboratory Study <i>Somasiri M.R.R.A., Wijetunga S.</i>
88	Development of protein rich functional soup cubes from pumpkin seeds and evaluation of its quality parameters <i>Dharmasiri R.M.N.S, Jayasekara H.D, Bulugahapitiya V.P, Abeysuriya H.I.</i>
97	Preliminary Study of Sound Absorption in Loosely Packed Coir Fiber for Building Noise Insulation <i>Bodhika J.A.P., Fernando W.K.B.S.K., Weerasekara R.W.A.M.K.G., Chandrasekara I.M.K.T.</i>
114	Green synthesis of AgNPs using Citrus aurantifolia extract and their application as a fabric coating to enhance the color, and anti-bacterial property <i>Siriwardana K., Gauder S.I., Rathnapala J.M.S.N.</i>
131	SYNTHESIS OF SiO ₂ NEAR-NANO PARTICLES AND BIOCHAR FROM RICE HUSK FOR RICE PLANT GROWTH ENHANCEMENT. <i>Wishwabandara S.M.G.A.M., Edussuriya M., Masakorala K.</i>
137	Determination of Naphthalene and Phenanthrene concentrations in meandering part of the Kelani River basin, Sri Lanka <i>Adhikari P.A.A.S., Bandara K. R. V., Manage P. M.</i>
149	Bioactive Potential and Industrial Applications of Compounds from Endophytic Fungi in Prosopis juliflora L.: Extraction, Isolation, and Characterization <i>Sepali L.D.S., Manawadu H.C., Kodikara K.A.S., V.P.Bulugahapitiya.</i>

151	Value addition to rose water toner using biotransformed products formed with endophytic fungi in Prosopis juliflora <i>Sepali L.D.S., Manawadu H.C., Kodikara K.A.S., V.P.Bulugahapitiya .</i>
167	Development of a Smart Electrochemical potential measuring system <i>Rajapaksha R.M.P.M., Wanshanatha B.K.R.I., Abeykoon A.J.M.A., Udunuwara U.N.M. . Ratnaweera C.N., Lakshan K.A.S.</i>
168	Evaluating the Viability of Utilizing Waste Cooking Oil for Laundry Soap Production <i>Hidellaarachchi H.A.N.S., Yapa Y.M.A.L.W.</i>
174	A Study on Using Industrial Footwear Offcuts in Composite Fabrication for Secondary Applications <i>Bodhika J.A.P. , Rathnayaka P.T., Dunuwila K.K. , Ranaweera A.S.</i>
175	Preliminary Analysis of the Social Impacts of Flooding in the Southern Province of Sri Lanka from 2011 to 2020 <i>Bodhika J.A.P., Gunasinghe P.A.K.G., Jayasekara Leslie</i>
182	An optical method for estimating the concentration of sugar solutions <i>Jayasekara O.P.V.V., Wickramasuriya N.T., Perera H.A.D.S.D., Abeywickrama S.S.</i>

Category - Mathematics and Statistics

Venue: Prof. Alwaththagoda Premadasa Auditorium

Time: 3.45 PM

Panel members:

Mrs. K. C. N. Shanthidevi

Dr. N. Yapage

Dr. L.W. Somathilaka

Dr. Samarathunga

Dr. E.J.K.P. Nandani

Mrs. S.D.M. Dilshani

ID	Title
2	A Personalized Hair Shampoo Recommender System based on Hair Type and Condition using Graph Theory. <u>Lanel G.H.J., Sameesha R.D.</u>
3	Graph Theory Analysis of Human Physiology: Ranking Human Body Systems, Organs, Hormones, and Effects <u>Lanel G.H.J. and Thivarna S.A.O.</u>
39	Estimation of Value at Risk of Portfolios: Empirical Evidence from Colombo Stock Exchange <u>Yapa A. D. W., W. A. R. De Mel.</u>
79	Logistic Function as a Forecasting Model for Product Diffusion <u>Nanayakkara L.V.S.R., K.C.N. Shanthidevi</u>
89	Hybrid Optimization Method Combining Revised Ant Colony Algorithm and Geometric Mean to Solve the Traveling Salesman Problem <u>Ruwan S.M.T., Ekanayake E.M.U.S.B.</u>
90	An Improvement of the Restructured Vogel's Approximation Technique for Both Balanced and Unbalanced Transportation Problems <u>Dhananjalee S.B.R.D., Ekanayake E.M.U.S.B.</u>
98	Enhancing Flood Forecasting in the Nilwala River Catchment: A HEC-HMS Approach <u>D.B.R. Nilmani, K.S.S. Atapaththu, J.W.G Buddika, T. P.D. Gamage</u>
110	One Dimensional Cutting Stock Problem Using the Decreasing Even-Odd Method <u>Amarasinghe A.V.L.H., Ekanayake E.M.U.S.B.</u>
112	A Novel Upper Bound of Ramsey Number $R(3,11)$ <u>Chamodi N.M.W., Athapattu A.M.C.U.M.</u>
133	Optimizing Skolem Sequence Generation: Python Implementations for Standard and Hooked Forms <u>Athapaththu A.M.S.L.K., Athapattu A.M.C.U.M.</u>
140	Optimal Impulsive Immunotherapy Strategies for Cancer through a Mathematical Model <u>Prabodya H.A.S, Somathilake L.W.</u>

143	A Novel Transposition Cipher Leveraging RSA Cryptosystem and Euler's Totient Function <u>Jayatilake S.I., Ranasinghe P.G.R.S.</u>
145	Influence Function-Based Confidence Interval for Survival Probabilities by using Kaplan-Meier M-estimators <u>Dr. W. A. R. De Mel., D. H. T. S. De Silva</u>
156	An Application of Binary Linear Programming: A Case Study of Preparing a Weekly Timetable for Lower Secondary Grades (Junior Section) in a School in Sri Lanka <u>Pathiraja P. M. N. D., Samarathunga D. M.</u>
157	An Application of Mixed Integer Nonlinear Mathematical Programming for SAR Model in Time Series Analysis <u>Nishantha K.D.P.H.S., Samarathunga D.M.</u>
158	A Python-Based Method for Labeling Alkane Graphs Gracefully <u>Nawarathna S.N.B.M.C.M., Dasanayake D.M.N.U.B., Ranasinghe P.G.R.S., Perera A.A.I.</u>
159	Selecting Students for a Scholarship Program using Goal Programming Techniques: A Case Study <u>Nishantha K.D.P.H.S. , Batuvita R.R. , Dr. Samarathunga D. M.</u>
184	Enhancing coffee Arabica quality using Bayesian optimal experimental design approach <u>Batuwitage N.V. , Thilan A.W.L.P., Arachchi K.A.I.H.K.</u>

Category - Computer Science and Engineering

Venue: Prof. Alwaththagoda Premadasa Auditorium

Time: 3.45 PM

Panel members:

Mrs. M.A.L. Kalyani

Mrs. Tharika Weerakoon

Mr. L.L Gihan Chathuranga

Ms. M.S. Hiruni Peiris

ID	Title
16	Combining Large Language Models with Predictive Analytics: A Review <i>AU Jayawardene, KAHK Karandana</i>
30	Cybersecurity Awareness Among Sri Lankan State University Students: A Cross-Stream Analysis <i>Ekanayaka E.M.G.A.T., Dilshan.K.G.O, Ranasinghe N.K.</i>
51	Topography identification using multilevel thresholding and Genetic algorithm <i>Bandara O.G.V.V., Jayarathna B.K.V., Samarathunga D.M.</i>
87	Automated Detection of Vishing Attacks Using Deep Learning Models. <i>Akalanka J.K.S., Dilshan N.R. , Samarakoon S.M.N.S.,Ellepola C.S.D.D.</i>
93	Design of High Efficient Corrosion Resistant Heat Exchanger for Closed Cooling Water (CCW) System <i>Nawarathne A.N.S., De Silva K.T.K.M.</i>
95	Designing a Privacy-Driven Question & Answering System: Leveraging LLMs to Handle Complex Document Structures <i>K.H.D.U. Senarathna, G Dantanarayana, MGNAS Fernando</i>
107	Design of an automatic soil compactor for preparation of AASHTO T-180 D proctor specimens <i>Tamilki M.D.M.E., De Silva K.T.K.M.</i>
121	Design and Development of a Ball Screw Scissor Lift for Efficient Airport Baggage Handling <i>Sooriyabandara B.S.N., De Silva K.T.K.M.</i>
125	Design of a Tubular Heat Exchanger as a Replacement for Plate Heat Exchanger to Reduce Maintenance Cost <i>De Silva M. K.T.K., Wijepala T.N.K.</i>
127	Bearing fault identification using vibration analysis: A comparative study of theoretical and FFT-derived frequencies <i>Parami S.P.P., Baranasooriya N.D., Gunawardana K.G.S.H.</i>
138	Automated PCB Fault Detection and Component Identification Using Image Processing and Machine Learning <i>Tharmaseelan.J , Nusaf.M.M.M.S, Karishan.T , Nisath.N.M , Ganega.H.C , L.C.D. Wickramasinghe.</i>
189	Exploring Project Methodologies for Software Quality Assurance Practices in Sri Lankan Software Industry <i>Pathiraja A.L.C.D.</i>