



**11th Ruhuna International Science and Technology
Conference**

24th January 2024

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 Honours |
| 08:05 AM | Lighting the Traditional Oil Lamp |
| 08:15 AM | University Anthem |
| 08:20 AM | Welcome Address by Dr. H. C. Manawadu Chairperson / RISTCON 2024 |
| 08:30 AM | Address by Professor D. H. N. Munasinghe, Dean, Faculty of Science, University of Ruhuna |
| 08.45 AM | Keynote speech by Professor Stefan H. Bossmann Professor and Chair The University of Kansas Medical Center - Cancer Biology The University of Kansas Cancer Center - Drug Discovery, Delivery and Experimental Therapeutics, The University of Kansas, Kansas City, USA “Tailored Nanostructures for Drug Delivery and Early Cancer Detection” |
| 09:45 AM | Address by the Chief Guest Senior Professor Sujeewa Amarasena Vice Chancellor, University of Ruhuna |
| 10.00 AM | Felicitation of Retired Academic Staff Members |
| 10:20 AM | Vote of Thanks by Dr. Jeewantha S. Hewage Joint Secretary/RISTCON 2024 |
| 10:30 AM | National Anthem |

Oral and Poster Sessions

Program Summary

| Time | Topic |
|---|---|
| 11: 00 am– 12:30 pm | Oral Sessions - I |
| 12.30 pm – 1.30 pm | Lunch Break |
| 1.30 pm – 2.00 pm (Parallel sessions) | Plenary Talk I “Creating a Researcher with an Entrepreneurial Mindset To Build-up the Science-based & Technology-Oriented Research System of a Nation is Socially-Responsible” Senior Professor Udith K. Jayasinghe-Mudalige Vice Chancellor Wayamba University of Sri Lanka Plenary Talk II “How nano science technology contributes for a better life” Prof. C. A. N. Fernando Senior Professor Department of Nano Science Technology, Faculty of Technology, Wayamba University of Sri Lanka. |
| 2.00 pm– 3.45 pm | Oral Sessions - II |
| 3.45 pm – 4:30 pm | Poster Sessions |
| 4:30 pm | Closing the Program |

Category A

Agriculture, Botany, Molecular Biology & Biotechnology

Category B

Biochemistry & Biophysics, Chemistry, Ecology, Environmental Science, Oceanography

Category C

Fisheries & Aquaculture, Medical & Health Sciences, Veterinary Science, Zoology

Category D

Computer Science & Information and Communications Technology, Engineering, Mathematics & Statistics, Modeling & Simulation, Nanotechnology, Physics & Geophysical Science, Quantum Science

Oral Presentations – Category A

Session: A-I

Venue: Senior Common room (Faculty Complex)

Session Chair: Prof Udith K. Jayasinghe-Mudalige

Panel Members: Prof. K. A. S. Kodikara

Dr. T. G. Dayananda

Convener: Miss. T. P. Abhayathunga

| Time | ID | Title |
|------------|-----|---|
| 11.00 am | A01 | Analysis of insulin-like peptide 3 and testosterone concentrations with selected morphometric attributes in Thamankaduwa white male cattle <u>De Silva S.T.D.</u> , Gunawardena O.B., Pragashan P., Manoharan N., Sukumar V., Viveka K.A., Pagthinathan M., Silva G.L.L.P., Pathirana I.N. |
| 11.15 am | A06 | Evaluation of Characteristics of Composite Blend of Wheat (<i>Triticum aestivum L.</i>) and Angili bathala (<i>Ipomoea batatas</i>) Cultivar Flour for Cake Development <u>Wijenayake J.M.U.S.</u> , Mahinda Senevirathne |
| 11.30 am | A32 | Determination of growing media for Black Soldier Fly (<i>Hermetia illucens</i>) production using organic waste ingredients <u>Abeysingha A.M.S.U.</u> , Mikunthan G., Pakeerathan K. |
| 11.45 am | A35 | Development of Instant Pasta Using Composite Flour Mixture of Unripe Banana (<i>Musa acuminata</i>) and Jackfruit Seeds (<i>Artocarpus heterophyllus</i>) <u>Jayampathi H.G.N.</u> , Kariyawasam K.M.G.M.M., Fernando G.S.N. |
| 12.00 noon | A45 | Productive performance of Jersey and Jersey x Holstein Friesian crosses in the dry zone of Sri Lanka under sophisticated intensive management system <u>Thissera W.T.L.</u> , Sinniah J. |

Session A - II

Venue: Senior Common room (Faculty Complex)

Session Chair: Prof. K. Masakorala

Panel Members: Prof. Shirani Manel Kumari

Dr. R. D. A. Gunasekara

Convener: Miss. T. P. Abhayathunga

| Time | ID | Title |
|---------|-----|---|
| 2.00 pm | A03 | Development of Trichoderma based bulb treatment for the management of anthracnose and white rot in onion (<i>Allium cepa</i> L.) <u>Withana W.A.T.N</u> , Pakeerathan K., Fernando W.M.K., Kumarasinghe K.M.T.M., Tillakaratne J.B.D.Y. |
| 2.15 pm | A05 | Can leaf micromorphology and foliar anatomy be used to identify cinnamon species in Sri Lanka? <u>Abeyasinghe P. D.</u> |
| 2.30 pm | A09 | Comparison of In vitro Antibacterial Activity of <i>Plectranthus hadiensis</i> , <i>Cyperus rotundus</i> and <i>Desmodium triflorum</i> extracts against <i>Enterococcus faecalis</i> <u>Kavindi K.D.S.</u> , Munasinghe M.L.A.M.S. |
| 2.45 pm | A25 | Isolation of Phosphate Solubilizing Bacteria from Soil and Its Application in Plant Growth Promotion: As A Green Approach <u>Jayathilake K.M.P.I.</u> , Manage P.M., Idroos F.S. |
| 3.00 pm | A48 | A Preliminary Taxonomic Survey of Epiphytic Cryptogams in Selected Southern Lowland Rainforests of Sri Lanka <u>Dilrukshi H.A.C.</u> , Rubasinghe S.C.K., Ruklani N.C.S. |

Oral Presentations – Category B

Session: B - I

Venue: LCTU - 2
Session Chair: Prof. Stefan H. Bossmann

Panel Members: Dr.M.S.Kodikara
Dr.C.N.Ratnaweera
Convener: Ms.K.E.Rupasinghe

| Time | ID: | Title |
|----------|-----|---|
| 11.00 am | B04 | Removal of dissolved copper ions in water by using tea waste and tea waste-derived Biochar <u>Darsigan S.</u> , Maithreepala R.A., Asanthi H.B. |
| 11.15 am | B11 | Developing Cationic Selective Membrane with Aloe Vera for the Desalination of water <u>Thilanka K. K. T.</u> , Fernando M. S., De Silva K.M.N., De Silva W. R. M. |
| 11.30 am | B15 | PCL/HAP-MMT Electrospun Scaffold with Chitosan-mediated nanosilver for Antibacterial Activity <u>Chandraguptha K.V.D.T.</u> , Fernando H.A.V., Fernando M.S., Godakanda V.U., De Silva K.M.N., De Silva W.R.M. |
| 11.45 am | B16 | Green Synthesis of Zinc Oxide Nanoparticles using <i>Mangifera indica</i> Seed Kernel Extract and their Photocatalytic Activity <u>Perera D.H.A.G.K.</u> , Thiripuranathar G., Rathnayake R.M.A.S. |
| 12 noon | B21 | DFT And TDDFT Calculations Of Linear And Nonlinear Optical Properties Of Ruthenium Alkynyls With Extended Π -Bridges <u>Madushan K.V.Y.K.</u> , Kodikara M.S. |
| 12.15 pm | B26 | Assessment of DFT Methods for Calculating First Hyperpolarizabilities and Excitation Energies of Organic Molecules <u>Jayawaruni W.H.R.</u> , Kodikara M.S. |

Session B - II

Venue: LCTU - 3

Session Chair: Prof.L.A.Panamgama

Panel Members: Dr.Y.M.A.L.W.Yapa

Dr.H.D.Jayasekera

Convener: Mr.P.R.A.Osada

| Time | ID | Title |
|----------|-----|--|
| 11.00 am | B12 | Detection of Pathogenic E. coli O157 along with the Chemical Monitoring of Coastal Water from Sarakkuwa to Mirissa Coastal Belt in Sri Lanka <u>Bandara S.M.T.V.</u> , Wijerathna P.A.K.C., Liyanage G.Y., Manage P.M. |
| 11.15 am | B13 | Value addition to the black tea using leaves of common guava, Ceylon Cinnamon and evaluation of its functional properties <u>Dehideniya K.M.S.A.K.</u> , Bulugahapitiya V.P., Sabaragamuwa R.S., Kananke T.C. |
| 11.30 am | B18 | Development of batik textile colorant using mahogany shale (<i>Swietenia macrophylla</i>), marigold flowers (<i>Tagetes erecta</i>), and onion peel (<i>Allium cepa L.</i>) <u>Chandrasri N.K.U.K.</u> , Amarasinghe A.G.C.S., Hewavitharana K.H.I.K. |
| 11.45 am | B19 | Novel bacterial consortium for the reduction of composting odor emission and enhancing compost maturation rate in the municipal solid waste <u>Wijerathna P.A.K.C.</u> , Udayagee K.P.P., Idroos F.S., Manage Pathmalal M. |
| 12 noon | B27 | Analysis of major fatty acid groups, conjugated linoleic acid, and lipid quality indices in selected commercial dairy products in Sri Lanka <u>Rathnathunga W.A.A.I.</u> , Senarath H.P.S. |
| 12.15 pm | B36 | UV-Blocking Activity of <i>Cocosnucifera</i> (coconut) Leaf Extracts Dissanayake A.S., <u>Sathishka P.K.</u> |

Session B- III

Venue: LCTU - 2
Session Chair: Prof. Stefan H Bossmann
Panel Members Prof. N.K.Kalutharage
Dr.A.S.Ranaweera
Convener: Ms.K.E.Rupasinghe

| Time | ID | Title |
|---------|-----|--|
| 2.00 pm | B20 | Mapping of Water and Soil Quality Parameters in the Gampaha-Ihalagama Grama Niladhari Division <u>Heenkenda H.M.D.S.D.</u> , Deraniyagala P.E.P.S., De Silva R.C.L. |
| 2.15 pm | B32 | Fluoride removal in water using kaolin and eggshell powder blend adsorbents <u>Senarathna S.A.A.G.</u> , Wanniarachchi D.D.C.de S., Diyabalanage, S. |
| 2.30 pm | B33 | Marine algae derived ZnO NPs, Ag NPs and Ag/ZnO NCs for photocatalytic activity <u>Senanayake E.R.M.K.</u> , Thiripuranathar G. |
| 2.45 pm | B37 | Neutralization potential of bulk deposition in two distinct environments (urban and rural), Sri Lanka <u>Wijerathna A.I.S.S.</u> , Amarathunga A.A.D., Pamarathne S.K.S., Naveendrakumar G. |
| 3.00 pm | B44 | In-vitro Evaluation of Coagulant Activity of <i>Mikania micrantha</i> Leaves Extract Grown in Sri Lanka and Formulation of a Topical Herbal Cream <u>Harshani P.D.K.</u> , Pathiraja V. M., Karunanayake A. |
| 3.15 pm | B47 | Sustainable synthesis of Ag-ZnO nanocomposites utilizing pumpkin agro-waste and evaluation of their antioxidant potential <u>Samudrika Aththanayake A.M.</u> , Gobika Thiripuranathar, Sagarika Ekanayake |
| 3.30 pm | B49 | Green Synthesis of ZnO Nanoparticles and Study of their Photocatalytic Degradation of Rhodamine B <u>Samarasingha K.C.M.</u> , Edussuriya M. |

Session B- IV**Venue:** LCTU - 3**Session Chair:** Prof.L.A.Panamgama**Panel Members:** Dr.Y.L.M.A.W.Yapa
Dr.H.D.Jayasekara**Convener:** Ms.M.K.Kularathna

| Time | ID | Title |
|---------|-----|---|
| 2.00 pm | B28 | Influence of land use on aquatic pollution in an urban wetland: a case study in 'Kiralakale', Matara District, Sri Lanka <u>Sumanarathne E.S.C.</u> , Jayasinghe U.A.D., Sanjaya K. |
| 2.15 pm | B38 | Zooplankton assemblages in Nilwala River and Madu River estuaries in Southern Sri Lanka as indicators of ecosystem health <u>Rathnayake R.M.S.W.</u> , Guruge W.A.H.P., Gunawickrama S.H.N.P., Gunawickrama K.B.S. |
| 2.30 pm | B39 | Evaluation of hydrolytic and thermal stability of plywood, bonded with urea-formaldehyde resins with tire pyrolysis char, wheat flour and coconut shell powder as novel filler systems <u>Sandamali L.W.D.</u> , Hewage J. S., Malimbadage A., Panamgama L. A. |
| 2.45 pm | B46 | Herbal Cream Formulation Enriched with Extracts of <i>Pterocarpus marsupium</i> (Gammalu) Bark <u>Nawarathna T.P.H.</u> , Dissanayake A.S., Hettihewa S.K. |
| 3.00 pm | B53 | Synthesis of nanocrystalline cellulose from plant and their chromatographic applications. <u>Gunawardana J.G.S.P.P.</u> , Waduge M.H., Thiripuranathar G. |
| 3.15 pm | B54 | Synthesis of nanocrystalline cellulose from Musa Paradisiaca bunch stalk and peel and its' application in environmental remediation. <u>Waduge M.H.</u> , Gunawardana J.G.S.P.P., Thiripuranathar G. |
| 3.30 pm | B56 | Evaluation of antimicrobial activity of essential oil of Pogostemon heyneanus Benth (<i>F. Lamiaceae</i>) leaves and formulation of an emulgel dosage form <u>Nisansala W.G.M.</u> , Herath H.M.D.R., Nadeshkumar A., Arawwawala L.D.A.M., Jayasuriya W.J.A.B.N. |

Session B- V**Venue:** Science Conference Room**Session Chair:** Dr.M.Edussuriya**Panel Members:** Dr.M.S.Kodikara
Dr.C.N.Ratnaweera**Convener:** Mr.P.R.A.Osada

| Time | ID | Title |
|---------|-----|--|
| 2.00 pm | B08 | Degradation of synthetic dye wastewater by electrolysis <u>Wickramarathna A.H.M.H.M.</u> , Hewage J.W., Wanniarachchi S. |
| 2.15 pm | B30 | Synthesis and Characterization of Chitosan-Supported Ni and Cu Nanoparticles <u>Vithana C.T.</u> , Kalutharage N.K. |
| 2.30 pm | B40 | Production of biodiesel from waste cooking oil by using mahogany husk ash and CaO as catalyst Ratnaweera C.N., <u>Pulle P.D.P.D.</u> , Karunarathna A.G.S.S. |
| 2.45 pm | B42 | Construction of Low-cost Silver-silver Chloride and Carbon Paste Electrodes for Potentiometry Practicals and pH Measurements <u>Gimhani A.</u> , Nethmini P.K.A., Ratnaweera C.N. |
| 3.00 pm | B43 | Upgraded waste tyre pyrolytic char for solid tyre tread Compounds <u>De Zoysa D.M.D.A.</u> , Sampath W.D.M., Hewage J.S., Ranaweera S.A. |
| 3.15 pm | B57 | Computational study on the activity of serum paraoxonase-1 (PON1) in lipid membrane with Glutamine/Arginine polymorphism at position 192 <u>Thantrige V.O.</u> , Wijekumara A.B.A.T., Ratnaweera C.N. |

Oral Presentations – Category C

Session C - I

Venue: LCTU - 4

Session Chair: Snr. Prof. W.T.S.D. Premachandra

Panel Members: Dr. W.A.H.P. Guruge
Dr. K.A.M. Sudarshani

Convener: Mr. Dilshan Ruwansiri

| Time | ID | Title |
|----------|-----|--|
| 11.00 am | C01 | The Impact of Structured Exercise Programs on the Gross Motor Skills Development of Children with Attention Deficit Hyperactivity Disorder (ADHD) <u>Somarathna R.D.A.M.</u> , Perera R.A.K.I. |
| 11.15 am | C03 | Knowledge of medication and associated factors among a selected working community in University of Jaffna, Sri Lanka Thuvaragan S., <u>Anuradha A.G.P.</u> , Kumara K.G.I.P., Punyawardana M.G.S.D., Kumarendran B. |
| 11.30 am | C04 | A Survey on Dietary and Lifestyle Practices among Hypertensive Patients: A Cross-Sectional Study <u>Madhushan W.M.L.</u> , Kalawana O.T.M.R.K.S.B. |
| 11.45 am | C20 | Identification of dominant Sesarmid crab species of a mangrove ecosystem in Southern Sri Lanka using DNA barcoding <u>Dedunupitiya H.M.M.D.</u> , Gamage L.M.P., Bandara K.V.S.N., Munasinghe D.H.N. |
| 12 noon | C21 | Variations of colour, total carotenoid and astaxanthin levels in fillets of Asian seabass (<i>Lates calcarifer</i>) with the post-harvest time <u>Premawansa K.K.K.</u> , De Silva M.P.K.S.K., Senaarachchi W.A.R.K., Liyanage N.P.P. |
| 12.15 pm | C26 | Acute toxicity of cylindrospermopsin on zebrafish (<i>Danio rerio</i>) embryonic development <u>Imanthi K.P.A.</u> , Pathmalal M.M., Wanigasuriya J.K.P., Perera P.P.R., Nishad Jayasundara |

Session C- II**Venue: LCTU - 4****Session Chair: Prof. M.P.K.S.K. De Silva**

Session Chair: Dr. W.A.H.P. Guruge
Dr. K.A.M. Sudarshani
Convener: Ms. Tharuka Siriwardane

| Time | ID | Title |
|----------|-----|--|
| 2.00 pm | C10 | Soil nematodes assemblage associated with ridge-gourd fields maintained with conventional and good agricultural practices (GAP) <u>Dribargs T.I.S.C.</u> , Dammini Premachandra W.T.S. |
| 2.15 pm | C11 | Formulation of a potential topical antiperspirant using natural ingredients <u>Jayathilaka W.W.D.M.S.</u> , Pathiraja V.M., Karunanayake A. |
| 2.30 pm | C12 | Development of herbal feminine wash with <i>Bauhinia racemosa</i> (Lam.) bark-extract and in-vitro evaluation of antibacterial and antifungal activities <u>Janarammi G.E.</u> , Hettihewa S.K., Dissanayake A.S. |
| 2.45 pm | C17 | Immunomodulatory Roles of Edwardsiella piscicida and Streptococcus parauberis Derived Extracellular Vesicles in Zebrafish Jayathilaka E.H.T.T., Dias M.K.H.M., Nikapitiya C., <u>De Zoysa M.</u> |
| 3.000 pm | C18 | Determination of biocompatibility of Carmona retusa (vahl.) Masam using brine shrimp and zebrafish assays (FET 293) <u>Nadunika T.A.S.</u> , Munasinghe M.W.S.S.M.V.C.B., Vijaykumar P.J., Herath H.M.L.P.B. |
| 3.15 pm | C23 | Significance of Wellamadama Premises of the University of Ruhuna, Southern Sri Lanka for the conservation of avifauna in Matara District <u>Shantha W.M.D.T.L.S.</u> , Pushpika W.D.D., Chathuranga W.G.D. |
| 3.30 pm | C24 | SELEX for identifying albumin binding DNA aptamers in a local setting – a preliminary study <u>Abeykoon A.I.</u> , Kumarasinghe K.M.N., Chandrasekharan N.V., Muhandiramlage T.P. |
| 3.45 pm | C25 | Investigating the impact of socio-demographic factors on reservoir conservation interest Witharana A., Randeni L., Perera T., <u>Silva M.B.V.A.</u> |

Oral Presentations – Category D

Session D - I

Venue: Physics Mini-Auditorium

Session Chair: Prof. K.K.A.S. Yapa

Panel Members: Dr W.M.K. De Silva

Dr. H L Jayetileke

Convener: Mrs. K.M. Liyanage

| Time | ID | Title |
|----------|------|--|
| 11.00 am | D55 | Design and Development of a Portable Thermoelectric Refrigeration System for Medical Usage <u>Herath H.M.D.S.</u> , Aqueel M.N.M., Muthukumarana P.N.D., Sirirathna K.P.P.M., Liyanage L.P.D.D. |
| 11.15 am | D60 | Development Of A Sophisticated Automatic External Ventilation System For Automobile <u>Fernando M.M.M.</u> , Deemantha M.B.A., Maparathna M.R.H.D., Sirinanda R.B.T.D., Jayalath J.R.K.A. |
| 11.30 am | D67 | Meta-analysis on the effects of Romosozumab on Bone Mineral Density in Osteoporosis; comparison of Fixed effects and Random effects models <u>Dilshani S.D.M.</u> , Jayasekara L., Liyanage G., Lekamwasam S. |
| 11.45 pm | D79 | Forecasting Paddy Production in Matara District Using Time Series Analysis <u>Abeysekare E.M.N.</u> , Batuwitage N.V., Jayasankha R.G., Prasangika K.D. |
| 12 noon | D106 | Exploring the Sound Transmission Characteristics of Loosely Packed Wood Dust and Wood Chips for Noise Attenuation in Building Applications: A Preliminary Study Chandrasiri T.L.A.N., Siriwardhana J.M.C.N., Jayasooriyariya A.P.C. Chethana, <u>Bodhika J.A.P.</u> |

Session D - II**Venue:** MSR (Department of Mathematics)**Session Chair:** Prof. Jayantha Pasdunkorale Arachchige**Panel Members:** Dr. M.K.Abeyratne
Ms. S. D. L. Geeganage**Convener:** Ms. A.D.W. Yapa

| Time | ID | Title |
|----------|-----|--|
| 11.00 am | D56 | Multi Objective programming approach to find best set of software components in component based software engineering using minmax objective function Thilakarathna N.C.J., Rodrigo W.N.P. |
| 11.15 am | D61 | Modeling and Forecasting Dengue Incidence in Matara District Using Kernel Smoothing with Boxcar Kernel Function <u>Priyantha M.V.T.I.</u> , Prasangika K.D. |
| 11.30 am | D66 | A Mathematical Model for Diabetes Presence with Two Control Strategies - An Optimal Control Approach <u>Madhushika T.D.T.</u> , Somathilake L.W., Fernando M.C.S. |
| 11.45 am | D70 | Fuzzy Linear Programming Problem on Product Mix for Profit Maximization and Cost Minimization in the Apparel Industry <u>Malshani H.H.</u> , Rodrigo W.N.P. |
| 12 noon | D77 | Statistical Analysis & Forecasting the Future Direction of Cancer Incidents in Sri Lanka Tennakoon T.H.M.U.S.B., Dharmasena W.D.K.S., Prasangika K.D. |
| 12.15 pm | D78 | Analysis of Road Accident Patterns in Sri Lanka using K-means Clustering <u>Kumari W.M.S.K.</u> , Britto K.K.S.N., Kannangara K.K.S.V., Jayethileke H.L., Hansani K.G.P. |

Session D- III**Venue: Physics Mini-Auditorium****Session Chair: Prof. Leslie Jayasekara****Panel Members:** Ms. K. C. N. Shanthidevi

Dr. L. W. Somathilake

Convener:

Ms. S.R.T. Kulasekara

| Time | ID | Title |
|-------------|-----------|--|
| 2.00 pm | D44 | Agreement evaluation among multiple methods with skewed and heavy-tailed distributions using a multivariate measurement error model <u>Duwarahan J.</u> , Nawarathna L.S. |
| 2.15 pm | D51 | Exploring Monthly Births Trend in Sri Lanka <u>Perera W.T.C.</u> , Kulasekara S.M.D.K.A. , Jayasinghe A.D.K.C.D., Prasangika K.D. |
| 2.30 pm | D52 | Parameter Estimation in Survival Distribution by Using Expectation Maximization (EM) Algorithm <u>Lakmini R.M.V.</u> , De Mel W.A.R. |
| 2.45 pm | D59 | An Improved Mathematical Model for Making Certain Procurement-Related Decisions in Sri Lankan Industry Manathunga M.M.D., <u>Dharmasena W. D.K.S.</u> , Yapage N. |

Session D- IV

Venue: e-Learning centre
Session Chair: Prof. M.G.N.A.S. Fernando

Panel Members: Dr. T. Wannige
Dr. E.J.K.P. Nandani
Convener: Mrs. Tharika Weerakoon

| Time | ID | Title |
|---------|-----|---|
| 2.00 pm | D04 | Enhancing Digital Intelligence: A Comprehensive Approach to Detailed Recognition of Hand-Drawn Circuit Diagrams <u>Herath H.M.L.D.</u> , Kumarika B.M.T. |
| 2.15 pm | D07 | Sentiment Analysis on ChatGPT: A Comparison of Different Algorithms Using Twitter Data <u>Kumarawadu T.E.</u> , Rupasingha R.A.H.M. |
| 2.30 pm | D08 | Ensemble Approach for Predicting Bug Priority Level Using Deep Learning Algorithms <u>Dharmakeerthi P.G.S.M.</u> , Rupasingha R.A.H.M., Kumara B.T.G.S. |
| 2.45 pm | D42 | A hybrid CNN-SVM model for Tamil Handwritten Character Recognition <u>Nemitha R.</u> , Ramanan M., Yasotha R. |
| 3.00 pm | D81 | Elementary model for Bird Species Identification using Convolutional Neural Network: Case Study in Sri Lanka <u>Vidanagamachchi C.</u> , Chathuranga L.L.G., Jayathilaka K.A.T.S., Raigamkorale B., Vidanagamachchi S. |

Virtual Session

Zoom Link:

<https://learn.zoom.us/j/97564524170?pwd=M0ltci9waGdvRHN1T3p4ViszM3VZdz09>

Session Chair: Prof. B. G. S. Pradeep

Panel Members:

Dr. H.A.D.S.D. Perera

Dr. Jagath Senarathne

Dr. W. K. K. D. Siriwardana

Dr. A. J. D. Perera

Convener:

Ms. K.K.D.L.H.Jayarathna

| Time | ID | Title |
|---------|--------------|--|
| 2.00 pm | A22 | In Vitro Evaluation Of Acute Toxicity Of Citrus Essential Oils Towards The Parasitic Mite Tetranychus Urticae <u>Nakshath Banu M.U.</u> , Thanusan S., Vinujan S. |
| 2.15 pm | B48 | Effects Of Acid Treatments On The Properties Of Pyrolytic Carbon Char In Rubber Carpet Formulations Liyanagamage V.U., Hewage J.S., Attanayake A., Ranaweera S.A. |
| 2.30 pm | B51 | Wood Apple Agro-Waste based Zinc Oxide Nanoparticles and their Photocatalytic Activity <u>Gamage V.</u> , Thiripuranathar G., Nishshanka U., Priyantha N., Goonatilleke M.D., Guiton B.S., Gunewardene S., Jayanetti S. |
| 2.45 pm | D41 | An optimization model to the integrated Vehicle Routing Problem and Vehicle Sequencing Problem with Cross-docking System <u>Gnanapragasam S.R.</u> , Daundasekera W.B. |
| 3.00 pm | D46 | CFD Simulation for Miscible and Immiscible Viscous Fingering Formation for Distinct Injective Fluids Sahabandu C.W., Dewasurendra M. 2 |
| 3.15 pm | D68 (Poster) | A Goal Programming Model for Land Allocation for Crops in Udawalawa Irrigation Scheme Jayasinghe A.D.K.C.D., Samarathunga D.M. |

Poster Presentations

Venue: AP Auditorium

Time: 3.45 PM

Panel members:

Prof. K. A. S. Kodikara
Dr. A.S.Ranaweera
Dr. E.J.K.P. Nandani
Mrs. T.D.G. Geethika
Dr. K.P.S. Jayathilake
Dr. W.G.D. Chathuranga

Category A

| ID | Title |
|-----|---|
| A02 | Effect of artificial light supplementation and split application of Albert's fertilizer solution on growth and yield of Bell Pepper in protected conditions <u>Karunarathne W.M.A.M.</u> , Subasinghe S., Kumarasinghe H.K.M.S., Adikaram K.K.L.B., Piyaratne M.K.D.K. |
| A04 | In vitro evaluation of Dicloran 75% WP as a new fungicide against Onion Bulb Rot Caused by <i>Sclerotium rolfsii</i> Fernando W.M.K., <u>Kumarasingha K.M.T.M.</u> , Thilakarathna J.B.D.Y. |
| A07 | Management Of Root-Knot, Meloidogyne Incognita In Tomatoes Using Medicinal Plant-Based Compost <u>Thanuja S.</u> , Nirosha T., Pakeerathan K., Mikunthan G. |
| A10 | Comparative Assessment of Different Drying Techniques on Physicochemical, Proximate, Antioxidant and Sensory Properties of Bilimbi Fruit (<i>Averrhoa Bilimbi L.</i>) <u>Sandarenu E.G.S.</u> , Fernando G.S.N., Kariyawasam K.M.G.M.M., Awanthi M.G.G. |
| A13 | Evaluation of Nutritional, Physicochemical and Cooking Quality of Defatted Soy Flour (<i>Glycine max L. Merr.</i>) Enriched Pasta <u>Farhana S.L.F.</u> , Kariyawasam K.M.G.M.M., Rimaz R.M.M. |
| A14 | Formulation and Quality Assessment of "Peanut-Based" Spread Incorporated with Flax, Chia, and Sesame Seeds <u>Wardha A.S.</u> , Kariyawasam K.M.G.M.M., Rimaz A.M.M. |
| A16 | A preliminary study of some of the Physicochemical, Nutritional, and Functional Properties of Rice Bran in White and Brown Rice (Bg 300 and At 362) in Sri Lanka <u>Jans H.M.</u> , Perumpili P.A.B.N., Abesuriya A.P.H.I. |

- A17 Evaluating Yoghurt Quality Attributes with Banana (*Musa acuminata*) Peel Integration
Senaratne S.M.D.S.C., Somaratne G., Roy D.
- A18 Evaluating the effect of king coconut husk ash, biochar, together with inorganic fertilizer application to improve soil fertility in coconut lands.
Shamila S.K., Udumann S. S., Kowshalya R., Anjana J. Atapattu
- A20 The potential antimicrobial activity of two common *Zingiber officinale* cultivars grown in Sri Lanka.
Dharmapala D.K.P., Amarakoon R.
- A23 A study on the performance of four underutilized vegetable crops in Northern Province with different trellises
Nidarshini S.P., Sivachandiran S.
- A24 Formulation of Fiber-Rich Drink Powder Mix from Ridge Gourd (*Luffa acutangula*) and Evaluation of its Quality Parameters
Avanjan H.G.S.D., Kariyawasam K.M.G.M.M., Binduhewa A.M.C.U.
- A28 Development And Characterization Of Kithul Flour (*Caryota Urens*) Based Alternative Tissue Culture Media For Agar
Sandamini W.W.S.S., Hewavitharana K.H.I.K., Jayawardana L.S.
- A31 Development of composite flour incorporated with banana pseudo-stem flour and application in waffle cones
Kulathunga B.P.S.D., Amarasinghe H.K., Senarath H.P.S.
- A34 A Comparison of the Phytochemicals and In Vitro Antioxidant Activity of Different Parts of *Syzygium cumini* in Jaffna District, Sri Lanka for the Preparation of Nutraceuticals
Vethanayakan K., Rajkumar G., Sanmugarajah V.
- A39 Effect Of Actigen Prebiotic On Growth Performance Of Broiler Chicken
Raheema M.S.S.M.S., Varthani S., Jeyaharan T., Piratheepan S.
- A41 Effect of different time periods of pinching on growth and flowering of an ornamental plant, *Platycodon grandifloras* Jacq. var. 2009B
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- A42 Development of Beverage Powder from Vacuum Dehydrated Lavulu (*Pouteria campechiana* (Kunth) Baehni) and Lime (*Citrus aurantiifolia* (Christm.) Swingle) fruits
Sirisooriya A.C.H., Rajapaksha D.S.W.

A47 Antibacterial activity of acetone fractions of the root of *Vateria copallifera* against *Staphylococcus aureus* and *Escherichia coli*
Nirubini A.S., Ajeetha J., Sivasinthujah S., Gnanakarunyan T.J., Srikan R.

A49 Evaluation of antibacterial potential of *Pandanus kaida* inflorescence crude extracts and formulation of a transparent antibacterial soap
Karunathilaka S., Darshana D.

A50 Enhancement of antibacterial efficacy of Norfloxacin through biotransformation by *Saccharomyces cerevisiae*
Karunathilaka S., Darshana D.

Category B

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| B01 | Plant mediated synthesis of ZnO/CuO nanocomposite using juice extracts of Citrus limon and the evaluation of its antioxidant activity <u>Perera W.H.P.A.D.</u> , Weerasiri K.C. |
| B22 | Eco-friendly photocatalyst derived from egg-shell waste for methylene blue dye degradation <u>Hewavitharana S.D.</u> , Wanniarachchi D. |
| B25 | Traits of Ferruginous Gravel and Laterite deposit and Stratigraphic Correlation with Red Earth in Northern Sri Lanka <u>Madushanka H.G.D.</u> , Balasooriya N.W.B. |
| B29 | Investigation of Antioxidant activity in Leaf extract of <i>Argyrea pomacea</i> (Manpanchan) <u>Lasmitha Yogarasa</u> , Sivasinthuja Srikokulan, Meena Senthilnanthanan |
| B34 | Study of Synergistic Bioactivities of <i>Coffea arabica</i> Leaf Extract with Copper Oxide Nanoparticles <u>Weligamage N.S.</u> , Weerasiri K.C. |
| B35 | Nanoscale zero-valent iron biochar composites for heavy metal removal: Thermodynamics, material regeneration, and application to simulated wastewater <u>Malaweera Arachchi U.</u> , Hettige A. L., Alahakoon Y. A., Peiris C., Mlsna T. E., Gunatilake S. R. |
| B41 | Rice Husk Derived Silica Gel as a Desiccant and TLC Stationary Phase <u>Thilakarathna W.D.N.</u> , Samaraweera A.P.K. , Bandara N.G.H.J., Ratnaweera C.N. |

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| B50 | TLC-based metabolite profiling for Amurthashtaka kwatha: An Ayurvedic polyherbal formulation used for fever associated inflammation <u>Vinodani L.P.S.</u> , Gurupadayya B.M., Rajeshwari S., Erica Alves, Suresh J., Herath H.M.D.R., Hapuarachchi S.D., Dantanarayana P., Suresh T.S., Jayasuriya W.J.A.B.N. |
| B52 | Synthesis and characterization of desferrioxamine entrapped PEO/ethyl cellulose nano-hybrids <u>Wimalasiri A.K.D.V.K.</u> , Espósito B.P., Mohotti M., Kalansuriya P. |
| B55 | Comparative phytochemical screening and thin layer chromatography development for Soxhlet and ultrasound-assisted extracts of Piper longum (Thippili) and Piper sarmentosum (Gas thippili) grown in Sri Lanka <u>Uyangoda I.S.S.C.</u> , Munasinghe M.L.A.M.S., Nawarathne T.K. |

Category C

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| C05 | Rerecord of Asymmetricata impressa (Lampyridae) after 112 years from Central Province, Sri Lanka. Gamage L.M.P., <u>Rathnayake R.R.M.U.N.B.</u> , Wijekoon W.M.C.D., Wegiriya H.C.E. |
| C14 | Physical and microbial stability of three extemporaneously compounded medicines in selected pharmacies in Uva and Southern Provinces <u>Oshadhi R.M.U.</u> , Karunanayaka K.D.S.V., Subasinghe H.W.A.S., De Silva K.I.M. |
| C15 | Evaluation of Quality and Stability of Spironolactone Tablets Stored in Different Household Conditions <u>Wimalasena M.A.M.</u> , Subasinghe H.W.A.S., De Silva K.I.M. |
| C16 | In vivo immunomodulatory properties of Edwardsiella piscicida challenged olive-flounder plasma exosomes <u>Jayathilaka E.H.T.T.</u> , Dias M.K.H.M., De Zoysa M., Nikapitiya C. |

Category D

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| D05 | Ensemble-Based Predictive Model for Predicting Healthy Lifestyle Based on Lifestyle, Habits, and Behaviors <u>Perera T.D.M.</u> , Rupasingha R.A.H.M. |

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| D09 | Uncovering the Multifaceted Nature of Fake News: Latent Dirichlet Allocation Topic Modelling Approach <u>Abishethvarman V., Banujan K., Nirubikaa R., Kumara B.T.G.S.</u> |
| D10 | Application of Deep Learning for Breast Cancer Prediction Using Biglycan as a Potential Biomarker <u>Paranawithana G.P.</u> |
| D43 | Addressing the early dropout of Quantity Surveying Courses among university students in Sri Lanka <u>Paranagama S.M., Srivishagan V., Thalpage R.</u> |
| D50 | Modelling Breast Cancer Incidences in Sri Lanka using Time Series Analysis <u>Kulasekara S.M.D.K.A., Prasangika K.D.</u> |
| D58 | Application of Dijkstra's algorithm to find the shortest paths between selected traveling destinations in Colombo <u>Lanel G.H.J., Priyanvada K.H.H.</u> |
| D62 | Influence Functions of Cumulative Hazard and Kaplan-Meier Estimators for Survival Data <u>Thilakarathne K.P.A.I., De Mel W.A.R.</u> |
| D63 | Numerical analysis on size dependency of spherical silver nanoparticle optical enhancements <u>Lakshan K.A.S.</u> |
| D64 | Use of End Area Rule for the volume estimation in two dimensionally varying sections Wanasinghe G.I., <u>Gunathilaka K.M.R.S.</u> |
| D65 | Numerical Study of Age-structured Two-sex Population Dynamics Model for Transmission of Thalassemia Disease Chandrasiri A.M.P., De Silva T.H.K.R |
| D68 | A Goal Programming Model for Land Allocation for Crops in Udawalawa Irrigation Scheme <u>Jayasinghe A.D.K.C.D., Samarathunga D.M.</u> |
| D69 | Kauffman Bracket Polynomials Of Torus Knots: <u>Dissanayake A.A.A.W.N., Almeida S.V.A.</u> |
| D71 | Development of Electrically Conductive Carbon nanotube (CNT)-Natural Rubber Latex (NRL) composite dipped films by the application of an Electric field <u>Jayasinghe D.M., Weerathunga D.T.D., Kumarasinghe A.R., Manathunga K.S., Dharmasiri R.A.D.D., Manathunga C.H., Sewwandi B.V.N.</u> |

- D72 Investigation of the mechanical properties of grit blasting waste incorporated concrete
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Pabasara W.G.A.
- D75 A dynamical model for natural resistance against HIV
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- D76 Modeling Temperature Variation in Trincomalee District, Sri Lanka: SARIMA
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- D80 Impact of environmental, social and governance (ESG) reporting in the corporate
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- D101 An HTTP-based Real-Time HD to SD Adaptive Video Streamer for Mobile Devices
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- D102 Project management Failure and Impact in The Employer's Budget in the Sri Lankan
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- D103 Comparative Analysis of Standard Condition of Contract in Sri Lankan Construction
Industry, Special Study of ICTAD AND FIDIC
Faseela F.F., Srivishagan V., Thalpage R.
- D104 Analyzing The Factors Effect On Wear Of Brushes And Optimizing The Brush Life Of
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