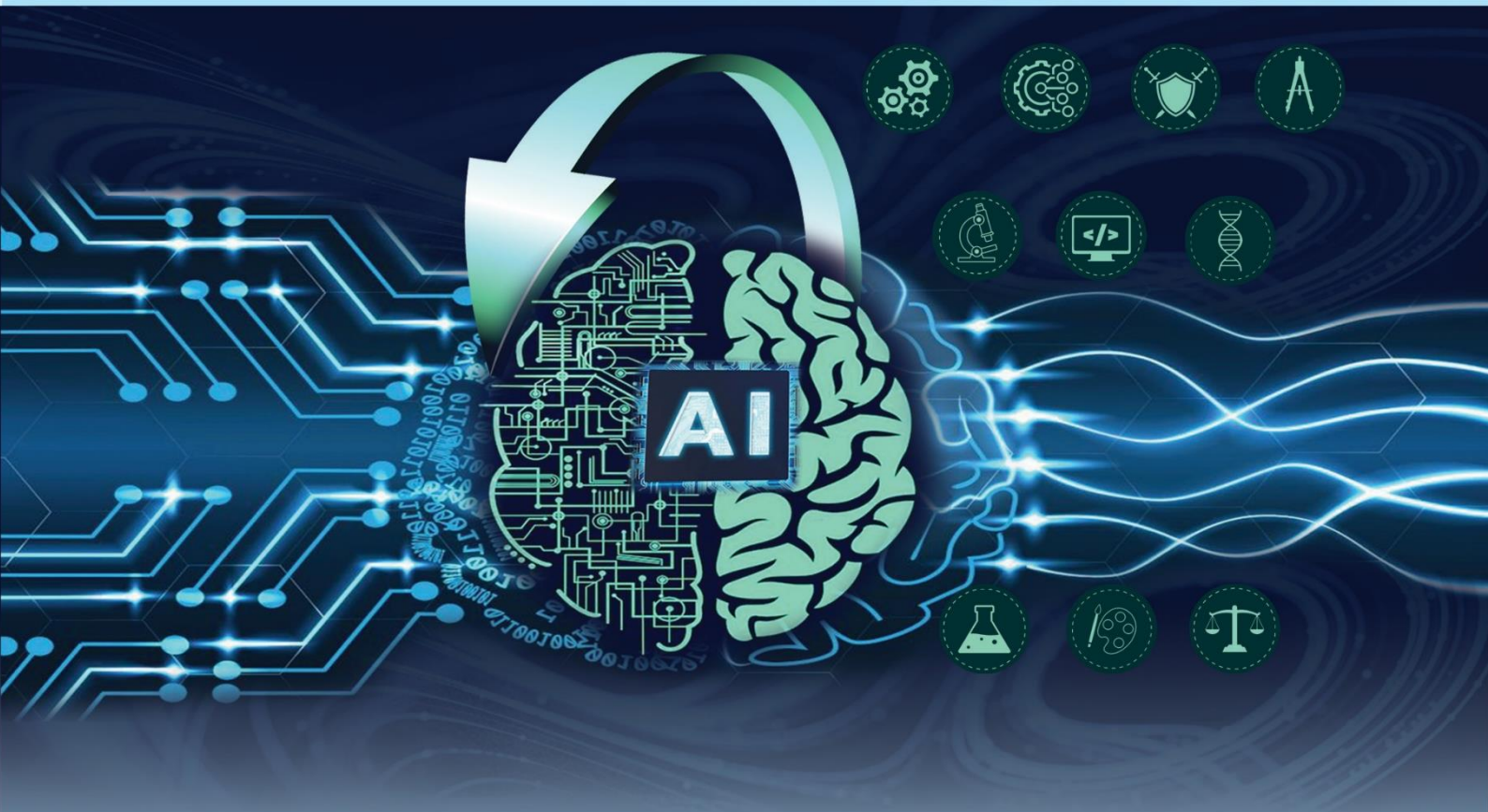


# 17<sup>th</sup> INTERNATIONAL RESEARCH CONFERENCE

*Unravelling the Paradigm Shift:  
Revolutions in the Era of AI*

26<sup>TH</sup> - 27<sup>TH</sup> SEPTEMBER 2024



**PROGRAMME BOOK**



# 17<sup>TH</sup> INTERNATIONAL RESEARCH CONFERENCE

Unravelling the Paradigm Shift: Revolutions in the Era of AI

## Programme Book



General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka

**MESSAGE FROM THE CHIEF GUEST**  
**CHANCELLOR, GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY**  
**GENERAL SHS KOTTEGODA (Retd) WWV RWP RSP VSV USP ndc**



I am truly honoured to welcome all the distinguished participants to the 17<sup>th</sup> International Research Conference (IRC) at General Sir John Kotelawala Defence University (KDU). This annually organized conference serves as a unique milestone showcasing the rich research culture deeply embedded within KDU. As a prestigious seat of learning, novelty and innovation remain at the heart of KDU's mission. Therefore, **'Unravelling the Paradigm Shift: Revolutions in the Era of AI'** has been chosen as the key theme of IRC 2024.

Moving ahead with the momentum of modern-day research, we are set to uncover the extensive impacts of artificial intelligence, not just in defence but across every facet of national interest. Currently, AI has become a driving force, reforming our defence strategies, transforming healthcare, and restructuring our educational frameworks and infrastructure.

Investing in research is essential for national advancement, promoting innovation, formulating policies, and offering solutions that address our most pressing challenges. Hence, the IRC serves as a vital platform that fosters such great endeavours, contributing significantly to national development. Our responsibility as defenders of national security is profound, extending beyond traditional roles to include the ethical integration of advanced technologies that ensure our nation's safety and prosperity.

KDU stands as a symbol of a rich and diverse research culture across many disciplines. It is also a hub for high-quality research, upholding international standards of academic excellence. This conference represents a critical meeting of minds where leading experts converge to define strategies for our future. Each discussion and presentation at this event is a step toward securing a thriving, prosperous future for our region.

I extend my best wishes to all for a successful and productive conference, eagerly anticipating the innovative ideas and transformative insights that will undoubtedly arise.

**GENERAL SHS KOTTEGODA (Retd) WWV RWP RSP VSV USP ndc**  
Chancellor  
General Sir John Kotelawala Defence University

## Message from the Vice-Chancellor



Greetings to all participants, speakers, and guests of the 17th International Research Conference (IRC) at KDU. This year's IRC is centered around a timely theme that has sparked diverse dialogues in the realms of research and innovation. The theme, 'Unravelling the Paradigm Shift: Revolutions in the Era of AI', serves as an eye-opener for both eminent and novice researchers across the globe. It also highlights the critical role that advanced technologies play in shaping our world.

At KDU, we take pride in being at the forefront of defence education in Asia, a distinction affirmed by our high rankings and our pivotal role in shaping global security dialogues. KDU claims to have a unique history in providing high quality education for both military and civilian students. It also proudly stands as a thriving hub for cutting-edge research that addresses pressing global and national issues. We strongly believe in fostering a rich and diverse research culture among KDU's students and staff, aligned with international standards. Therefore, IRC is recognized as a key event in KDU's annual calendar, emphasizing its significance in the institution's academic and research endeavours.

This year, we aim to explore the revolutionary impacts of AI across diverse disciplines, reaffirming our commitment to leading these discussions on a global scale. The insights shared here will undoubtedly spark new research initiatives and strategic collaborations, enhancing Sri Lanka's stature as a leader in both academic and strategic domains.

I extend my sincere gratitude to all those whose collective efforts have brought this conference to a reality. Your contributions ensure that KDU plays a prominent role in the international arena, driving discussions that will shape the future of technology and strategy. I look forward to a successful event, characterized by insightful discussions and pioneering ideas.

**Rear Admiral HGU Dammika Kumara, VSV, USP, psc, MMaritimePol, BSc (DS)**

Vice Chancellor

General Sir John Kotelawala Defence University

## Message from the keynote speaker



Brain health is a holistic concept encompassing cognitive, sensory, social-emotional, behavioural, and motor functions, enabling individuals to achieve their full potential. With one in three people globally affected by a brain disorder, the urgency for preventive brain health initiatives is evident. Since the inception of World Brain Day in 2014, there has been a renewed global focus on this critical area. The World Federation of Neurology (WFN), in collaboration with key organizations such as the American Academy of Neurology (AAN), the European Academy of Neurology (EAN), and the Asian Regional Consortium of Headaches (ARCH),

has led the charge to raise awareness and promote brain health worldwide.

This keynote address will outline the journey of World Brain Day and its impact on the global brain health movement, with a specific focus on prevention. It will explore the evolution of brain health concepts and the alarming prevalence of brain disorders, emphasizing the need for urgent, coordinated action. Central to this effort is the role of artificial intelligence (AI) in enhancing preventive brain health strategies. AI-driven technologies are increasingly being used to predict, diagnose, and monitor brain health conditions, enabling earlier interventions and more personalized approaches to prevention.

The address will highlight the author's pioneering work in community-based programs, public health campaigns, and international collaborations. It will underscore the critical role of prevention, early intervention, and AI-powered tools in improving quality of life and reducing the global burden of brain disorders. The ultimate goal is to advance comprehensive brain health initiatives that leverage cutting-edge technologies to ensure a healthier future for all.

### **Professor Tissa Wijeratne**

DR OAM MD PhD FRACP FRCP(London) FRCP (Edin) FAAN (USA) FEAN (EAN)  
Professor and Chair, Director, Senior Neurologist, Department of Neurology, Western Health, Victoria, Australia  
Co-Founder and Co-Chair, World Brain Day, World Federation of Neurology

## Message from the Chairperson



It is my honour, as Chairperson, to welcome you all to the 17th International Research Conference at KDU. This year, we explore how artificial intelligence has evolved from a technological innovation into a catalyst for transformative change across numerous sectors. With an impressive selection of 441 research papers, drawn from nearly 1000 submissions, our conference will span 11 distinct tracks covering a wide range of disciplines.

Our theme, "Unravelling the Paradigm Shift: Revolutions in the Era of AI," highlights the profound and far-reaching transformations that AI is driving—from reshaping urban infrastructure to revolutionizing healthcare. The conference is designed to promote interdisciplinary dialogue, addressing not only technological advancements but also the ethical, social, and economic implications of these developments. One of our key objectives is to create a platform where researchers, professionals, and thought leaders can come together, exchange ideas, and foster collaborative initiatives that will push the boundaries of innovation. I am deeply grateful to all our keynote speakers, participants, and the entire organizing team for their tireless efforts and contributions. Your dedication to advancing knowledge is what brings this conference to life, positioning it as a critical forum in global research.

Together, we are charting a path toward a future where technology and society grow hand in hand, reshaping the landscape of not just research but our daily lives. Let's engage in meaningful discussions that will inspire new perspectives and drive impactful solutions. Here's to a successful conference, rich in insight and collaboration. Finally, I would like to extend my best wishes to all the presenters, authors, and participants joining the KDU IRC 2024, whether on-site or online. I hope each of you finds this conference not only informative and enjoyable but also an encouraging opportunity to experience the warm hospitality of KDU throughout these two fruitful days.

### **Dr. Nirosha Wedasinghe**

Ph.D(KDU-SL), MIT(CStud-Aus), B.Sc in Comp & IS (London Met -UK), SMIEEE(US), MBSC(UK), MCS(SL), FISDS(Japan)

Senior Lecturer cum Director -Centre for Gender Equity and Equality

General Sir John Kotelawala Defence University

Conference Chair- IRC 2024

## Message from the Conference Secretary



As we gather for the 17th International Research Conference at KDU, I extend a warm and heartfelt welcome to all participants, researchers, and thought leaders. This year, we proudly present 441 selected research papers from nearly 1,000 submissions, spanning 11 tracks in diverse fields such as Defence & Strategic Studies, Medicine, Health Sciences, Engineering, Technology and Computing, Basic sciences, Law, Social Sciences and Humanities, and the Built Environment and Spatial Sciences.

Our theme, “Unravelling the Paradigm Shift: Revolutions in the Era of AI,” reflects the profound ways AI is transforming our world, becoming integral to our lives and work. The discussions here aim to explore how AI can address global challenges, drive innovation, and foster interdisciplinary collaborations that will shape the future.

Looking ahead, the future of IRC lies in broadening its horizons. We aim to increase international participation, diversify the scope of research, and establish global research consortia to tackle real-world problems that extend beyond the borders of Sri Lanka. The insights gained here must lead to actionable outcomes, particularly in formulating policy recommendations in areas such as AI in defence, public health, and education.

This conference is more than just a forum for discussion; it is a platform where the brightest minds collaborate to drive change. I extend my heartfelt thanks to all our speakers and participants for their dedication and contributions. Together, we are not only shaping the future of research but also crafting solutions that will impact society on a global scale. Here’s to a successful and inspiring conference that drives innovation, shapes policy, and sparks meaningful collaboration.

### **Dr. HM Prasanna Herath**

Ph.D. (USJ), RN(SLNC), B.Sc(Nursing) Hons (UPSL), CTHE

Senior Lecturer

Faculty of Allied Health Sciences

Erasmus coordinator

General Sir John Kotelawala Defence University

Conference Secretary- IRC 2024

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# INAGURAL SESSION

26<sup>th</sup> September 2024

Venue: Auditorium, Faculty of Graduate Studies

0700 – 0750 Hrs	Registration
0750 – 0800 Hrs	Arrival of the Chief Guest
0800 – 0810 Hrs	Inauguration KDU IRC 2024 Curtain-Raiser Video Lighting the Traditional Oil Lamp Pooja Dance by KDU Students
0810 – 0815 Hrs	Welcome Address
0815 – 0825 Hrs	Speech of the Chief Guest
0825 – 0845 Hrs	Keynote Speech
0845 – 0855 Hrs	Dancing Performance
0855 – 0925 Hrs	Award Ceremony of Research Excellence Award
0925 – 0935 Hrs	Vote of Thanks
0935 – 0955 Hrs	Group Photograph
0955 – 1030 Hrs	Refreshments



# **PLENARY SESSIONS**

**26<sup>th</sup> September 2024**

## DEFENCE AND STRATEGIC STUDIES – I

Theme: Technological Revolution and Security

Venue: Auditorium, Faculty of Graduate Studies

<b>Chairperson</b>	<b>Air Marshal RAUP Rajapaksa RSP and two bars VSV USP MSc (Def Stu) in Mgt MA in IS &amp; S (UK) BSc (Def Stu) MIM (SL) AMIE (SL) rcds psc</b> Commander of the Air Force, Sri Lanka
1100 - 1110 Hrs	Introduction of the Session/ Chairperson
1110 - 1125 Hrs	<b>Prof. Swaran Singh</b> Professor, Diplomacy & Disarmament at Centre for International Politics, School of International Studies, Jawaharlal Nehru University (New Delhi), India
1125 -1140 Hrs	<b>Dr. Ghulam Mujaddid</b> Head of Department, Department of Strategic Studies, National Defence University, Islamabad, Pakistan
1140 - 1155 Hrs	<b>Prof. Dr. Azizi bin Miskon</b> Deputy Vice Chancellor (Research & Innovation), National Defence University, Malaysia
1155-1210 Hrs	<b>Major General DGS Senarath Yapa RWP RSP ndu</b> Commandant, National Defence College, Sri Lanka
1210-1225 Hrs	<b>Ms. Siri Bjune</b> Head, Global Maritime Crime Programme, United Nations Office on Drugs and Crime
1225 - 1250 Hrs	Question and Answering Session
1250 - 1300 Hrs	Panel Discussion and Summing up by the Chair
1300 -1400 Hrs	Lunch

## DEFENCE AND STRATEGIC STUDIES – II

Theme: International Security Landscape

Venue: Auditorium, Faculty of Defence and Strategic Studies

<b>Chairperson</b>	<b>Mr. Ravinatha P. Aryasinha</b> Executive Director, Lakshman Kadirgamar Institute of International Relations and Strategic Studies
1400 - 1410 Hrs	Introduction of the Session/ Chairperson
1410 - 1425 Hrs	<b>Mrs. Marie-Noelle Duris</b> Chargé d’Affaires, Embassy of France in Sri Lanka and The Maldives
1425 - 1440 Hrs	<b>Lieutenant General Jonni Mahroza, Ph.D</b> Rector Republic of Indonesia Defence University Indonesia
1440 - 1455 Hrs	<b>Mr. Sachindra Samararatne</b> Associate Chief Digital Economy Officer Information Communication Technology Agency Sri Lanka
1455 - 1510 Hrs	<b>Mr. Yamada Tetsuya</b> Chief Representative Japan International Cooperation Agency
1510 - 1525 Hrs	<b>Prof. David Des Roches</b> Professor of Practice Near East South Asia Centre for Strategic Studies National Defence University Washington DC USA
1525 - 1545 Hrs	Question and Answering Session
1545 - 1555 Hrs	Panel Discussion and Summing up by the Chair
1555 – 1615 Hrs	Tea

## MEDICINE

Theme: Changing Landscapes in Medical Science with AI

Venue: Mini Lecturer Theatre, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Prof. Pandula Athauda-arachchi</b> Head - Para clinical Sciences Faculty of Medicine General Sir John Kotelawala Defence University
1345 – 1400 Hrs	Introduction of the Session – Chairperson
1400 – 1430 Hrs	<b>Prof. Vajira H.K. Dissanayake</b> Dean, Faculty of Medicine, University of Colombo
1430 - 1500 Hrs	<b>Prof. Madawa Chandratilake</b> Dean, Faculty of Medicine, University of Kelaniya
1500 - 1530 Hrs	<b>Prof. R. Balasubramani</b> Department of Library Information Science, Bharathidasan University, Tiruchirappalli
1530 – 1600 Hrs	<b>Dr. Subha Fernando</b> Faculty of Information Technology, University of Moratuwa
1600 - 1615Hrs	Panel Discussion and Summing up by the chair
1615 – 1645 Hrs	Refreshments

## ENGINEERING

Theme: AI in Engineering for Sustainable Development

Venue: FOE 6-1, 6<sup>th</sup> Floor, Faculty of Engineering

<b>Chairperson</b>	<b>Prof. SAS Kulathilaka</b> Senior Professor Department of Civil Engineering, Faculty of Engineering, Kotelawala Defence University, Sri Lanka
1400 – 1405 Hrs	Introduction of the Session/ Chairperson
1405 – 1435 Hrs	<b>Dr. Tilak Siyambalapitiya</b> Managing Director Resource Management Associates Private Limited, Sri Lanka
1435 –1505 Hrs	<b>Dr Thanuja Ranawaka</b> Principal Engineer Scottsdale Construction Systems, Australia
1505 – 1535 Hrs	<b>Dr. Thusitha Rodrigo</b> Assistant Professor Department of Aviation Engineering, Faculty of Engineering and Technology, Abu Dhabi Campus, Higher Colleges of Technology, United Arab Emirates
1535 – 1605 Hrs	<b>Dr. Asiri Karunawardena</b> Director General National Building Research Organization, Sri Lanka
1555 – 1615 Hrs	Questions and Answer Session
1620 – 1630 Hrs	Summing up by the Chair
1630 – 1700 Hrs	Refreshments

## COMPUTING

Theme: Innovations Beyond Boundaries: Redefining Computing in the Era of AI

Venue: LT2, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairpersons</b>	<b>Prof. Dileeka Dias</b> Professor, Faculty of Engineering, Department of Electronic & Telecommunication Engineering, , University of Moratuwa, Sri Lanka
1400 – 1410 Hrs	Introduction of the Session/ Chairperson
1410 – 1430 Hrs	<b>Professor Nuwan Kodagoda</b> Pro Vice Chancellor, Faculty of Computing, Sri Lanka Institute of Information Technology, Malabe Campus, Sri Lanka
1430 –1450 Hrs	<b>Dr. Chathura Prasanna Rajapakshe</b> Senior Lecturer in Computing, Department of Industrial Management, University of Kelaniya, Sri Lanka
1450 – 1510 Hrs	<b>Mr. K.D. Chamil Jeewantha</b> Software Architect, Multiplier Technologies Pvt. Ltd, Singapore
1510 – 1530 Hrs	<b>Mr. Lakmal Embuldeniya</b> President, ISACA Sri Lanka Secretariat, Colombo 07, Sri Lanka
1530 – 1600 Hrs	Panel Discussion and Summing up by the Chair
1600 – 1630 Hrs	Refreshments

## LAW

Theme: Conquering Traditional Frontiers: Challenges Presented to Law by  
New Technologies

Venue: Main Auditorium, Faculty of Graduate Studies

<b>Chairperson</b>	<b>His Lordship Jayantha Jayasuriya PC</b> Chief Justice, Supreme Court of Sri Lanka
1400 – 1410 Hrs	Introduction of the Session
1410 – 1425 Hrs	<b>Diplomacy in the Digital Age: Role of the International Law</b> M.U.M. Ali Sabry PC, M.P. Former Minister for Justice, Prisons Affairs and Constitutional Reforms, and Minister of Foreign Affairs
1425 – 1430 Hrs	Questions and Answers
1430 – 1445 Hrs	<b>Regulating Artificial Intelligence: Inventions and Legal Accountability</b> Parinda Ranasinghe PC Hon. Attorney General, Attorney General's Department
1445 – 1450 Hrs	Questions and Answers
1450 – 1505 Hrs	<b>Future-Proofing Legal Education: Integrating Technological Advances to Legal Education</b> Mr. Palitha Kumarasinghe PC Chairman, Standing Committee on Legal Studies, University Grants Commission
1505 – 1510 Hrs	Questions and Answers
1510 – 1525 Hrs	<b>Legal Profession in the Digital Age: Embracing Change and Meeting New Challenges</b> Kaushalya Nawarathna PC Former President, Bar Association of Sri Lanka
1525 – 1530 Hrs	Questions and Answers



1530 – 1540 Hrs	Summing up by the Chair
1540 – 1545 Hrs	Launch of the KDU Law Journal
1545 – 1615 Hrs	Evaluation of Poster Presentations
1615 – 1630 Hrs	Refreshments

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Theme: AI Revolution: Transforming Management, Social Sciences and Humanities into  
New Digital Era.

Venue: 6-2, 6<sup>th</sup> Floor, Faculty of Management, Social Sciences & Humanities

<b>Chairpersons</b>	<b>Prof Dinesh Samarasinghe</b> Dean, Faculty of Business University of Moratuwa.
1400 – 1410 Hrs	Introduction of the Session/ Chairperson
1415 – 1435 Hrs	Dr. Susantha Goonathilake Former Professor of Anthropology University of Exeter and Columbia University.
1440 –1500 Hrs	Dr Andrzej Cirocki Associate Professor in English Language Education University of York, UK
1505 – 1525 Hrs	Dr. Zameer Careem Medical & Diplomatic historian, Visiting Lecturer KDU & International Universities, Board Director- Centre for Policy Alternatives, Colombo.
1530 – 1545 Hrs	Summing up by the Chair
1545 – 1600 Hrs	Refreshments

## TECHNOLOGY

Theme: Sustainable and Resilient Technological Systems in the Era of AI

Venue: 3-1, Faculty of Graduate Studies

<b>Chairperson</b>	<b>Prof. G. A. S. Premakumara</b> Professor in Basic Science & Social Science Dept of Basic Science & Social Science Faculty of Nursing University of Colombo
1400 – 1410 Hrs	Introduction of the Session/Chairperson
1410 – 1435 Hrs	<b>Prof. Rahula Anura Attalage</b> Pro Vice - Chancellor (Academic) Sri Lanka Institute of Information Technology (SLIIT)
1435 – 1500 Hrs	<b>Prof. Hasin Anupama Azhari</b> Professor in Medical Physics Director, Centre of Biomedical Science and Engineering, United International University, Bangladesh
1500 – 1525 Hrs	<b>Chartered Engineer Prasanna Narangoda</b> Director, DeMEP Consultants (Pvt) Ltd. Nugegoda
1525 – 1550 Hrs	<b>Mr Thilina Yapa,</b> Associate Principal Consultant Nagarro [Pvt] Ltd. Colombo 10
1550 – 1615 Hrs	Panel Discussion and Summing up by the Chair.
1615 – 1715 Hrs	Refreshments

## CRIMINAL JUSTICE

Theme: Relevancy of AI in Criminal Justice: Balancing Social Interest and Individual Interest

Venue: It01, 3<sup>rd</sup> floor, Faculty of Medicine

### Chairpersons

**Hon. Justice Nissanka Bandula Karunaratne**

President of the Court of Appeal, Sri Lanka

1400 – 1415 Hrs

Introduction of the Session/ Chairperson

1415 – 1435 Hrs

**Deshabandu Professor MADSJS Niriella**

Professor in Law, Faculty of Law, University of Colombo, Sri Lanka

1435 – 1455 Hrs

**Prof Dhanapala Wijesinghe**

Professor in Criminology, Faculty of Humanities and Social Sciences, University of Sri Jayawardenepura, Sri Lanka

1455 – 1515 Hrs

Mr. Thushara Upuldeniya

Commissioner General of Prisons

1515 – 1535 Hrs

**Mr Sajeewa Madawatte**

Senior Deputy Inspector General of Police, Sri Lanka

1535 – 1605 Hrs

**Panel Discussion and Summing up by the Chair**

1605 – 1635 Hrs

Refreshments

## BUILT ENVIRONMENT AND SPATIAL SCIENCES

Theme: Beyond The Materialist Paradigm: The Miracle of Spatial intelligence

Venue: Main Auditorium, Southern Campus, KDU

<b>Chairperson</b>	<b>Emeritus Prof. Nimal De Silva</b> Professor in Architecture, Faculty of Architecture, University of Moratuwa
1330 – 1345 Hrs	Introduction of the Session/ Chairpersons
1345 – 1415 Hrs	<b>Prof. H.M.I. Prasanna</b> Professor of Geodesy, Department of Surveying and Geodesy, Faculty of Geomatics, Sabaragamuwa University of Sri Lanka
1415 –1445 Hrs	<b>Prof. Janaka Wijesundara</b> Professor in Architecture, Faculty of Architecture, University of Moratuwa
1445 – 1515 Hrs	<b>Adjunct Prof. Chandana Jayalath</b> Professor in Quantity Surveying, University of Vocational Technology, Sri Lanka
1515 – 1545 Hrs	<b>Prof. S. T. W. S. Yapa</b> Professor, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura
1545 – 1600 Hrs	Panel Discussion and Summing up by the Chair

## BASIC AND APPLIED SCIENCES

Theme: AI Synergies: Merging Basic Science Discoveries with Applied Science Innovations

Venue: LL3, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Senior Prof. KM Nalin de Silva</b> Chair Senior Professor of Chemistry and Former Head of the Department, Department of Chemistry, Faculty of Science, University of Colombo, Sri Lanka
1400 – 1410 Hrs	Introduction of the Session/ Chairperson
1415 – 1445 Hrs	<b>Senior Prof. Asoka S. Karunananda</b> Senior Professor, Department of Computational Mathematics, Faculty of Information Technology, University of Moratuwa, Sri Lanka
1450 – 1520 Hrs	<b>Prof. Gaurav Ahuja</b> Associate Professor, Department of Computational Biology, Indraprastha Institute of Information Technology- Delhi, India
1525 – 1555 Hrs	<b>Dr. Lal Ekanayake</b> Director General, Institute of Sports Medicine Colombo, Sri Lanka
1600 – 1630 Hrs	<b>Asst Prof. Kar Tong Tan</b> Assistant Professor, Department of Pharmacy and Pharmaceutical Sciences, National University of Singapore Singapore
1630 – 1645 Hrs	Summing up by the Chair
1645 – 1700 Hrs	Refreshments

## ALLIED HEALTH SCIENCES

Theme: Empowering Future Developments in Health Sciences in the Era of AI

Venue: LL2, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Snr Prof Sampath Gunawardena</b> Senior Professor of Physiology, Department of Physiology, Faculty of Medicine, University of Ruhuna, Sri Lanka
1400 – 1410 Hrs	Introduction of the Session/Chairperson
1410 – 1430 Hrs	<b>Assoc Prof Paul Linsley</b> Associate Professor, School of Health Sciences, University of East Anglia, United Kingdom
1430 – 1450 Hrs	<b>Prof Nithushi Samaranayake</b> Professor, Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka
1450 – 1510 Hrs	<b>Dr Ishanka Weerasekara</b> Lecturer in Physiotherapy, Institute of Health and Wellbeing, Federation University, Australia
1510 – 1530 Hrs	<b>Dr Dulharie T Wijeratne</b> Senior Lecturer, Department of Medical Laboratory Sciences, Faculty of Health Sciences, The Open University of Sri Lanka
1530 – 1550 Hrs	<b>Dr P Sathyathas</b> Teaching Associate & Medical Radiation Practitioner, Faculty of Health, School of Clinical Sciences, Centre for Biomedical Technologies, Queensland University of Technology, Australia
1550 – 1615 Hrs	Panel Discussion and Summing up by the Chair
1615 – 1645 Hrs	Refreshments

# **ORAL PRESENTATIONS**

**27<sup>th</sup> September 2024**



## DEFENCE AND STRATEGIC STUDIES

Technical Session I: International Security Landscape

Venue: Auditorium, Faculty of Graduate Studies

<b>Chairperson</b>	<b>Prof. Hazuki Sasaki</b> Associate Professor, Kanzawa University Japan
0830 - 0835 Hrs	Introduction of the Chair
0835 - 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0850 Hrs	<b>Misinformation in an Era of Artificial Intelligence Analysis on Global Security</b> T Karunarathna, S Bandara, and M Pathinayake
0850 - 0900 Hrs	<b>Diplomacy in the Age of Information Warfare; Strategies and Challenges in South Asia</b> KPAR Sarasinghe
0900 - 0910 Hrs	<b>From Migration to Mainstream: A Case Study of Indian Diaspora's Rising Geopolitical Influence</b> DD Samaragunaratna
0910 - 0920 Hrs	<b>The Galactic Chessboard: A Comparative Analysis of Space Warfare Strategies Employed by the US, Russia, and China</b> BRAWS Bandara and KPR Kumara
0920 – 0930 Hrs	<b>Maritime Strategic Thinking Culture of Small Island States: Sri Lankan Perspective</b> SACR Kulatunga
0930 – 0950 Hrs	Question and Answering Session
0950 - 1000 Hrs	Summing up by the Chair
1000 - 1030 Hrs	Refreshments

## DEFENCE AND STRATEGIC STUDIES

Technical Session II: Future Technologies I

Venue: Auditorium, Faculty of Graduate Studies

<b>Chairperson</b>	<b>Mr. Imran Furkan</b> Chief Executive Officer, TRESYNC, Australia
1030 - 1035 Hrs	Introduction of the Chair
1035 - 1040 Hrs	Preliminary Remarks by the Chair
1040 - 1050 Hrs	<b>Islamic State Exploitation of Emerging Web3 and Generative AI Technologies</b> RMTGP Rathnayaka
1050 - 1100 Hrs	<b>AI-Driven Wars Ethical Impact of the War on Gaza</b> TN Halpe
1100 - 1110 Hrs	<b>The Evolving Landscape of Military Manpower: Evaluating the Rise of AI in Possible Futures</b> IGMKT Ihagama & KERL Fernando
1110 - 1120 Hrs	<b>The Impact of Artificial Intelligence on Military Defence and Security; A Case Study on Sri Lanka Navy's Red Sea Deployment</b> IS Kudaligama
1120 - 1130 Hrs	<b>Forging Relations in the Era of AI: Utilizing Artificial Intelligence as a Tool in Sri Lankan Cultural Diplomacy</b> WMD Wijekoon
1130 - 1150 Hrs	Question and Answering Session
1150 - 1200 Hrs	Summing up by the Chair
1200 - 1330 Hrs	Lunch

## DEFENCE AND STRATEGIC STUDIES

Technical Session III : Future Technologies II

Venue: Auditorium, Faculty of Graduate Studies

Parallel Session

<b>Chairperson</b>	<b>Brigadier TCMGST Cooray RWP RSP USP ndc psc</b> Secretary, National Defence College Colombo 03
1030 - 1035 Hrs	Introduction of the Chair
1035 - 1040 Hrs	Preliminary Remarks by the Chair
1040 – 1050 Hrs	<b>AI-Powered Drone Warfare: A Case Study on Russia-Ukraine War</b> YI Premaratne and KJ Arachchi
1050 - 1100 Hrs	<b>Potential of Artificial Intelligence as a Remedy for the Challenges Facing the United Nations Peacekeeping Operations of Sri Lanka's Armed Forces</b> HMTU Herath
1100 - 1110 Hrs	<b>Warfare in the Age of Artificial Intelligence: Changing Dynamics</b> MAJ Gimantha
1110 - 1120 Hrs	<b>Artificial Intelligence and Deterrence: An Analysis of Practical Implications</b> S Vithanage and KADIS Kuruwita
1120 – 1130 Hrs	<b>Impacts of Artificial Intelligence for the Logistic and Economic Intelligence in Administrative Planning of Military Operations</b> TPA Peiris and HSM Hapuarachchi
1130 – 1150 Hrs	Question and Answering Session
1150 - 1200 Hrs	Summing up by the Chair
1200 - 1330 Hrs	Lunch

## DEFENCE AND STRATEGIC STUDIES

Technical Session IV: Dimensions of National Security I

Venue: Auditorium, Faculty of Graduate Studies

<b>Chairperson</b>	<b>Major General LCR Jayasuriya RSP ndc psc</b> Rector - Southern Campus General Sir John Kotelawala Defence University
1330 - 1335 Hrs	Introduction of the Chair
1335 - 1340 Hrs	Preliminary Remarks by the Chair
1340 - 1350 Hrs	<b>A Strategic Approach to Enhancing National Security in Sri Lanka by Decentralizing Energy Production Through Domestic Solar Systems</b> MMC Mirahawatta and C Ranasinghe
1350 - 1400 Hrs	<b>Assessing the Impact of Crypto Currency on Counter Terrorism Strategies in Sri Lanka</b> BGSP Samarasinghe, MHM Imran, WPS Perera, and SDDS Silva
1400 - 1410 Hrs	<b>AI and Human Rights: Safeguarding civil liberties in Sri Lanka Whilst Focusing National Security</b> KTDS Kalansooriya, KAPA Rathnayake, and BGSP Samarasinghe
1410 - 1420 Hrs	<b>Differences in Perceptions in Three Ethnic Groups About the Predicted Impacts of the Rise of Mono-Ethnic Nationalism in Post-war Sri Lanka</b> PWKH Hemakumara
1420 - 1430 Hrs	<b>Challenges on Post-Harvest Management of Sri Lankan Multi-Day Fishing Boats and Their Implications on the National Security of the Country</b> BD Abeygunawardhana
1430 - 1450 Hrs	Question and Answering Session
1450 - 1500 Hrs	Summing up by the Chair
1500 - 1530 Hrs	Refreshments

## DEFENCE AND STRATEGIC STUDIES

Technical Session V: Dimensions of National Security II

Venue: Classroom 4-1, Faculty of Graduate Studies

Parallel Session

<b>Chairperson</b>	<b>Dr. Asantha Senevirathna</b> Senior Lecturer at the Department of Strategic Studies, Faculty of Defence and Strategic Studies, General Sir John Kotelawala Defence University
1330 - 1335 Hrs	Introduction of the Chair
1335 - 1340 Hrs	Preliminary Remarks by the Chair
1340 – 1350 Hrs	<b>Mitigating ISIS Radicalization in Sri Lanka: Strategies and Challenges</b> KMDDDB Rathnayake, RSD Fernando, and PKGB Palanage
1350 - 1400 Hrs	<b>Money Laundering in Sri Lanka: Examining Socio-Economic Consequences, Social Conflicts, and Regulatory Challenges</b> CLCM Patabendige and UIA Pathirana
1400 - 1410 Hrs	<b>History of Chemical Attacks in Sri Lanka; A Special reference to East Kiran Attack</b> KADSK Athukorala
1410 - 1420 Hrs	<b>Strengthening the Geopolitical Aspects of Sri Lanka by Joining the Regional Comprehensive Economic Partnership (RCEP)</b> UGWR Jayathilleka
1420 – 1430 Hrs	<b>The Red Sea Area: Importance, Regional Conflicts and Impact on Sri Lankan Trade and Security</b> PKGB Palanage, LSU De Silva and KPSH De Silva
1430 – 1440 Hrs	<b>13th Amendment to the Constitution of Sri Lanka: Impacts and Challenges</b> HRFM Tissera
1440 – 1500Hrs	Question and Answering Session
1500 - 1510 Hrs	Summing up by the Chair
1510 - 1530 Hrs	Refreshments

## MEDICINE

### Technical Session I

Venue: Mini Lecturer Theatre, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Prof. Priyamali Jayasekera</b> Head-Department of Clinical Sciences, Faculty of Medicine General Sir John Kotelawala Defence University
0830 – 0845 Hrs	Introduction of the Chair, Introduction of the guest speaker and Preliminary Remarks by the Chair
0845 – 0915 Hrs	<b>Dr Sampath Jayalath</b> Department of Electrical Engineering, University of Cape Town, South Africa
0915- 0930 Hrs	Panel discussion
0930 – 1000 Hrs	Refreshment
1000 – 1020 Hrs	<b>Biological Predictors of DHS Implant Failure in Extracapsular Neck of Femur Fractures; A 10-year Follow-Up Study</b> CR Karunathilaka, P Cool, PTR Makuloluwa, S Mendis, U Banagala, and J Chandrasiri
1020 – 1040 Hrs	<b>Pyocyanin (5-methylphenazin-1-one) inhibits the growth of bacterial species colonized on chronic diabetic wounds.</b> S.D. Amaya Kaumini Wijesinghe, W.M.I. Dilini Nakkawita, AD De Silva, U S Gunwardana and HS. Jayasinghearachchi
1040 – 1100 Hrs	<b>Survival Analysis of Fracture Complications Following Dynamic Hip Screw Fixation of Fracture Neck of Femur: A Ten-Year Follow-up Study</b> CR Karunathilaka, P Cool, PTR Makuloluwa, S Mendis and U Banagala
1100 – 1120 Hrs	<b>Bleeding events among elderly antiplatelet users: Are we overprescribing?</b> Lamabadusuriya DA, Jayawardene, Perera TPS, Govidapala BGDS, Fernando N and Jayasekara MMPT

- 1120 – 1140 Hrs      **Positioning of Dynamic Hip Screw as a Predictor of Implant-Failure Following Fracture Neck of Femur: A survival analysis for 10 years.**  
CR Karunathilaka, P Cool, PTR Makuloluwa, S Mendis and U Banagala
- 1140 – 1150 Hrs      Summing up by the Session Chair
- 1150 – 1300 Hrs      Lunch

## MEDICINE

### Technical Session II

Venue: Mini Lecturer Theater, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Lt Col. (Prof.) WMMS Bandara</b> Department of Pre-clinical Sciences, Faculty of Medicine General Sir John Kotelawala Defence University
1300 – 1315 Hrs	Introduction of the Chair, Introduction of the guest speaker and Preliminary Remarks by the Chair
1315 – 1345 Hrs	<b>Col. (Dr) HHLK Fernando</b> Department of Pre-Clinical Sciences, Faculty of Medicine, General Sir John Kotelawala Defence University
1345 -1400 Hrs	Panel discussion
1400 – 1420 Hrs	<b>Development and analysis of searches of a comprehensive new digital database and search engine (Mediverify) for registered medicines in Sri Lanka</b> Praveen C Athauda arachchi, BM Rohini Fernandopulle, and Pandula M Athauda arachchi
1420 – 1440 Hrs	<b>Antibiogram of carbapenem-resistant Gram-negative bacteria causing urinary tract infections</b> AWGSN Jayathilaka, WMID Nakkawita, SP Gunasekara, and UTN Senaratne
1440 – 1500 Hrs	<b>Oxford Nanopore sequencing for preliminary microbiome analysis amongst active/latent tuberculosis patients vs healthy individuals in Sri Lanka</b> US Gunawardane, MR Peiris, DS Kathriarachchi, DKR Aluthge, GDHM Gunasekara, DGP Kawyangana, MA Balasuriya, SAV Moorthy, W Gunasinghe, TI Withanawasam, N Dissanayake, A Balasuriya, B Peters, CS Lindestam Arlehamn and AD De Silva
1500 – 1520 Hrs	<b>Identification of Intrathoracic Pathological Conditions in Chest X-rays using Deep Learning and Digital Image Processing</b> J.D.B.K. Jayakody, J. Thussitha, W.K. Udayanga, M. Janotheepan, T. Rajeetha, and W.K.C. Sampath



- 1520 – 1540 Hrs      **Healthcare costs and related factors of a patient attending a medical clinic of a tertiary care government hospital in Sri Lanka**  
NH Ubeysekara, KPA Sewwandi, SAMAVR Senanayake, HA Ubeysekara and SDUM Ranga
- 1540 – 1550 Hrs      Summing up by the Session Chair
- 1550 – 1615 Hrs      Announcement of Best Oral and Poster Awards

## ENGINEERING

### Technical Session I

Venue: FOE 6-1, 6<sup>th</sup> Floor, Faculty of Engineering

<b>Chairperson</b>	<b>Dr. Sanika Wijayasekara</b> Assistant Professor, Faculty of Computing, SLIIT, Sri Lanka
0900 – 0905 Hrs	Introduction of the Chair
0905 – 0910 Hrs	Preliminary Remarks by the Chair
0910 – 0925 Hrs	<b>Integration of Image Processing with Underwater Rover to Monitor Coral Growth.</b> WAMPL Adhipaththu, AMMHB Abeysinghe, BY Ranasinghe, UVH Sameera and BLS Thilakarathne
0925 – 0940 Hrs	<b>Designing a Portable Solar Power Station for Outdoor Activities</b> HAS Eranda, RAIT Rathnayake, PMP Rodrigo, KGNS Karunarathne and JP Karunadasa
0940 – 0955 Hrs	<b>Enhancing Electrical Grid Reliability through Predictive Cycle Detection with Graph Neural Networks</b> WMKGVB Wijekoon and HPPP Hettiarachchi
0955 – 1010 Hrs	<b>Edge Computing using FPGA with the Deployment of Neural Networks for General Purpose Application</b> Kevini Perera, Chamod Hettihewa, Manupa Wickramasinghe, Ashan Sandanayake, Chamali Rajapaksha and Pubudu Pathirana
1010 – 1020 Hrs	Summing up by the Session Chair
1020 – 1030 Hrs	Awards Ceremony
1030 – 1100 Hrs	Refreshments

## ENGINEERING

### Technical Session II

Venue: FOE 6-1, 6<sup>th</sup> Floor, Faculty of Engineering

<b>Chairperson</b>	<b>Prof. Shiromi Karunaratne</b> Professor, Department of Civil Engineering, Faculty of Engineering, SLIIT, Sri Lanka
1100 – 1105 Hrs	Introduction of the Chair
1105 – 1110 Hrs	Preliminary Remarks by the Chair
1110 – 1125 Hrs	<b>Management of Construction Wastage in Building Projects of Sri Lanka</b> NGP Aparna and TMWRMB Samarakoon
1125 – 1140 Hrs	<b>Graphene Oxide as a corrosion mitigation agent in reinforced concrete: An evaluation</b> DA Oshadhi and BHJ Pushpakumara
1140 – 1155 Hrs	<b>Analysis on Design Standards of Bus Terminals in Sri Lanka</b> MPVP Medawatte and RMNT Sirisoma
1155 – 1210 Hrs	<b>Investigation of Stormwater Quality in Different Impervious Surfaces – Case Study in General Sir John Kotelawala Defence University</b> RARS Ranasinghe, HK Pathinayaka, and NS Miguntanna
1210 – 1225 Hrs	<b>Socio-hydrological influence of floods in Kelani River basin due to Southwest monsoon: A comparative study</b> LY Hitige, MT Gunasekara, and WCDK Fernando
1225 – 1230 Hrs	Summing up by the Session Chair
1230 – 1235 Hrs	Awards Ceremony
1235 – 1330 Hrs	Lunch

## ENGINEERING

### Technical Sessions III

Venue: FOE 6-1, 6<sup>th</sup> Floor, Faculty of Engineering

<b>Chairpersons</b>	<b>Prof. Indika De Silva</b> Professor, Department of Materials Science and Engineering, Faculty of Engineering, University of Moratuwa, Sri Lanka
1330 – 1335 Hrs	Introduction of the Chair
1335 – 1340 Hrs	Preliminary Remarks by the Chair
1340 – 1355 Hrs	<b>Design and Analysis of Rotor and Airfoil Configurations for Vertical Axis Wind Turbine to Harvest Wind Generated at Highways</b> MM Kothalawala, RDMHM Ariyaratne, HGS Hikkaduwa, NVL De Silva, KREMSB Ekanayaka, MCH Chandrasiri, and PS Gauder
1355 – 1410 Hrs	<b>Design and Implementation of Operational Level Arduino Based Marine Two Stroke Engine Simulator</b> HGS Hikkaduwa, KMPK Senarathne, DVP Wijethunga, MCH Chandrasiri, LAKR Athukorala, LBND Rajasekara, SADR Maduwantha, RGYK Rajapaksha, and JPKD Amarathunga
1410 – 1425 Hrs	<b>Transforming Waste to Wealth: Development of a Feedstock-Specific Auto-Thermal Pyrolizer for Carbonizing Compost Residues in Sri Lanka</b> MSK Ranaweera, EANK Edirisinghe, M Narayana, BCL Athapattu, DGC Wickramasinghe, and M Vithanage
1425 – 1440 Hrs	<b>Preliminary Study on Design and Development of Unmanned Shallow Water Surface Surveillance Craft</b> HGS Hikkaduwa, TADBP Thissarachchi, KMPK Senarathne, DNT Karunarathne, P Danthararyana, BADR Balachandra, UVPS Perera, TV Induruwage, and BMJC Balasuriya
1440 – 1450 Hrs	Summing up by the Session Chair
1450 – 1500 Hrs	Awards Ceremony



1500 – 1530 Hrs

Refreshments

## ENGINEERING

### Technical Session IV

Venue: FOE 6-1, 6<sup>th</sup> Floor, Faculty of Engineering

<b>Chairperson</b>	<b>Prof. Jeyasingam Jeyasugiththan</b> Professor, Department of Nuclear Science, Faculty of Science, University of Colombo, Sri Lanka
1530 – 1535 Hrs	Introduction of the Chair
1535 – 1540 Hrs	Preliminary Remarks by the Chair
1540 – 1555 Hrs	<b>Analyzing the Difference in Joint Angular Kinematics between Professional and Amateur Tennis Players</b> AS Rajendran, KNS Silva, and LT Rupasingha
1555 – 1610 Hrs	<b>Comprehensive Review on the use of Arterial Spin Labelling MRI for localization of the Epileptogenic Zone in Drug-Resistant Epilepsy</b> BMAT Perera, PPCR Karunasekara, and MSS Fernando
1610 – 1625 Hrs	<b>Biomechanical Analysis of Basketball Shooting Techniques: A Motion Capture Study of Joint Angles and Movement Patterns</b> KMRY Samarakoon, SHVK Kumaranayake, SMVM Senanayake and PDK Dewanmini
1625 – 1640 Hrs	<b>Advanced Nanotechnology for Intracranial Pressure Monitoring: A Comprehensive Review of Carbon Nanotube Based ICP Pressure Sensors</b> ARA Rahman and WLPK Wijesinghe
1640 – 1650 Hrs	Summing up by the Session Chair
1650 – 1700 Hrs	Awards Ceremony
1700 – 1730 Hrs	Refreshments

## COMPUTING

Technical Session I - Smart Applications for Rational Decision Making

Venue: LT 02, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Prof. Noel Fernando</b> Professor, Department of Information Systems Engineering, University of Colombo School of Computing, Sri Lanka
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0855 Hrs	<b>Autoencoder Empowered EEG Data Classification: A Self-Supervised Learning Approach</b> AHMTC Bakmeedeniya, WBMSC Wijayakoon, UWHK Ukgoda
0855 – 0910 Hrs	<b>Prediction of Coronary Artery Disease Using Artificial Neural Network</b> GK Dhananjaya , JACA Perera , GRA Senarathne, JADI Priyashan , B Hettige
0910 – 0925 Hrs	<b>Harmonizing Business Process Re-Engineering, Industry 4.0 and Artificial Intelligence: Towards Sophisticated and Dynamic Business Processes</b> HT Gunasekara, SA Nanayakkara, and DHS Santhushni
0925 – 0940 Hrs	<b>An Ensemble Machine Learning Approach for Categorizing English Sentences Based on their Emotional Tone</b> DBY Perera, RAHM Rupasingha
0940 – 0955 Hrs	<b>Tense Identification in English Sentences Using an Ensemble Machine Learning Approach</b> IDTD Rathnayaka and RAHM Rupasingha
0955 – 1010 Hrs	<b>Ethical Landscape of Artificial Intelligence: A Review</b> HCT Gamage, PRD Wijesinghe
1010 – 1020 Hrs	Summing up by the Session Chair
1020 – 1030 Hrs	Refreshments

## COMPUTING

Technical Session II - From Data to Design: The Impact of Advancements in AI for Innovation

Venue: LT2, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Dr. A.D. Dharmawansa</b> Senior Lecturer, Department of Industrial Management, Faculty of Applied Sciences, Wayamba University of Sri Lanka.
1030 – 1035 Hrs	Introduction of the Chair
1035 – 1040 Hrs	Preliminary Remarks by the Chair
1040 – 1055 Hrs	<b>Classification of Research Papers Based on Their Subject Field Using an Ensemble Machine Learning Approach</b> GKE Dilushika, RAHM Rupasingha
1055 – 1110 Hrs	<b>Detecting AI-generated and Human-written Documents Using an Ensemble Learning Approach</b> HMDT Herath, RAHM Rupasingha
1110 – 1125 Hrs	<b>A Comprehensive Review of Mobile Personal Assistant (Chatbot) for Depression Patients Using Emotion Recognition : A Large Language Model</b> AWTD Sarathchandra, BVKI Vidanage
1125 – 1140 Hrs	<b>TanzaNote: First Step Towards Classification and Notation Generation for Sri Lankan Traditional Instruments, Gataberaya and Flute</b> RDP Gamage, B Hettige
1140 – 1155 Hrs	<b>Rail Track Surface Defects Detection Using CNN</b> RMLV Karunarathna, B Mayurathan
1155 – 1210 Hrs	<b>Deep Learning for Early Skin Cancer Detection: A Convolutional Neural Network Approach</b> NDEA Perera, SMM Lakmali , KC Yakupitiya, BVKI Vidanage
1210 – 1220 Hrs	Summing up by the Session Chair
1220 – 1300 Hrs	Lunch



## COMPUTING

Technical Session III - Harnessing AI for Revolutionizing Smart Solutions

Venue: LT2, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairpersons</b>	<b>Dr. N. Pratheesh</b> Senior Lecturer in Computer Science , Department of Multidisciplinary Studies , Faculty of Technology , Eastern University, Sri Lanka
1300 – 1305 Hrs	Introduction of the Chair
1305 – 1310 Hrs	Preliminary Remarks by the Chair
1310 – 1325 Hrs	<b>A Comparative Analysis of Dog Emotion Prediction Using Full-Body and Facial Images with Transfer Learning</b> DP Konaduwege, KD Sandaruwan
1325 – 1340 Hrs	<b>NutriMom: Image Processing Based Mobile Application for Empowering Pregnant Mothers in Sri Lanka with Health and Convenience</b> KAD De Alwis, DU Vidanagama
1340 – 1355 Hrs	<b>Artificial Intelligence-Powered Course Recommendation System for Private Education</b> HS Fernando, KC Yakupitiya
1355 – 1410 Hrs	<b>Multi-Agent Solution for Autonomous Home Automation</b> EMNMR Edirisinghe, HNM Fernando, B Hettige
1410 – 1425 Hrs	<b>Artificial Intelligence Based Mobile Application for Interior Design in Sri Lanka</b> DTN Dahanayake, WAAM Wanniarachchi
1425 – 1440 Hrs	<b>Navigating Future Careers: Design, Implementation, and Evaluation of an AI-driven Career Guidance System for IT Professionals in Sri Lanka</b> GN Induruwege, AMR Adithya, DU Vidanagama
1440 – 1450 Hrs	Summing up by the Session Chair



1450 – 1500 Hrs Refreshments

## COMPUTING

Technical Session IV - AI Powered Solutions for Tomorrow's Challenges

Venue: LT2, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairpersons</b>	<b>Dr. S. Ahangama</b> Senior Lecturer, Faculty of Information Technology, Department of Information Technology, University of Moratuwa.
1500 – 1505 Hrs	Introduction of the Chair
1505 – 1510 Hrs	Preliminary Remarks by the Chair
1510 – 1525 Hrs	<b>Optimizing Task Assignment for Teams of Robots Using Ant Colony Optimization</b> WGCPB Wattegama, K Galappaththi
1525 – 1540 Hrs	<b>Shifting Paradigms in Stakeholder Identification: Integrating Enhanced Use Case Tool with Automated Analysis</b> RMM Pradeep
1540 – 1555 Hrs	<b>Real-Time Monitoring of Gas Station Underground Fuel Tanks Using IoT Technology</b> KGJC Edirisinghe, ASM Amarasinghe, HANB Heelibathdeniya
1555 – 1610 Hrs	<b>Intelligent Gaming Robot: Robotic Solution for the Traditional Sri Lankan Board Game 'Nerenchi'</b> MKMGPA Jayasinghe, RGUI Meththananda, B Hettige
1610 – 1625 Hrs	<b>Enhancing Physical Rehabilitation through Gaming and Gaming NPCs: A Novel Approach</b> PSPC Silva , BVKI Vidanage
1625 – 1635 Hrs	Summing up by the Session Chair
1625 – 1700 Hrs	Refreshments

## LAW

Technical Session I: Emerging New Technologies and Public Law: Need for an Innovative Approach

Venue: Board Room, Main Building

<b>Chairperson</b>	<b>Shanaka Wijesinghe PC</b> Additional Solicitor General, Attorney General's Department, Sri Lanka
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0850 Hrs	<b>Judgement Day 2.0: Can AI Judges Turn Sri Lanka's Legal Leap into a Futuristic Fairytale of High-Tech Justice?</b> SL De Silva, PAGD Wickramasinghe
0850 – 0900 Hrs	<b>Breaking the Code; The Role of Legal Reforms in Addressing the Influence of Digital Media on the Juvenile Delinquency in Sri Lanka</b> TS Jayathilaka, LAA Jayaratne, AGCC Nethmini
0900 – 0910 Hrs	<b>Comparative Legal Analysis of Liability Frameworks in Autonomous Vehicle-Accidents in California and Japan</b> CAN Bopage, GAD Bhagya, MGBL Senarathne, DKKY Dharmakeerthi
0910 – 0920 Hrs	<b>Harnessing AI Tools for Predictive Analytics in Litigation: Transforming Legal Strategies and Outcomes</b> Dr. Aneesh V. Pillai, CG Dasanayaka
0920 – 0940 Hrs	Question and Answer session
0940 – 0945 Hrs	Summing up by the Session Chair
0945 – 1015 Hrs	Refreshments

## LAW

### Technical Session II: Evolving Trends in Business Law in Response to Novel Technologies

Venue: Board Room, Main Building

#### Chairperson

**Dr. Sunil Abeyaratne**

Chairman, ICT Law Committee of LAWASIA and ICT Law Committee of the Bar Association of Sri Lanka

1015- 1020 Hrs	Introduction of the Chair
1020 - 1025 Hrs	Preliminary Remarks by the Chair
1025 - 1035 Hrs	<b>Liability or liberty: An Assessment of Air Carrier's Liability under the Montreal Convention to Passengers in Case of an Accident</b> A.K.S. De Silva
1035 - 1045 Hrs	<b>Developing Trends in International Intellectual Property Laws; with regard to Copyright Infringement in Generative AI, and Training of Artificial Intelligence</b> BAP Wimalarathna
1045 - 1055 Hrs	<b>Financial Fraud to Human Trafficking: Legal Reclassification and Enforcement Strategies in Deceptive Recruitment and Abandonment</b> AABDP Abewardhana, R N G Vithanage, KTAM Perera
1055 - 1105 Hrs	<b>Corporate Fraudsters and Victimized Sri Lankan Companies: Lessons from Indian Company Law</b> SMAG Senevirathne
1105 - 1115 Hrs	<b>Improving Corporate Governance Law in Sri Lanka: A Comparative Analysis with South Africa</b> MPA Gamage
1115 - 1135 Hrs	Question and Answer session
1135 - 1140 Hrs	Summing up by the Session Chair
1140 - 1330 Hrs	Lunch

## LAW

### Technical Sessions III: Current Shreds in International Jurisprudence in the Light of New Technologies

Venue: Board Room, Main Building

#### Chairperson

**Ms. Tilani Silva**

Deputy Legal Advisor, Ministry of Foreign Affairs

1330 – 1335 Hrs	Introduction of the Chair
1335 – 1340 Hrs	Preliminary Remarks by the Chair
1340 – 1350 Hrs	<b>Beyond Section 365: Navigating LGBTQ+ Rights in Sri Lanka's Legal Landscape</b> ME Kumarasingha
1350 – 1400 Hrs	<b>Deepfakes in Warfare: A Novel Challenge to International Humanitarian Law</b> HM Dantanarayana
1400 – 1410 Hrs	<b>Use of UN Treaty Bodies Comments and Recommendations in Judicial Decision Making: A Critical Review of the Sri Lankan Experience</b> A Thilakarathna, T Galappaththige
1410 – 1420 Hrs	<b>From Nuclear Weapons to Artificial Intelligence (AI) Based Weapons in Armed Conflicts, A Comparative Analysis of Development of Laws on Nuclear Weapons and AI-Based Weapons in Armed Conflicts</b> H Lahiru, I Perera
1420 – 1440 Hrs	Question and Answer Session
1440 – 1445 Hrs	Summing up by the Session Chair
1445 – 1530 Hrs	Refreshments

## LAW

### Technical Sessions IV: Jurisprudential Transformation for Synergy with Artificial Intelligence

Venue: Board Room, Main Building

<b>Chairperson</b>	<b>Sumathi Dharmawardena PC</b> Additional Solicitor General, Attorney General's Department, Sri Lanka
1530 – 1535 Hrs	Introduction of the Chair
1535 – 1540 Hrs	Preliminary Remarks by the Chair
1540 – 1550 Hrs	<b>Artificial Intelligence and International Arbitration: The Necessity of Human Oversight to Ensure Fairness and Efficiency</b> KAIM Kandapolaarachchi, SA Wesal
1550 – 1600 Hrs	<b>The Impact of the Right to Be Forgotten on AI-driven Data Retention Practices in Sri Lankan Context: A Comparative Study of Regulatory Approaches and Compliance</b> PTD Jinasoma, WPU Mayantha, SM Jayakody
1600 – 1610 Hrs	<b>A Comparative Analysis of Legal Frameworks for ensuring Quality and Accuracy of AI – Generated Data: A Study of USA and Sri Lanka</b> AADDs Parindya
1610 – 1620 Hrs	<b>An Analysis on the Impact of Artificial Intelligence on Future Legal Education</b> RM Jayanath Ranatunga
1620 – 1630 Hrs	Question and Answer Session
1630 – 1640 Hrs	Summing up by the Session Chair

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session I: Management and Finance

Venue: 4 – 2 New FMSH Building

<b>Chairperson</b>	<b>Dr. (Mrs) RMNT Sirisoma</b> Senior Lecturer Faculty of Management, Social Sciences and Humanities, General Sir John Kotelawala Defence University
08 00 – 08 05 hrs	Introduction of the Chair
08 05 – 08 10 hrs	Preliminary Remarks by the Chair
08 10 – 08 20 hrs	<b>Optimizing Cold Chain Management in Sri Lanka's Pharmaceutical Industry: A Fuzzy Logic Approach to Enhancing Transportation and Storage</b> TD Sooriyaarachchi, DR Perera
08 20 – 08 30 hrs	<b>ML-Powered Application for Predicting Flight Delays: Insights from Sri Lankan Airlines</b> GVY Anuththara, DR Perera
08 30 – 08 40 hrs	<b>Predictive Model to Identify the Productivity of Colombo Port Based on Ship Movement</b> CH Liyanaarachchi
08 40 – 08 50 hrs	<b>Enhancing Port Competitiveness through Digitalization and Sustainability Initiatives: The Case of Port of Colombo</b> S.A.C.P. Subasinghe, W.W.A.S. Fernando
08 50 – 09 20 hrs	Question and Answer Session
09 20 – 09 30 hrs	Summing up by the Session Chair
09 30 – 10 00 hrs	Refreshments



## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session II: Management and Finance

Venue: 4 – 2 New FMSH Building

<b>Chairperson</b>	<b>Mrs. ID Wattuhewa</b> Senior Lecturer Faculty of Management, Social Sciences and Humanities, General Sir John Kotelawala Defence University
10 00 – 10 05 hrs	Introduction of the Chair
10 05 – 10 10 hrs	Preliminary Remarks by the Chair
10 10 – 10 20 hrs	<b>Leveraging Artificial Intelligence for Human Resource Management in Sri Lanka Navy: A Bibliometric Analysis</b> HK Dassanaiké, YA Iddagoda, and H Dissanayake
10 20 – 10 30 hrs	<b>Balancing Academic and Professional Responsibilities: An Exploration of Stress Factors Among Full-Time Working Undergraduates at General Sir John Kotelawala Defence University, Sri Lanka</b> AHE De Silva, L Liyanage
10 30 – 10 40 hrs	<b>Exploration of the Problems Faced by Cargo Operations in Sri Lankan Airlines</b> GKG Balasuriya, LPDAS Pathirage, and NT Sirisoma
10 40 – 10 50 hrs	<b>Assessing the Perceived Logistics and Spatial Feasibility of Establishing an Export Processing Zone in Trincomalee, Sri Lanka</b> S Lakshan, MKN Dulanjalee, MSF Shazika and AHS Sharic
10 50 – 11 00 hrs	<b>Enhancing Educational Outcomes: The Role of Instructional Leadership in Education Management</b> AS Thennakoon
11 00 – 11 25 hrs	Question and Answer Session
11 25 – 11 30 hrs	Summing up by the Session Chair

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session III : Management and Finance

Venue: 4 – 2 New FMSH Building

<b>Chairperson</b>	<b>Dr. JMW Premarathne</b> Senior Lecturer Faculty of Management, Social Sciences and Humanities, General Sir John Kotelawala Defence University
12 00 – 12 05 hrs	Introduction of the Chair
12 05 – 12 10 hrs	Preliminary Remarks by the Chair
12 10 – 12 20 hrs	<b>Comprehensive Analysis of Global Crude Oil Market Dynamics: Leveraging Hierarchical Clustering to Explore Country-Level Patterns and Strategic Decision-Making Trend</b> RSP Ranasinghe, AHDB De Silva, and HSC De Silva
12 20 – 12 30 hrs	<b>Audit Committee Characteristics and Firm Performance Measured by Return on Assets: A Study on Listed Food, Beverage, and Tobacco Companies in Sri Lanka</b> Jethusan.J, Premi.P
12 30 – 12 40 hrs	<b>Exploratory Study on How Short Video Platforms Affect Gen Z's Purchasing Intention for Electronic Devices in Colombo District</b> A.W.H.M.D.T Bandara, MMLC Gunathilake
12 40 – 12 50 hrs	<b>Adoption of Digital Marketing by Micro-Entrepreneurs in Gampaha District, Sri Lanka</b> MAKR Mudannayaka, MMLC Gunathilaka
12 50 – 13 00 hrs	<b>Adoption and Usage of Social Media as a Marketing Tool for Long-Distance Bus Operations in Sri Lanka</b> K T Vimukthika, T M Pathirana
13 00 – 13 10 hrs	<b>Challenges faced by Farmers in Digitalising the Organic Vegetables and Fruits Supply Chain in Sri Lanka</b> GSH Costa, PB Kulatarage, UVB Rajapaksha, KR Ambepitiya

13 10 – 13 20 hrs	<b>Productivity of Army Vocational Training Prior to the Retirement of Other Ranks on Effective Employment in the Civil Society after Retirement</b> YGTM Ambakumbura, NK Weerasinghe, and PADSW Ponnamperuma
1320 – 1345 hrs	Question & Answer Session
1345 – 1355 hrs	Summing up by the Session Chair
1400- 1500 hrs	Lunch

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session I: Social Sciences

Venue: 6-2, 6<sup>th</sup> Floor, FMSH building

<b>Chairperson</b>	<b>Dr. Susantha Goonatilake</b> Former Professor of Anthropology, University of Exeter & Columbia University
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0850 Hrs	<b>Impact of Long-Term Sports Participation in Athletic Running Events Performance at Sports Schools in Sri Lanka</b> RDAM Somarathna
0850 – 0900 Hrs	<b>Exploring the Migration Intentions and Motivations among Sri Lankan Youth: A Sentiment Analysis perspective</b> DMG Amasha, WLKD Perera, PLTA Gunarathne and SD Udugamasooriya
0900– 0910 Hrs	<b>A Medical Anthropology Study on Challenges of Traditional Medical Practitioners in Jaffna Tamil Community</b> G Sarththiga
0910 – 0920 Hrs	<b>Machine Learning-Based Assessment of Post-Monsoon Groundwater Quality for Sustainable Agricultural Practices.</b> UR Weerasinghe, MC Wijayasinghe, BRS Mendis and CS Mallawaarachchi
0920 – 0930 Hrs	<b>Modelling Night Occupancy of Domestic Tourists in the Colombo District of Sri Lanka</b> KMUB Konarasinghe
0930 – 0950 Hrs	Question & Answer Session
0950 – 1000 Hrs	Summing up by the Session Chair
1000- 1015 Hrs	Refreshments

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session II: Social Sciences

Venue: 6-2, 6<sup>th</sup> Floor, FMSH building

<b>Chairperson</b>	<b>Prof P. Hewage</b> Senior Professor in Geography, Former Dean, Faculty of Humanities & Social Sciences, University of Ruhuna, Former Head of Department of Geography, University of Ruhuna.
1030 – 1035 Hrs	Introduction of the Chair
1035 – 1040 Hrs	Preliminary Remarks by the Chair
1040 – 1050 Hrs	<b>An Assessment of Women’s Representation in Planning and Decision-Making at the Executive level</b> RBPM Rathnayake
1050 – 1100 Hrs	<b>AI and Man: A Philosophical Analysis on Two Noninterchangeable Ontologies.</b> JDA Kumara
1100 – 1110 Hrs	<b>A Content Analysis of Elon Musk’s Interview about Neuralink and Its Role in Merging Humans with AI</b> SAKM Subhasingha
1110 – 1120 Hrs	<b>Effect of Social Media Usage on Behavioural Changes in Adolescents Attending to the District General Hospital Hambantota</b> RI Priyanjali, HAR Ahinsa, SGC Madushani, KN Pushpakanthi, HRD Lakshani, HMCRK Thilakarathna, KTG Kanchana.
1120 – 1130 Hrs	<b>Mental Health Awareness and Coping Mechanisms Among Engineering Undergraduates at General Sir John Kotelawala Defence University</b> KVND Vithanage, ADU Dewmini, and HMDK Thilakarathna
1130– 1150 Hrs	Question & Answer Sessions
1150 – 1200 Hrs	Summing up by the Session Chair

1200 – 1300 Hrs

Lunch

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session I: TESOL

Venue: 5 – 1, 05<sup>th</sup> floor New FMSH Building

<b>Chairperson</b>	<b>Dr. (Mrs.) MTN Wijetunge</b> Senior Lecturer Head of the Department Department of Languages Faculty of Management, Social Sciences and Humanities, General Sir John Kotelawala Defence University
0830 – 0835 hrs	Introduction of the Chair
0835 – 0840 hrs	Preliminary Remarks by the Chair
0840 – 0850 hrs	<b>The Impact of Teaching Speaking as a Skill for Grade 3 English as a Second Language (ESL) Learners in Sri Lanka</b> M Faiz, GDK Dhananjaya, IN Palihakkara and HMN Bandara
0850 – 0900 hrs	<b>The Effectiveness of Small Group Discussions in Teaching Speaking as a Skill for Grade 6 English as a Second Language Learners in Sri Lanka</b> M Faiz and HMN Bandara
0900 – 0910 hrs	<b>Non-linguistic factors affecting the speaking skills of grade seven and grade eight English as a Second Language learners in Nittambuwa, Gampaha District, Sri Lanka</b> HK Thumpalage and RSHN Wimalarathna
0910 – 0920 hrs	<b>Writing Accuracy through Cooperative Learning: An Action Research Approach</b> HBH Pravini
0920 – 0930 hrs	<b>The Use of Code-Switching as a Teaching Tool at the Tertiary Level: A Case Study of English Lecturers in the Department of English Language Teaching at the University of Kelaniya</b> PGRY Gamage

0930 – 0940 hrs	<b>L2 learners’ difficulties in listening comprehension; Leaners’ perspectives among university undergraduate students</b> WKDO Walpita
0940 – 1010 hrs	Question and Answer Session
1010 – 1020 hrs	Summing up by the Session Chair
1020 – 1040 hrs	Refreshments



## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session II: Data Science

Venue: 4 – 1, 04<sup>th</sup> floor New FMSH Building

<b>Chairperson</b>	<b>Dr. Samantha Mathara Arachchi</b> Senior Lecturer University of Colombo School of Computing
08 30 – 08 35 hrs	Introduction of the Chair
08 35 – 08 40 hrs	Preliminary Remarks by the Chair
08 40 – 08 50 hrs	<b>Bridging the Gap: Data-Driven Techniques to improve Tax collection efficiency</b> DTAN Jayasinghe, MANS Machado, APK Lakshan, and SMMCB Samarakoon
08 50 – 09 00 hrs	<b>Predicting Water Quality Conditions in Wimmera Catchment, Australia: A Machine Learning Approach Using Environmental Parameters</b> MC Wijayasinghe, KKDAL Kannangara, SMMCB Samarakoon, and CS Mallawaarachchi
09 00 – 09 10 hrs	<b>A Comprehensive Analysis of the Surge in Lithium Battery-Related Fires with leveraging machine learning</b> BRS Mendis, UR Weerasinghe, APK Lakshan and SD Udugamasooriya
09 10 – 09 20 hrs	<b>Analyzing the Socio-Economic Determinants of Sri Lankan Migration Patterns: A Data Mining Approach</b> BSM Dayaratne, KEU Kankanamge, DHHK Peiris and BHCA Kaveeshwara
09 20 – 09 30 hrs	<b>Predictive Modeling of Obesity Trends Using Machine Learning Techniques</b> P. Laksia
09 30 – 09 50 hrs	Question and Answer Session
09 50 – 10 00 hrs	Summing up by the Session Chair



10 30 – 11 00 hrs

Refreshments

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session III : TESOL

Venue: 5-2, 05<sup>th</sup> floor, New FMSH Building

<b>Chairperson</b>	<b>Prof. HDBN Indrarathne</b> Professor in English Department of Languages Faculty of Management, Social Sciences and Humanities, General Sir John Kotelawala Defence University
08 30 – 08 35 hrs	Introduction of the Chair
08 35 – 08 40 hrs	Preliminary Remarks by the Chair
08 40 – 08 50 hrs	<b>The Impact of ChatGPT on Vocabulary Development in Written Proficiency Among Sri Lankan Tertiary-Level ESL Learners</b> NP Wickramage, DGK Amunugama, EMAN Ekanayake, NN Welgama and DU Wickramasinghe
08 50 – 09 00 hrs	<b>Exploring Morphological Variations in Sinhala Songs with Embedded English Lyrics</b> MHS Samarasinghe and WRIU Nilaweera
09 00 – 09 10 hrs	<b>The relationship between language and other modalities such as eye contact, body gestures facial expressions and context in communication in a bilingual classroom</b> KJAVO Jayakody
09 10 – 09 20 hrs	<b>Corpus-based Study of Linking Words used in Academic Journal Articles in ELT Journal and TESOL Quarterly</b> GK Nayanathara
09 20 – 09 30 hrs	<b>Perceptions of using AI powered language applications for self-studying English</b> MA Zumla, KWCKDM Karunarathna, BALT Basnayake and DMSD Dissanayake

09 30 – 09 40 hrs	<b>An Investigation into Language Assessment Literacy among ELT Professionals in Sri Lanka</b> DAAKL Dassanayake
09 40 – 10 10 hrs	Question and Answer Session
10 10 – 10 20 hrs	Summing up by the Session Chair
10 20 hrs – 10 50 hrs	Refreshments

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session IV: Data Science

Venue: 4 – 1, 04<sup>th</sup> floor, New FMSH Building

<b>Chairperson</b>	<b>Dr DGND Jayarathna</b> Head of the Department Department of Scientific Computing University of Sri Jayawardenapura
10 50 – 10 55 hrs	Introduction of the Chair
10 55 – 11 00 hrs	Preliminary Remarks by the Chair
11 00 – 11 10 hrs	<b>Clustering Analysis of Performance Differences Between Veteran and Rookie Basketball Players.</b> JKDMYY Jayanetti, MBF Amna, HTSH Samadhi and KGT Randika
11 10 – 11 20 hrs	<b>Assess the Health Impacts of Repeatedly Heated Cooking Oil Consumption Using AI Technology</b> MM Jayasinghe , LAP Thasanya, P Laksia and TV Induruwage
11 20 – 11 30 hrs	<b>Comparative Analysis of Machine Learning Models for the Precision of Dengue Severity Prediction</b> P. Miloshan, LNNA De Silva, MU Sathyanjalee, HWJ Pamoda
11 30 – 11 40 hrs	<b>Do Data Science Degrees in Sri Lanka Fullfil the Needs of the Job Market?</b> BCT Wickramasinghe, WWDP Fernando, WHS Amaya, WBR Munasinghe, and Bimali Indrarathne
11 40 – 12 10 hrs	Question and Answer Session
12 10 – 12 20 hrs	Summing up by the Session Chair

## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

Technical Session V: TESOL

Venue: 5 – 1, 05<sup>th</sup> floor New FMSH Building

<b>Chairperson</b>	<b>Dr Lesley Dick</b> Senior Lecturer Department of Languages Faculty of Management, Social Sciences and Humanities, General Sir John Kotelawala Defence University
10 50 – 10 55 hrs	Introduction of the Chair
10 55 – 11 00 hrs	Preliminary Remarks by the Chair
11 00 – 11 10 hrs	<b>The Importance of Using Artificial Intelligence in Teaching Spoken English in Sri Lanka: A Study Based on Duolingo</b> BGYR Uyangoda, ACI Werellagama, and MLYN Perera
11 10 – 11 20 hrs	<b>Teacher Perspectives on Different Englishes Used in Sri Lankan Classrooms</b> RATP Rajapaksha
11 20 – 11 30 hrs	<b>FACTORS INFLUENCING THE EFFECTIVENESS OF ENGLISH MEDIUM EDUCATION IN GOVERNMENT SCHOOLS (GRADE 01 - 05) IN COLOMBO DISTRICT</b> JVMS Jayathilake and T Wijetunge
11 30 – 11 40 hrs	<b>The Effect of Using Audio Visual Materials with Subtitles on Second Language Vocabulary Learning</b> KGSRK Jayawardane
11 40 – 11 50 hrs	<b>An Investigation into Phonological Awareness and ESL Instructional Practices Provided to Grade 4 ESL Students: A Study Based on a Selected ESL Tuition Class in Galle District</b> KPDK Sandakirini
11 50 – 12 20 hrs	Question and Answer Session



12 20 – 12 30 hrs	Summing up by the Session Chair
12 30 – 13 30 hrs	Lunch

## TECHNOLOGY

Theme: Sustainable and Resilient Technological Systems in the Era of AI

<b>Chairperson</b>	<b>Dr. HRWP Gunathilake</b> Department of Computer Science, Faculty of Computing General Sir John Kotelawala Defence University
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0855 Hrs	<b>Integrating Sentiment Analysis and Predictive Modelling for Stock Forecasting: A Case Study on Sentiment-Sensitive Industries in the Colombo Stock Exchange.</b> MASH Perera, GWGIU Munirathna, WUD Perera, MT Dewmika, HWRS De Silva, and DU Vidanagama
0855 – 0910 Hrs	<b>Improving Cyber Security Education through Gamification in Sri Lanka</b> AVNL Rajakaruna , Darwin Alfred , Prof. R Abeysekera
0910 – 0925 Hrs	<b>Innovating Sri Lankan School Management: A Design Science Research Approach to Developing an Automated Web-Based School Management System</b> LDTT De Silva, N Wedasinghe
0925 – 0940 Hrs	<b>Revolutionizing Mobility: Exploring the Integration of Ridesharing and Parcel Delivery Applications</b> B K T Pabasara, N. Wedasinghe
0940 – 0955 Hrs	<b>Differences in Learning Environment: The Effectiveness of online Learning platforms in Higher Education</b> D N Gamanayake, R Laveena
0955 – 1010 Hrs	Summing up by the Session Chair



## TECHNOLOGY

Theme: Sustainable and Resilient Technological Systems in the Era of AI

<b>Chairperson</b>	<b>Prof. KB Jayasekara</b> Department of Medical Laboratory Sciences Faculty of Allied Health Sciences General Sir John Kotelawala Defence University
1030 – 1035 Hrs	Introduction of the Chair
1035 – 1040 Hrs	Preliminary Remarks by the Chair
1040 – 1055 Hrs	<b>Eco-Friendly Innovation: Photocatalytic Degradation of IC-50 Orange Dye with Banana Flower ZnO Nano particles</b> V. Gamage, G. Thiripuranathar, U. Nishshanka, N. Priyantha, M.D. Goonatilleke, B.S. Guiton, and S. Jayanetti
1055 – 1110 Hrs	<b>Development of a Machine Learning-Based Methodology for Accurate Staging of Lumbar Intervertebral Disc Degeneration using T2-Weighted Magnetic Resonance Imaging (MRI) and Radiomics Features</b> Denuwanthi Gayanthika, Duminda Satharasinghe, Buddhika Shrimal, A.S.Pallewatte, and J Jeyasugiththan
1110 – 1125 Hrs	<b>Development and Characterization of a Cinnamon-based cereal using low-pressure cold extrusion for hyperglycaemia management</b> P.G.U. Chathuranga, P.H.U.W. De Silva, and B.M. Jayawardena
1125 – 1140 Hrs	<b>Development Of Low-Pressure Extraction Technique To Extract Plant Secondary Metabolites</b> M.S.S.W.R.A.M.I.N. Rajaguru, B.M. Jayawardena
1140 – 1155 Hrs	<b>Harnessing wave energy for sustainable and resilient power generation in Sri Lanka: A feasibility study</b> MPD Manohara, MGND Weerarathna , and SHD Liyanage
1155 – 1210 Hrs	<b>Toxicological effects of Flueggea leucopyrus Extracts on Wistar rats: Impact of Different Doses on Physiological Parameters and Organ function</b> US Kulasekara, and KMGP Premadasa

1210 – 1215 Hrs	Summing up by the Session Chair
1215 – 1330 Hrs	Evaluation of Poster Presentations
1330 – 1430 Hrs	Lunch

## CRIMINAL JUSTICE

### Technical Session I

Venue: LT01, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Mr Madhawa Tennakoon</b> Deputy Solicitor General, Attorney General's Department, Sri Lanka
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0855 Hrs	<b>Assessing Transparency, Fairness, and Accountability in Artificial Intelligence-Based Systems: Examining the Implications of AI Algorithms and Machine Learning Models in Legal Decision-Making</b> GR Ukwatte, BN Perera and TV Samaranayake
0855 – 0910 Hrs	<b>Technological Advances in Anti Trafficking Efforts: The role of Artificial Intelligence in Enhancing Criminal Justice Responses</b> AABDP Abewardhana, KTAM Perera and RNG Vithanage
0910 – 0925 Hrs	<b>Criminal Justice in the Digital Age: Role of Artificial Intelligence in Raising Awareness About Human Trafficking</b> AABDP Abewardhana, RNG Vithanage and KTAM Perera
0925 – 0940 Hrs	<b>Enhancing Criminological Theories with Artificial Intelligence: A New Approach to Combat Human Trafficking</b> AABDP Abewardhana, KTAM Perera and RNG Vithanage
0940 – 1000 Hrs	Summing up by the Session Chair
1000 – 1030 Hrs	Refreshments

## CRIMINAL JUSTICE

### Technical Session II

Venue: LT01, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Dehsabandu Prof. MADSJS Niriella</b> Professor in Law, Faculty of Law, University of Colombo, Sri Lanka
1030 – 1035 Hrs	Introduction of the Chair
1035 – 1040 Hrs	Preliminary Remarks by the Chair
1040 – 1055 Hrs	<b>Criminal Proceedings and Moral Discipline of Theravada Monks: A Comparative Case Study between Thailand and Sri Lanka (Online)</b> T Wongyai, N Nachan
1055 – 1110 Hrs	<b>Fear of Crime in Colombo's Inner-City Settlements: Exploring Fear Adaptation and Normalization</b> N Ranaweera, NT Rugkhapan and I Rado
1110 – 1125 Hrs	<b>A Study on The Legal, Rehabilitation and Socio- Economic Dimensions of Post-Punishment situations of Drug Traffickers in Sri Lanka: Special Reference to Moratumulla police area</b> IS Edirisooriya
1125 – 1140 Hrs	<b>Evidentiary Value of Identification Parade in Sri Lankan Law and Right to a Fair Hearing; An Exploration of Current Trends in Criminal Trials</b> TC Kathriarachchi1, R Singappuli
1140 – 1200 Hrs	Summing up by the Session Chair
1200 – 1300 Hrs	Lunch

## CRIMINAL JUSTICE

### Technical Session III

Venue: LT01, 3<sup>rd</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Dr. Nishara Mendis</b> Director (Research), Bandaranaike Center for International Studies
1300 – 1305 Hrs	Introduction of the Chair
1305 – 1310 Hrs	Preliminary Remarks by the Chair
1310 – 1325 Hrs	<b>Socio – Economic Impact of Cryptocurrency Related Financial Scams in Sri Lanka</b> KAM Chandrasiri, KKDPHS Ranweera and MACL Perera
1325 – 1340 Hrs	<b>Drug Related Masculinity Gang Criminal Behavior Case studies based on Welikada and Mahara prisons</b> IM Liyanage, EADA Edirisinghe
1340 – 1355 Hrs	<b>Uncovering the Drivers of Women Criminal Victimization - A study of Horana Police Division Sri Lanka</b> RPNHR Rajapaksha
1355 – 1410 Hrs	<b>A Sociological Study on the Factors Affecting Drug Addiction Among School Students, with Special Reference to Batapola Police Area</b> GN Kumarathunga
1410 – 1430 Hrs	Summing up by the Session Chair
1430 – 1445 Hrs	Refreshments

## CRIMINAL JUSTICE

### Technical Session IV

Venue: LT01, 3<sup>rd</sup> Floor, Faculty of Medicine

#### Chairpersons

**Hon Priyantha Liyanage**

Hon High Court Judge, Provincial High Court  
Hambantota

1445 – 1450 Hrs

Introduction of the Chair

1450 – 1455 Hrs

Preliminary Remarks by the Chair

1455 – 1510 Hrs

**Effectiveness of Institutional Support Systems on  
Mental Health Among University Lecturers in Sri  
Lanka**

AHN De Zoysa

1510 – 1525 Hrs

**Strengthening Sri Lanka's Anti-Money Laundering and  
Counter-Terrorist Financing Framework: Challenges  
and Opportunities in the Digital Age**

SL Weerasinghe, SMIH Sandanayake

1525 – 1540 Hrs

**Application of Biometric System in Sri Lankan Prison  
System to Identify Inmates**

NDP Thambara

1540 – 1555 Hrs

**Exploring Career Satisfaction Level of Police Officers:  
A Study Focused on Junior Gazetted Police Officers in  
the Western Province.**

H Kithunadi, S Samaradiwakara

1555 – 1615 Hrs

Summing up by the Session Chair

1615 – 1630 Hrs

Refreshments

## BUILT ENVIRONMENT AND SPATIAL SCIENCES

Technical Session I: Architecture

Venue: Main Auditorium, Southern Campus, KDU

<b>Chairperson</b>	<b>Assistant Prof. Jeeva Wijesundara</b> School of Architecture, Sri Lanka Institute of Information Technology
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0850 Hrs	<b>The Impact of the Built Environment on Psychological Well-being of Battle Casualties in Sri Lankan Rehabilitation Centers</b> BAKU Bangama, KDHJ Premarathna
0850 – 0900 Hrs	<b>Potential to Utilize Digital Twin Technology in Conserving Cultural Heritage within the Built Environment of Sri Lanka</b> KSKNJ Kudasinghe, WDBJ Jeewananda
0900 – 0910 Hrs	<b>Application of Ecotourism Guidelines and Standards in Sri Lankan Resorts with Special Reference to Bolgoda Area</b> M Jayasooriya, WAPS Kumara and KNK Pathirana
0910 – 0920 Hrs	<b>Developing Pre-Cast Partition Wall Panels Using Mud-Concrete (MC) Technology</b> HBGK Nayanjith, FR Arooz
0920 – 0940 Hrs	Question and Answer session
0940 – 0950 Hrs	Summing up by the Session Chair
0950 – 1020 Hrs	Refreshments

## BUILT ENVIRONMENT AND SPATIAL SCIENCES

Technical Session II: Quantity Surveying

Venue: Main Auditorium, Southern Campus, KDU

<b>Chairperson</b>	<b>Prof. Anuradha Waidyasekara</b> Faculty of Architecture, Department of Building Economics, University of Moratuwa, Sri Lanka
1020 – 1025 Hrs	Introduction of the Chair
1025 – 1030 Hrs	Preliminary Remarks by the Chair
1030 – 1040 Hrs	<b>Investigating The Challenges of Software Adoption Among Quantity Surveyors in Sri Lanka</b> NVOD Imarshana, WN Kawmudi
1040 – 1050 Hrs	<b>The Impact of Time, Cost, Quality Parameters on Value Engineering Application in Project Management Practices, Referencing to Post-Contract Stage</b> DVH Dodangoda, WN Kawmudi
1050 – 1100 Hrs	<b>Preparedness of Construction Stakeholders for the Adoption of E-Tendering in the Sri Lankan Building Construction Industry for the Public Sector</b> MPY Silva, AARK Amarathunga and AH Lakmal
1100 – 1110 Hrs	<b>A Study on the Applicability of Bim to Reduce Building Services Maintenance Costs of the Hotel Building Projects in Sri Lanka</b> KAPBK Arachchi, IGWR Jayaweera, and AARK Amarathunga
1110 – 1130 Hrs	Question and Answer session
1130 – 1140 Hrs	Summing up by the Session Chair
1140 – 1330 Hrs	Lunch



## BUILT ENVIRONMENT AND SPATIAL SCIENCES

### Technical Session III: Spatial Sciences

Venue: Main Auditorium, Southern Campus, KDU

<b>Chairperson</b>	<b>Dr. T.N. Wickramaarachchi</b> Senior Lecturer, Faculty of Engineering, University of Ruhuna
1330 – 1335 Hrs	Introduction of the Chair
1335 – 1340 Hrs	Preliminary Remarks by the Chair
1340 – 1350 Hrs	<b>Assessment of the Accuracy and Precision of Deviations in Control Points through the Three-Point Resection Method</b> PSHP Kumara, DS Munasinghe, R Jenan
1350 – 1400 Hrs	<b>Investigating the Accuracy of Object Detection in UAV Model Utilizing Neural Networks for Military Applications in Sri Lanka</b> HAGVD Perera, KA Dinusha, KP Manuranga, and RKK Dilrukshi
1400 – 1410 Hrs	<b>An Application of Terrestrial Laser Scanning for the Inventory of Archaeological Monuments for the Use of Architectural Aspects</b> KNNB Kalugama, KP Manuranga, HD Asoka, and AR Rupasinghe
1410 – 1420 Hrs	<b>The Analysis of Existing Land Ownership in Urban Development with Special Reference to Meda-Minuwangoda Grama Niladhari Division</b> KAIS Kuruppu, CP Ranawaka, TGUP Perera, and AC Gunathilaka
1420 – 1440 Hrs	Question and Answer session
1440 – 1450 Hrs	Summing up by the Session Chair
1450 – 1520 Hrs	Refreshments

## BUILT ENVIRONMENT AND SPATIAL SCIENCES

Technical Session IV: Industrial Quality Management

Venue: Main Auditorium, Southern Campus, KDU

<b>Chairperson</b>	<b>Prof. S. T. W. S. Yapa</b> Professor, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura
1520 – 1525 Hrs	Introduction of the Chair
1525 – 1530 Hrs	Preliminary Remarks by the Chair
1530 – 1540 Hrs	<b>Ensuring the Quality of AI Integrated Smart Contracts in Sri Lankan Construction Industry</b> DMNA Gunawardhana, SH Rodrigo, SD Jayasooriya and DB Karunarathna
1540 – 1550 Hrs	<b>Boosting Sri Lanka's Tea Exports: Applying Lean Six Sigma for Enhanced Quality</b> MNS Rajapakshe
1550 – 1600 Hrs	<b>Factors Contributing to Delays in Building Permit Issuance in the Colombo Municipal Council Area: An Administrative Perspective</b> WMRT Wijesuriya, NB Sugathadasa, and WANM Weerasinghe
1600 – 1610 Hrs	<b>Lean Six Sigma Practices in Small and Medium Enterprises: A Bibliometric Analysis</b> WKD Ramese, SD Jayasooriya, AH Lakmal, MLNH Premarathna and MNR Wijetunga
1610 – 1630 Hrs	Question and Answer session
1630 – 1640 Hrs	Summing up by the Session Chair
1640 – 1710 Hrs	Refreshments

## BASIC AND APPLIED SCIENCES

### Technical Session I

Venue: LL3, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Prof. W. Rohini M. de Silva</b> Professor and Head of Department, Department of Chemistry Faculty of Science, University of Colombo, Sri Lanka
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0855 Hrs	<b>Comparative Investigation of Antioxidant Activity of Pectin and Gelatine-based Food Packaging Films incorporated with Green Tea and TiO<sub>2</sub></b> DNA Arachchi, RM de Silva, and KMN de Silva
0855 – 0910 Hrs	<b>Bio-congruent Synthesis and Characterization of Silver Nanoparticles using Aqueous Extracts of Justicia Genus Leaves: Investigation of Cytotoxicity, Antioxidant Capabilities, Antimicrobial Efficacy, Para-nitrophenol Reduction, and Photocatalytic Properties</b> A Premkumar, M Kandiah, and O Perera
0910 – 0925 Hrs	<b>Advanced Formulations of Chitosan/Polyethylene Oxide/Ethyl Cellulose incorporated Desferrioxamine: A Comparison of Cell Permeability, Loading Efficiency and pH-dependant Release Properties</b> AKDVK Wimalasiri, JC Godevithana, K Siriwardana, M Mohotti, TA Pereira, BP Espósito, and P Kalansuriya
0825 – 0940 Hrs	<b>Fitting Column Study Data of Commercial Activated Charcoal for Cu (II) Adsorption in Different Kinetic Models</b> RMHY Rajapaksha, TMM Marso, NP Liyanage, NPW Rathuwadu, and SB Alahakoon
0940 – 0955 Hrs	<b>Development of a Low-cost Paper-based Electroanalytical Device for the Detection of Caffeine</b> RAGM Roshael and MN Kaumal

0955 – 1010 Hrs	<b>Evaluating Influence of Solvents in Graphene Synthesis via Electrochemical Exfoliation: Optimal and Suboptimal Performers</b> ON Malawalaarachchi and NPW Rathuwadu
1010 – 1015 Hrs	Summing up by the Session Chair
1015 – 1030 Hrs	Refreshments

## BASIC AND APPLIED SCIENCES

### Technical Session II

Venue: LL3, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Emeritus Prof. A. M. Abeysekera</b> Emeritus Professor, Department of Chemistry, Faculty of Applied Sciences, University of Sri Jayewardenepura, Sri Lanka
1030 – 1035 Hrs	Introduction of the Chair
1035 – 1040 Hrs	Preliminary Remarks by the Chair
1040 – 1055 Hrs	<b>Optimizing Bioactive Properties of <i>Garcinia queasita</i> and <i>Moringa oleifera</i> Combinations: Phytochemical, Antioxidant, and Anti-inflammatory Insights</b> DM Silva, SB Alahakoon, and AI Kuruppu
1055 – 1110 Hrs	<b>Identification of Chemical Constituents in “Wathupalu” (<i>Mikania cordata</i>) Plant Extracts in Wound Healing using Scratch Assay</b> PGKA Bandara, CD Wijayarathna, CL Goonasekara, and AI Kuruppu
1110 – 1125 Hrs	<b><i>In vitro</i> Antioxidant, Anti-inflammatory and Antacid Activities of the Crude Extract of the Marine Algae <i>Codium</i> sp.</b> HMRP Premadasa, RDP Isurika, PGNH Dharmasiri, YT Senaweera, BLC Samanmali, and KW Samarakoon
1125 – 1140 Hrs	<b>Total Phenolic Content, Total Flavonoid Content and Antioxidant Activity in Whole Fruits of Ceylon Gooseberry (<i>Dovyalis hebecarpa</i>) at Different Maturity Stages</b> ST Warusavithana, AI Kuruppu, JAS Chathurika, RGPT Jayasooriya, and NPW Rathuwadu
1140 – 1155 Hrs	<b>Formulation of an Antioxidant Nutraceutical through the Optimization of Mixing Ratio of Antioxidant-Rich Underutilized Fruits Based on Experimental Mixture Design</b>

LA Wickramaarachchi, AI Kuruppu, P Ranasinghe, HMT  
Herath and KW Samarakoon

1155 – 1210 Hrs

**In vitro Bioactivity of *Curcuma longa***

JK Handagala, N Kumarasinghe, CL Goonasekara, and AI  
Kuruppu

1210 – 1215 Hrs

Summing up by the Session Chair

1215-1315 Hrs

Lunch

## BASIC AND APPLIED SCIENCES

### Technical Sessions III

Venue: LL3, 4th Floor, Faculty of Medicine

<b>Chairpersons</b>	<b>Prof. Chandrika M. Nanayakkara</b> Professor, Department of Plant Sciences, Faculty of Science, University of Colombo, Sri Lanka
1330 – 1335 Hrs	Introduction of the Chair
1335 – 1340 Hrs	Preliminary Remarks by the Chair
1340 – 1355 Hrs	<b>Bio-surfactant Production from Waste Coconut Oil by Marine Isolate of <i>Rhodococcus</i> sp. RH-01</b> A Kulakalaharan and HS Jayasinghearachchi
1355 – 1410 Hrs	<b>The Field Evaluation of the Efficacy of Bio-herbicide Formulations and Recommending the Effective Dosage for Rice</b> BN Hendeniya, PAM Krishanthi, PPDC Perera, HMS Herath, and SADP Senadheera
1410 – 1425 Hrs	<b>Biofortification of Iron in Hydroponically Grown <i>Ipomoea aquatica</i>, <i>Lactuca sativa</i>, and <i>Alternanthera sessilis</i> as a Solution to Alleviate Iron Deficiency in Sri Lanka</b> JK Hewawithana, HU Abhayarathne, GGLL Gunarathne, GAG Nadeera, and GSG Liyanage
1425 – 1440 Hrs	<b>Potential of African Butter (<i>Pentadesma butyracea</i>) Fruit Pulp in Selected Food Product Development</b> RMAR Rathnayaka, NY Jayanath, GD Liyanaarachchi and S Kathirgamanathar
1440 – 1455 Hrs	<b>Bio-surfactant-mediated Surface Conditioning Enhances the Microbial Colonization on Polyethylene Terephthalate (PET) Surface: Implication for the Development of Microbial Enhanced Biodegradation of PET</b> A Kulakalaharan and HS Jayasinghearachchi

- 1455 – 1510 Hrs      **In-silico Structure based Identification of Potential Human Gamma Secretase Inhibitor Ligands**  
MRM Faries, K Senathilake, S Samarakoon, and MFM Mishal
- 1510 – 1515 Hrs      Summing up by the Session Chair
- 1515 – 1530 Hrs      Refreshments



## BASIC AND APPLIED SCIENCES

### Technical Sessions IV

Venue: LL3, 4th Floor, Faculty of Medicine

<b>Chairpersons</b>	<b>Prof. Savithri Wasundara Wimalasekera</b> Professor, Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka
1530 – 1535 Hrs	Introduction of the Chair
1535 – 1540 Hrs	Preliminary Remarks by the Chair
1540 – 1555 Hrs	<b>Kinematic Analysis of the Release Phases in Male Javelin Throwers in Sri Lanka’s National Athletic Pool</b> TSW De Silva, WKDSA Wickramarachchi, and AWS Chandana
1555 – 1610 Hrs	<b>The Respiratory Muscle Strength and Pulmonary Functions in Sabaragamuwa University Athletes: Differences by BMI Classification</b> DMR Dhanapala and WKDSA Wickramarachchi
1610 – 1625 Hrs	<b>Estimation of Pre-practice Hydration Status of National Athletes in Sri Lanka</b> NDJMS Uluwita and WKDSA Wickramarachchi
1625 – 1640 Hrs	<b>The Relationship between Breathing Pattern and Shooting Performance of Elite School-Level Air Pistol Shooters in Sri Lanka</b> WAP Kaveesha, WKDSA Wickramarachchi, HWUS Jayasinghe, and MAS Udayanga
1640 – 1640 Hrs	Summing up by the Session Chair
1645 – 1650 Hrs	Certificate Awarding
1650 -1700 Hrs	Refreshments

## ALLIED HEALTH SCIENCES

Technical Session I- Physiotherapy

Venue: LL1, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Dr Amali C Dalpatadu</b> Senior Lecturer, Department of Clinical Sciences, Faculty of Medicine, General Sir John Kotelawala Defence University, Sri Lanka
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0850 Hrs	<b>Effectiveness of Task Specific Trunk Movement Training Exercise Protocol in Rehabilitation of Infants and Children with High Predictive Value of Cerebral Palsy: A Randomized Control Pilot Study</b> S Sukirthan, SP Senanayake, R Arunachalam, and P Jayawardana
0850 – 0900 Hrs	<b>Knowledge of Cardiopulmonary Resuscitation (CPR) among Physiotherapy Practitioners in Sri Lanka according to the European Resuscitation Council (ERC) Guidelines</b> LSN Peiris, NC Vithanachchige, KMK Maneesha, ADP Perera, and RSP Fernando
0900 – 0910 Hrs	<b>The Relationship between the Foot Progression Angle and Spatiotemporal Parameters of Gait with Fall Injury Risk in People with Knee Osteoarthritis</b> PTH Gunasekara, IGRSN Gunawardhana, PR Gunawardana, MDC Silva, and VS Thuduvage
0910 – 0920 Hrs	<b>Relationship between the Level of Spasticity and Activities of Daily Living During the First Year in Post-Stroke Hemiplegic Patients</b> AWRRRMDTB Atugoda, JKHP Guruge, BDNR Kularathne, and SADCS Senavirathna
0920 – 0930 Hrs	<b>Factors Affecting Exercise Adherence among Children Diagnosed with Duchenne Muscular Dystrophy (DMD) in</b>

**Lady Ridgeway Hospital, Sri Lanka: A Descriptive Cross-sectional Study**

LHG Abhishek, RTMN Fernando, DS Hewagamage, and HPM Dabare

- 0930 – 0940 Hrs      **The Effects of Physiotherapy Management on the Gait of Post-Stroke Ambulatory Hemiparetic Patients in the Neurology Unit at the National Hospital of Sri Lanka (NHSL)**  
FS Naizerdeen, SAK Navamani, and GAD Perera
- 0940 – 0950 Hrs      **The Relationship between Cardiovascular Endurance, Body Mass Index and Quality of Life of the Post-Myocardial Infarction Patients in the Cardiology Clinic at University Hospital Kotelawala Defence University (UHKDU)**  
RACA Rajapakshe, NRNA Nilaweera, DC Sooriyaarachchi, and GAD Perera
- 0950 – 1015 Hrs      Question and Answer Session
- 1015- 1025 Hrs      Summing up by the Session Chair
- 1025- 1045 Hrs      Refreshments

## ALLIED HEALTH SCIENCES

Technical Session (Parallel) I- Nursing

Venue: LL2, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Assoc Prof Paul Linsley</b> Associate Professor, School of Health Sciences, University of East Anglia, United Kingdom
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0850 Hrs	<b>Parents' Perspectives on Lifestyle Changes among Video Game-addicted Teenagers Attending the Child Psychiatric Clinic at Colombo South Teaching Hospital, Sri Lanka</b> DIH Kumari, AL Gunasekara, DCS Silva, DPLIUL Liyanage, KIDF Senanayake, and KGPK Munidasa
0850 – 0900 Hrs	<b>Emotional Intelligence among the Nursing Students of Selected Nursing Educational Institutes in Sri Lanka</b> AMSD Pathiranaage, A Thusthika, and WMSK Wijayasundara
0900 – 0910 Hrs	<b>The Perception and Attitudes toward Abortions among Adolescents in Colombo District, Sri Lanka</b> DPDC Dias, TRK Abeysekara, TDRD Madhusanka, and HMP Herath
0910 – 0920 Hrs	<b>Quality of Life in Patients with Coronary Artery Disease Attending the Cardiology Clinic at the University Hospital, Kotelawala Defence University, Sri Lanka</b> KLDKS Kothalawala, DSH Hettiarachchi, MCS De Silva, CKW Gamage, and RANK Wijesinghe
0920 – 0930 Hrs	<b>Dysmenorrhea and Associated Factors among Adolescents in Galle Zonal Education Area</b> WAJA Weearasekara, and J Lenora
0930 – 0940 Hrs	<b>An Evaluation of Risk for Malnutrition and Its Impact on Quality of Life among the Elderly Population in Battaramulla Area</b>



GS Wedage, PSP Fernando, WD Dilrukshi, MLDSP Gunathilaka,  
TK Gamage, HMCRK Thilakarathna, and SSP Warnakulasuriya

- |                 |                                 |
|-----------------|---------------------------------|
| 0940 – 1000 Hrs | Question and Answer Session     |
| 1000 – 1010 Hrs | Summing up by the Session Chair |
| 1010 – 1045 Hrs | Refreshments                    |

## ALLIED HEALTH SCIENCES

Technical Session II – Medical Laboratory Sciences

Venue: LL1, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Prof DI Uluwaduge</b> Dean, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka
1045 – 1050 Hrs	Introduction of the Chair
1050 – 1055 Hrs	Preliminary Remarks by the Chair
1055 – 1105 Hrs	<b>Evaluation of <i>In-vitro</i> Synergistic Antibacterial Effects between <i>Munronia pinnata</i> (Bin Kohomba) Found in Sri Lanka and Commercially Available Antibiotics against Urinary Tract Infection Causing Pathogens</b> BMITS Basnayake, KGML Gamage, and UTN Senaratne
1105 – 1115 Hrs	<b>Abilities of Triglyceride-Glucose-Body Mass Index and Triglyceride-Glucose-Index to Identify Dyslipidemia among the Women with Polycystic Ovary Syndrome Attending Teaching Hospital, Jaffna, Sri Lanka</b> K Balendrarajah, G Vijayakumar, V Murugathas, K Muhunthan, and V Arasaratnam
1115 – 1125 Hrs	<b>Nasal Colonization of <i>Staphylococcus aureus</i> and <i>Streptococcus pneumoniae</i> in Preschool Children Attending Selected Immunization Clinics, Kandy, Sri Lanka</b> HMNP Handapangoda, LPALP Ruwansiri, UPRU Dissanayake, ST Kudagammana, BN Dissanayake, and LVC Liyanapathirana
1125 – 1135 Hrs	<b>Cytotoxic Effect of <i>Nymphaea stellata</i> on a Triple-Negative Breast Cancer Cell Line</b> KBM Kavirathne, NS Wickramaratne, and SR Samarakoon
1135 – 1145 Hrs	<b>Prevalence of Asymptomatic Bacteriuria, and Antibiotic Sensitivity Patterns of Isolated Bacteria, in Patients with Cancer, Attending Trail Cancer Hospital, Tellippalai, Sri Lanka</b>

RIH Wijewardhane, SAPK Samaraweera, RHGL Hapitigama, TJ Gnanakarunyan, R Ramachandran, S Saravanabavananthan, and PSP Kumbukage

- 1145 – 1155 Hrs      **Population-adjusted Cut-off Enhances the Diagnostic Efficiency of Hematological Discrimination Formulae for Screening Beta-Thalassemia Trait**  
GDI Aravinda, WPSD Dharmasiri, HHC Sewwandi, SM Goonetilleke, and R Karunaithas
- 1155 – 1205 Hrs      **A Preliminary Investigation on Microbial Quality of Poultry and Meat Sold near Mahargama Public Fair Premises**  
N Sheriffdeen, KEN Hasaralee, RD Wickramasinghe, SPNN Senadeera, and CB Ranaweera
- 1205 – 1230 Hrs      Question and Answer Session
- 1230 – 1240 Hrs      Summing up by the Session Chair
- 1240 – 1330 Hrs      Lunch

## ALLIED HEALTH SCIENCES

Technical Session (Parallel) II - Nursing

Venue: LL2, 4<sup>th</sup> Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Air Cdre (Prof) RANK Wijesinghe</b> Professor of Medicine, Faculty of Medicine, General Sir John Kotelawala Defence University, Sri Lanka
1045 – 1050 Hrs	Introduction of the Chair
1050 – 1055 Hrs	Preliminary Remarks by the Chair
1055 – 1105 Hrs	<b>Knowledge and Factors Influencing Self-care Behaviors of Arteriovenous Fistula among CKD Patients in Hemodialysis Units in the Jaffna Peninsula</b> KDSM Appuhamy, LS Kaushalya, V Jegapragash, and BR Thangaraja
1105 – 1115 Hrs	<b>Application of ChatGPT in Nursing Education</b> MGSN Ishara, RAND Ranaweera, and TA Asurakkody
1115 – 1125 Hrs	<b>Medication Adherence Behavior among Patients with Type 2 Diabetes in Selected Tertiary Care Hospitals in Central Province, Sri Lanka: A Mixed-method Study</b> RDC Jayasena, and AMSD Pathirana
1125 – 1135 Hrs	<b>Procrastination among University Students in Sri Lanka</b> J Ekanayake, N Tennakoon, and L Lagoshan
1135 – 1145 Hrs	<b>Formal Carers' Perspectives towards Providing Care for Older People with Dementia in Residential Aged Care Facilities in Sri Lanka</b> DMV Ariyaratne, NA Wickramarathne, HMSDB Herath, HSMSK Wijesiri, and S Rathnayake
1145 – 1155 Hrs	<b>Effect of Screen Time on Sleep Quality among Advanced-Level Students: Cross-sectional School-based Study in Colombo, Sri Lanka</b> KADAP Gunawardena, and R Jayawardena



1155 – 1205 Hrs	<b>Understanding Quality of Life, Perceived Stress and Practices to Manage Stress among Adolescent Girls of Age 17 Years in a Selected School in Colombo</b> VNC Edirisinghe, KSH Udarika, BCM Peiris, MPKW Abhayasinghe, and NFJ Fernando
1205 – 1230 Hrs	Question and Answer Session
1230 – 1240 Hrs	Summing up by the Session Chair
1240 – 1330 Hrs	Lunch

## ALLIED HEALTH SCIENCES

Technical Sessions III - Pharmacy

Venue: LL1, 4th Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Snr Prof RN Pathirana</b> Senior Professor, Department of Pharmacy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka
1330 – 1335 Hrs	Introduction of the Chair
1335 – 1340 Hrs	Preliminary Remarks by the Chair
1340 – 1350 Hrs	<b>Assessment of Cumulative Release and <i>In Vitro</i> Stability of Curcumin Entrapped in Polycaprolactone (PCL) and Polycaprolactone/Poly(lactic Acid) (PLA) Blend Nanofibers</b> SPPM Perera, RM de Silva, and KMN de Silva
1350 – 1400 Hrs	<b>Exploring Phytochemicals in <i>Glycyrrhiza glabra</i> L. Root as Potential Therapeutics for Gastroesophageal Reflux Disease: A Molecular Docking and Dynamics Study</b> MGLS Dias, RDVK Kalhari, NRM Nelumdeniya, and HMAJ Halahakoon
1400 – 1410 Hrs	<b>Development of an In-house Medication Adherence Assessment Tool using Barcodes and Assessing Compliance to the Tool among Young and Middle-aged type II Diabetic Patients in Selected Healthcare Settings</b> MGA Hansika, GPSG Senadheera, and NR Samaranayake
1410 – 1420 Hrs	<b><i>In-silico</i> Identification of Phospholipase A2 Inhibitors from Traditional Medicinal Plants to Treat <i>Hypnale hypnale</i> Envenomation</b> SS Edirisinghe, NA Karunathilake, AGK Neranja, NRM Nelumdeniya, and MFM Mishal
1420 – 1430 Hrs	<b>Is Discrete Incremental Meta Docking (DIMD) the Key to Success in Molecular Docking-based Drug Discovery? A Comparison of the Results of the Novel Vinca Derivative VADRPA01</b>

HMAJ Halahakoon

- 1430 – 1440 Hrs      **Analysis of Total Phenolic Content, Total Flavonoid Content, Antioxidant and Anti-inflammatory Activities of *Halymenia Sp.***  
ST Widanagamage, SLTD Samarasinghe, PGNH Dharmasiri, YT Senaweera, KW Samarakoon, and BLC Samanmali
- 1440 – 1450 Hrs      **Synthesis and Characterization of Nano-formulations of Gallic Acid, Vanillin, and Quercetin to Enhance Antibacterial Activity**  
RMPC Rathnayake, and KDKP Kumari
- 1450 – 1500 Hrs      **Anticancer Drug Handling Practices among Oncology Pharmacists in Sri Lanka: A Cross-sectional Study**  
DPCK Pathirana, VGI Chathumali, NDD Wickraramasinghe, and RBJ Buddhika
- 1500 – 1525 Hrs      Question and Answer Session
- 1525 – 1535 Hrs      Summing up by the Session Chair
- 1535 – 1550 Hrs      Announcement of Best Oral and Poster Awards
- 1550 – 1615 Hrs      Refreshments

## ALLIED HEALTH SCIENCES

Technical Sessions (Parallel III) – Radiography and Radiotherapy

Venue: LL2, 4th Floor, Faculty of Medicine

<b>Chairperson</b>	<b>Dr JMC Udugama</b> Consultant in Nuclear Medicine, Lanka Hospitals PLC, Colombo, Sri Lanka
1330 – 1335 Hrs	Introduction of the Chair
1335 – 1340 Hrs	Preliminary Remarks by the Chair
1340 – 1350 Hrs	<b>Classification of Non-Small Cell Lung Carcinoma using Computer Aided Semi-automatic Segmentation and Radiomics</b> HARV Alwis, RT Hettiarachchi, V Ramanathan, WMIS Wickramasinghe, PAS Perera, and RMGCSB Jayatissa
1350 – 1400 Hrs	<b>Characterization and Classification of Structural Brain Changes in Generalized Epilepsy using Region based Morphometry</b> DMDT Wimalasiri, SRAL Rajapaksha, WKC Withanage, and WM Ediri Arachchi
1400 – 1410 Hrs	<b>Evaluation of the Level of Knowledge and Awareness on Radiation Protection among Radiation Therapists in Sri Lanka</b> MRM Anaas, WWT Nethmini, HKA Dharmasiri, and R Tudugala
1410 – 1420 Hrs	<b>An Assessment of Occupational Radiation Exposure in Cardiac Catheterization Laboratory at a Single Centre in Sri Lanka</b> PRGSMC Rathnayake, DMRS Dasanayake, V Ramanathan, CJ Horadigala, and WMIS Wickramasinghe
1420 – 1430 Hrs	<b>Institutional Diagnostic Reference Levels for Non-Contrast Computed Tomography Examinations of Adults at Sri Jayewardenepura General Hospital, Sri Lanka</b> HMDUK Herath, HLA De Silva, LHMIM Herath, AS Pallewatte, and WMIS Wickramasinghe

1430 – 1440 Hrs	<b>Evaluation of Inter-fractional Geometric and Dosimetric Variations in Gynaecology Brachytherapy Based on C-arm X-ray Images in Carcinoma of Cervix at Apeksha Hospital Maharagama</b> SP Hapugoda, HKA Dharmasiri, KASJ Balawardane, and R Tudugala
1440 – 1450 Hrs	<b>Comparison of Gate's GFR in 99mTc-DTPA Scintigraphy and Creatinine-based Estimated Glomerular Filtration Rate (GFR) among Chronic Kidney Disease (CKD) Patients in Sri Lanka</b> RMSR Rathnayake, BMDL Athukorala, DDN Wimalarathna, and JMC Udugama
1450 – 1515 Hrs	Question and Answer Session
1515 – 1525 Hrs	Summing up by the Session Chair
1525 – 1600 Hrs	Refreshments

# **POSTER PRESENTATIONS**

**27<sup>th</sup> September 2024**

## **DEFENCE AND STRATEGIC STUDIES**

Poster Session

Venue: Classroom 3-3 Faculty of Graduate Studies

Time: 1030 hrs – 1200 hrs

### **Artificial Intelligence in Maritime Security: Enhancing Future Strategic Stability in the Indian Ocean Region**

AMMLB Abeykoon and HMRR Bandara

### **Evolving Threats and Strategies in Modern Military Security: An Analysis of Global Approaches**

DCL Attale and A Egalle

### **Leveraging Sri Lanka's National Intelligence: Prospects from Anti-Money Laundering and Counter-Terrorist Financing**

UIA Pathirana

### **Identifying Challenges in Integrating AI Technology for Intelligence Gathering in the Sri Lankan Army**

KGSS Wijerathne and NRY Cabraal

### **Leveraging Artificial Intelligence to Counter Violent Extremism and Hate Speech Online: A Case Study of Sri Lanka's National Security Measures**

PMP Pannalage, VMM Vithanage, and MPM Waleboda

### **The Role of Information Warfare in Exacerbating Ethnic Tensions: A Case Study of Sinhala-Muslim Dynamics in Sri Lanka**

CLCM Patabendige

### **The Geopolitics of Artificial Intelligence: Power shifts in the 21st Century**

HAALSSA Arachchi, PKTL Panduwawala, and PMWMKT Sandanayake

### **Utilizing Artificial Intelligence for Detection, Delay and Response of Chemical, Biological, Radio graphical and Nuclear Threats**

MMU Nethsara, MAD Theekshana, MHHS Thisera, and AV Tantirimudali

### **Redefining Global Security in the Digital Age: Nuclear Proliferation**

BW Yehansa, TKV Hasara, AMCP Wijesekara, and PAHP Sandamini

**Artificial Intelligence and Human Inputs in Warfare Systems: A Comparative Analysis on Challenges and Opportunities**

WB Binaya

**Artificial Intelligence in Counter Insurgency Operations: Enhancing Combat Efficiency and Combat Effectiveness in Sri Lanka**

JLHSM Jayasundera and WWIS Weerasinghe

**The Role of Artificial Intelligence in Diplomacy: Strengthening or Replacing Traditional Methods**

WAOV Jayawardana and SADJD Samarakoon

**The Chinese Belt and Road Initiative and Sri Lanka: Geopolitical Implications and Infrastructure Development**

WRL Karunakalage

**Third Party Effects of Strategic Competition in the Indian Ocean and Their Implications to Small States: with Special Reference to Case Study of Sri Lanka**

JM Achchige

**AI in Defence Logistics: Optimizing Supply Chains and Resource Management**

GH Langappuli, RPYR Rajapaksha, BNWCVK Madawala, and NKCP Ekanayaka



## MEDICINE

Venue: Venue: Mini Lecturer Theater, 4<sup>th</sup> Floor, Faculty of Medicine

Time: 09 00 Hrs onwards

### **Invitro susceptibility of carbapenem-resistant Gram-negative organisms to the novel antibiotic ceftazidime-avibactam**

N Jayathilake, MFF Sameeha, UTN Senaratne, WMID Nakkawita

### **Screening and Awareness of Chronic Kidney Disease (Ckd) In A Selected Population in A Tertiary Care Hospital In A Lower Middle-Income Country**

Wijerathne WMUA, Sherrif R, Jayasundara GASS, Samarakoon SMPE, Hashari GC, Ediridinghe D, Jayasekara MMPT

### **A case report: severe hameolytic disease of the fetus and prolonged anaemia in newborn due to rhesus d (rh d) antibody**

T I Withanawasam<sup>1</sup>, A Dissanayake<sup>1</sup>, T Dias<sup>2</sup>, D S S Padmasiri<sup>3</sup>, R P P Dinali<sup>3</sup>, H A N K Perera<sup>3</sup>, and A Dalpatadu<sup>1</sup>

### **Cranial volume change – best measure for surgical outcome in craniosynostosis**

Nanayakkara BCIJ

### **Prophage diversity and conservation in *Burkholderia pseudomallei*: Implications for virulence and environmental adaptation**

Himalsha Madushani, Devanga Athukorala, Enoka Corea, A.D De Silva, H. S. Jayasinghearachchi

### **Viruses causing Severe Acute Respiratory Illness (SARI) and Influenza Like Illness (ILI) in adult patients at a teaching hospital in Sri Lanka**

Dilini Nakkawita, Upeksha Kulasekara, DGP Kawyangana, AWT Sandaruwan, Thamarasi Senaratne, Sasangika Rashmini, Varuna Navaratne, AD De Silva and Dumitha Govindapala

### **Dietary Intake and Nutritional Status of Adolescents in Selected Village of Monaragala**

RMDJ Rathnayaka, SBWD Premasiri, KADL Bhagya, GRNN Wayidyarathna, LAMHP Udayakumari

## ENGINEERING

Venue: 6-2, Faculty of Engineering

Time: 09 00 Hrs onwards

**Self-Sensing Concrete: A Breakthrough in Structural Health Monitoring- A review**  
OMR Priyantha

**The impact of plastic waste as a partial replacement for sand in normal strength concrete**

ME Sutharsan, P Pushparaj, D Sajithkumar, and V Kaneesh

**Wireless Underground Sensor Network for Soil Monitoring**

C Bandara, D Guruge, I Dalpathadu, P Samarathunga, P Karunanayake, T Weerwardane, A Könsgen, and A Förster

**Design and Development of a Wall-Climbing Robot for Wall Inspection and Crack Detection**

MY Deundaraarachchi, PD Walawege, AR Dolage and HDI Piyumini

**Bidirectional Power Conversion Redefined: A review on the superiority of Dual Active Bridge (DAB) Converters**

Sachethana Ranasinghe

**Development of a Footstep-Based Energy Harvesting System Using Piezoelectric Material for Military Applications**

RRGSN Senarathna, PSR Dilshan, DMSS Delgamuwa, and MRRA Bandara

**Efficient Smart Home System Using IoT and Arduino for Enhanced Automation and Security**

NT Sandanayake, KR Walawege, EGSM Gunathilake, DDGR Karunarathne

**Driver Drowsiness Detection & Accident Alert System**

GAPK Gunasinghe, BMDP Rathnayake, SHRT Sooriyagoda, RMCP Ranasinghe

**Smart Liquefied Petroleum Gas (LPG) Level Monitoring System with Gas Leakage Detection System**

MPSM Pathirana and Sachethana Ranasinghe

**Review of Different Business Models Applicable for a Community Microgrid**

DLSA Dahanayake, AUC Perera, KV Wickramanayake and MGBP Charaka

**A Comprehensive Review of Cardiac Output Determination and Radial Pulse Analysis Using Piezoelectric Sensors**

PS Walawege, and WLPK Wijesinghe

**Enhanced Pulse Simulator for Medical and Nursing students**

ML Niane, AWA Iqbal, IT Ponnampereuma and KG Samarawickrama

**A Novel Air Bubble Removal System in Infusion Pumps Utilizing Vacuum and Air-Permeable Membrane Technology for Enhanced Patient Safety**

WKD Fernando, RAIB Chandrasekera, MHND Hewage, and KG Samarawickrama

**Designing an IoT-enabled syringe pump with remote monitoring feature**

JMTA Bhashini, MALST Perera, KG Samarawickrama, WKMND Bandara

**Optimizing Vertical Axis Wind Turbines to Suit Sri Lankan Residential Applications**

CJ Kekirideniya, SG Nugegoda, WVPP Madhumali, PRA Dissanayake, and WRU Fernando

**Automated Fabric Hook-and-Eye Closure Feeding System**

NBA Hettiarachchi, MMBMB Seneviratne, ACL Bandara, HDI Piyumini, and PPSS Pussepitiya

**Numerical Study of Single Stage Travelling Wave Thermoacoustic Generator Through Regenerator Optimization**

MDA Wickramasinghe, MMID Manthilake, MA Wijewardane, RACP Ranasinghe

**Design of an AI-Assisted Digital Flight Data Recording System for Sri Lanka Air Force Light Aircraft**

EMDJ Ekanayaka, RSJ Karunarathne, TGT Peiris, SN Kiriwella, and KGT Jayasooriya

**Designing Noise Reduction Propeller System for DJI Matrice 300 Drone**

MMPT Gallella, MT Liyanagamage, HMTN Herath, and SLMD Rangajeewa

**Factors Influencing Human Error in the Aviation Industry**

KAP Malake, and AA Azeez

**Optimization of the Performances of P 47 Series Fast Attack Craft in Sri Lanka Navy Using AI-Driven Hydrodynamics Analysis**



KREMSB Ekanayake, TADBP Tissarachchi, NVL De Silva, RDMHM Ariyaratne and LAKR Athukorala

## COMPUTING

Venue: LT3, 3<sup>rd</sup> Floor, Faculty of Medicine

Time: 09 00 hrs. onwards

**Cinnamon Care: Digitizing Disease Detection and Treatment Recommendations for Cinnamon Plants using Image Processing and Machine Learning**

SN Jayasinghe, SCM de Silva Sirisuriya

**Adaptive Security Protocols for Wireless Mobile Ad Hoc Networks: Challenges and Innovations: A Review**

A Gurusinghe, M Pathirana

**Comparative Analysis of Food Recommendation Systems: Tailoring to Sri Lankan Cultural Events and Traditions**

MPWSS Peiris, B Hettige

**Optimizing Sri Lanka ayurvedic healthcare industry: A Technological Approach to Enhance Patient Care and management special references to Central Province in Sri Lanka**

WHKG Hapugahakotuwa , RPS Kathriarachchi

**Advanced Strategies for Dietary Recommendations in Liver Diseases: A Comprehensive Literature Review**

AA Abeysekara, GAI Uwanthika, WMKS Ilmini, RNN Waidyarathna

**Exploration of Technological Interventions for Borderline Personality Disorder**

SABN Jayasundera, WMKS Ilmini, MKOK De Siva

**Identification and Assessment of Key Performance Indicators in Sri Lankan Volleyball**

HMDR Peiris, RMM Pradeep

**Enhance Tea Quality and Market Stability with Advanced Technology: A Strategic Management Approach**

RKKG Gunawardhana, RPS Kathriarachchi

**Artificial Intelligence-Based Geospatial Framework to Simulate Landslide Susceptibility**

J Gunaseela, T Kumara, M Karunanayake, C Abenayake, B Hettige

**Sustainable Waste Management in Urban Areas: A Case Study in Ratmalana, Sri Lanka**

NACJC Jayasinghe, HRWP Gunathilake

**Using a Study Planner with Predictive Analytics: Exploring the Effects on Academic Performance and Time Management: A Systematic Review**

TD Wijesinghe, DVDS Abeysinghe

**A Comprehensive Review of Dynamic Pricing Strategies: Optimizing Market Competitiveness and Consumer Satisfaction for Sri Lankan Consumer Brands**

UDAN Diwyanjalee, CIM Fonseka, DN Ranaweera, GAT Senadeera, WMKS Ilmini, KD Madhubhashani

**Piloting Data-Driven Real Estate Decisions in Colombo: A Prototype Dashboard for Informed Stakeholder Engagement**

HI Ranasinghe, DVDS Abeysinghe

**A Review of Machine Learning Algorithms and Weather Forecasting Integration for Enhancing Flood Prediction in the Nilwala River Basin**

HT Sewwandini, Pradeep Kalansooriya, DU Vidanagama

**Enhancing On-Device Learning in IoT Systems Through Meta-Learning Techniques: A Comprehensive Review**

GASSA Dissanayake

**Data-Driven Optimization Strategies for Resource Allocation in Small Businesses**

NGC Maddumarachchi, PRD Wijesinghe, ERC Sandamali

**Attribute Selection and Verification for Effective Hockey Player Ranking in the Sri Lankan Context**

HAYB Hettiarachchi, SMM Lakmali, RMM Pradeep

**A Comprehensive Review of Automated ICD -10 Categorization Model: Methodologies, Challenges, and Future Directions**

AHS Chinthika, DMKS Dissanayake, WNNA Madhubashitha, WMS Kaumal, ERC Sandamali

**OptiLens AI: Enhancing Cataract Diagnosis and Personalized Eye Care through Artificial Intelligence**

RPKL Ruwanpathirana, WAAM Wanniarachchi

**Early Detection and Identification of Blister Blight Disease in Tea Plantations using Deep Learning and Real-Time Environmental Data**

KKDSR Gunathilaka, B Hettige

**AQUAFINA: Streamlining Collaboration, Meet Management, and Performance Prediction in Swimming**

KDRM Munasinghe, MVT Kawya

**Optimizing Human-AI Collaboration in Graphic Design: Opportunities, Challenges, and Future Directions**

KDRM Munasinghe, WAAM Wanniarachchi

**Leveraging Natural Language Processing (NLP) to Enhance Patient Feedback Analysis and Improve Shared Antenatal Care at University Hospital KDU, Sri Lanka**

GPTR Thihansith, MKP Madushanka, WAAM Wanniarachchi, A Perera

**Data Science Driven Solution to Predict Employee Attrition: A Systematic Review**

PK Kosgahakumbura, YB Hettiarachchi, DR Peiris, RP Hewage, ST Hewaarchchi, KD Madhubhashani, SMM Lakmali, HRWP Gunathilake

**The Role of Visual Elements (Color, Typography, and Layout) on User Trust in Online Payment Processes**

BMUKS Ekanayake, WAAM Wanniarachchi

**Optimizing Accident Severity Prediction: A Comparative Study of LSTM, CatBoost, and CNN Models with Feature Selection**

Thayani Gathirvelou, Barathy Mayurathan

**A Data-Driven Approach to Heart Stroke Prediction using Machine Learning and Fuzzy Logic**

MDR Peiris, ADAI Gunasekara

**Decoding Brain Wave Patterns for Speech Recognition in Individuals with Speaking Disabilities**

KHPKK Kariyawasam, RALU Ranasinghe, RMM Pradeep

**IoT-Based Assistive Smart Shoe for Disabled Individuals Using Kansei Engineering**

PVD Uththara, EPKH Pathirana, APGBY Yasaruwan, WLV Vinnath, Pradeep Kalansooriya

**A Multi-Factor Approach of Spot Price Forecasting via Deep Learning**

K Kajamohan, T Varhsala, J Jananie

## LAW

Venue: 01<sup>st</sup> Floor-Faculty of Graduate Studies

Time: 16 hrs-17 hrs

### **Pragmatic Approaches Towards Fundamental Rights Litigation Procedure in Sri Lanka: Challenges and Opportunities**

P Chandrahasan

### **Unveiling Sri Lanka's Legal Landscape: Combating Cybersex Trafficking Using Existing Online Harassment Laws**

C Mahingoda, Dr. K Harasgama, S Jayamaha

### **Enhancing Industrial Design Protection: A Comparative Legal Analysis of Sri Lanka, India, and Japan**

S.T.D. Sandanayaka

### **A Study on the Eradication of Corporate Impunity on Environmental Degradation Through the Doctrine of 'Ultra Vires'**

KGHH Dias

### **Challenges and Risks in Protecting Children's Rights in the Digital Environment**

R.T Kariawasam, H.R.S Ashwini



## MANAGEMENT, SOCIAL SCIENCES & HUMANITIES

### **Leveraging Artificial Intelligence to Enhance Public Transport Efficiency in Sri Lanka**

WPS Perera, SDDS Silva

### **The Study of Management Skills in High-Performance Sport Organizations in Sri Lanka**

WMVD Chathuranga

### **Youth Female Unemployment: Case Study based on Sooriyawewa, Sri Lanka**

UGHC Yapa Bandara, NAK Weerasinghe

### **Analyzing Common Challenges for Shipping Industry in Colombo: A Root Cause Approach**

SAAH Subasinghe, MKC De Silva

### **Distribution Patterns and challenges of Multi Country Consolidation Operations in the Port Authority of Sri Lanka**

ST Hewa Arachchi, RMNT Sirisoma, and ERC Sandamali

### **Quantifying the Benefits of Technology and Data Science in Higher Education: A Fuzzy Logic Approach**

PHT Perera, DR Perera

### **Impact of Financial Literacy on Individuals' Financial Behaviour of Employees of IT Industry in Sri Lanka**

SI Rukshan, ID Wattuhewa

### **The Impact of Vocational Training on Employee Performance of Junior Officers in Sri Lanka Navy**

RPSS Jayasinghe, UG Rajapaksha, and VD Kithsiri

### **Assessing the Impact of Agricultural Schemes on Paddy Yield in the Maha Season in Sri Lanka: A Comprehensive Analysis of Major, Minor and Rainfed Schemes from the year 2020 to 2023**

KKDAL Kannangara, AD Sellar, MRM Rihan and TSS Nilakshi

### **Integrating AI Systems for Urban Waste Segregation and Disaster Mitigation**

MBF Amna, MG Saranga, GPH Bandara, PRM Perera

**An Investigation into the Influence on Social Media on Fashion Industry Market Dynamics in Sri Lanka through a Study on Impact of Facebook and Instagram into the Apparel Industry**

WMUS Senevirathna

**Analysis, Prediction, and Evaluation of Hendra Virus Transmission Dynamics using Machine Learning Algorithms**

C Sathsarani, S Abeywardhana, P Senevirathna and D Tharanga

**Identifying Subtypes of Parkinson's Disease using Clustering and Dimensionality Reduction Techniques**

JMSG Jayasekara, HMIG Gunerathne, BT Ikula and KKNT Perera

**Studying Japanese Kansei Concept Affects Consumer Purchasing Decisions and Brand Loyalty Using Data Mining Techniques**

TJ Marasinghe

**A survey-based analysis of integrating artificial intelligence in Ayurveda practices**

DLS Nadavi

## TECHNOLOGY

Venue: Faculty of Graduate Studies 3-1

### **A Review of high-capacity battery systems for onboard war ships in the era of artificial intelligence**

L M H De Silva

### **Investigating Material Degradation and Durability in Hypersonic Environments**

NS Dikkumburage

### **A Critical Review on Compatibility of Energy Storage Technologies with Renewable Energy Integration**

VN Vithanage, and HMKP Jayathilaka

### **How Ultrasound Imaging Could Revolutionize Brain Imaging: A Review of its Potential as an Alternative to MRI and CT**

UM Senarathna, MD Wickramanayake, and IDCL Gunarathna , KDHG Jayawardena

### **AI-Assisted Learning: A Study on Undergraduate Web Development Proficiency**

MTA Wickramasinghe, and SHIDN De Silva

### **Development of a Novel RBC Histogram and a RDW-CV Parameter for Improved Diagnosis and Monitoring of Iron Deficiency Anemia using a Computational Mathematical Tool**

HN Ranasinghe, VW Liyanaarachchi, US Rahubadda and DK Kottahachchi

### **Enhancing IoT Security: A Framework for Mitigating Vulnerabilities in Industrial Systems**

M I Sathsara, A kurunayaka and R Laveena

### **Urban Youth Perspectives on AI-Driven Solutions for Food Waste Management: Evaluating the Smart Food Waste Accelerator Prototype in Colombo**

N. J. Zeron Anas and N.J.M. Asam

### **A review of Key research and development opportunities in the technological advancements of Bioprinting**

VW Liyanarachchi

## **DIGITAL PRESERVATION TECHNOLOGY FOR TRADITIONAL ARTS IN SRI LANKA**

T.Kiniththa

## **Predictive Modelling of Breast and Oral Cancer Incidence Trends in Sri Lanka: Utilizing Random Forest Algorithm and National Cancer Registry Data**

A Neththikumara, D Satharasinghe, J Jeyasugiththan , L Liyanage, RMDS Rasnayake and Oshada Senaweera

## **A review of Sustainable Construction Practices Enabled by Internet of Things (IoT): Case Studies and Innovations**

T. Prasanthan

## **A Review: Night-to-Day Image Translation Leveraging GANs for Enhanced Visual Perception for Autonomous Driving Systems**

K J P Fernando, and H K I S Lakmal

## CRIMINAL JUSTICE

### **Issues Related to Health Facilities in Prison Hospitals - A Case Study of Welikada and Bogambara Prisons in Sri Lanka**

IM Liyanage, EADA Edirisinghe

### **The Role of Artificial Intelligence in Social Media Monitoring: Assessing Effectiveness, Privacy, and Civil Liberties**

RJKKD Ranathunga, DMTE Dahaneka, DAT Madushanka, CSDSD Kalinga and VGDV Ranadewa

### **The Importance of a National Criminal DNA Database for Sri Lanka: A Comparative Study**

DS Arambawatta

## **BUILT ENVIRONMENT AND SPATIAL SCIENCES**

### **Impact of Modern Technology on the Quality of Sustainable Construction in the Sri Lankan Construction Industry**

PA Deemantha, SD Jayasooriya, AH Lakmal, and AGKMWS Atapattu

### **Applicability of Effective Claim Management Framework Under FIDIC 2017 Red Book in Sri Lankan Construction Industry**

WB Kalpani, KPSPK Bandara, WANM Weerasinghe, and WDBJ Jeewananda

### **Interior Design Learners Memory Retention Enhancement through Virtual Reality**

DW Kasun Gayantha, T Chandarasekara, MNR Wijethunge, UI Perera, HDS Asoka, and SD Jayasooriya

### **AI-Driven Innovations in Cost Estimation and Quality Control in Sri Lankan Construction Projects**

LADCN Wijesinghe, SD Jayasooriya, and MKM Nilupulee

### **Analysis of Green Space Recovery of Post Forest Fire: A Case Study in Laggala, Wilgamuwa, Sri Lanka**

DAPS Wasalathilaka, NV Wikramathilaka, CP Ranawaka, and TATP Bandara

### **Investigating the Reliability of Smartphone LiDAR for Outer Boundary Surveys**

AMP Athukorala, WMIU Adikaram, KNNB Kalugama, and KP Manuranga

### **Harnessing Spatial Intelligence in adopting net zero energy building concept to the residential buildings in SL**

GKE Perera, KSPK Bandara, WANM Weerasinghe, and WDBJ Jeewananda

### **The Impact of Architecture on the Healing Process of Pediatrics: A Case Study of Lady Ridgeway Hospital in Sri Lanka**

MN Ranagala, KDHJ Premarathna

**Local Climate Zone Mapping Using World Urban Database and Access Portal Tools:  
A Study of Colombo City**

VGRG Gunasekara, DS Munasinghe

**The Role of Professional Surveyors in the Emerging Trend of Building Information  
Modelling (BIM)**

WKH Kalpitha, KGES Dias, KP Manuranga, and JMO Jayamanne

**Analysis of Urban Green Spaces and Potential Expansion to Kandy city, Sri Lanka**

TATP Bandara, NV Wickramathilaka, CD Iddagoda, and DAPS Wasalathilaka

**Land Use Change and Its Impact on Urban Flooding: A Case Study on Kandy City  
Sudden Flood in December 2022**

WMIU Adikaram, OJ Perera, and KP Manuranga

**Spatial Modeling of Two-Dimensional Road Traffic Noise in Urban Zones: Case  
Study in Ratnapura Municipal Council**

DMAP Dissanayaka, NV Wickramathilaka, CP Ranawaka, HHKT Bandulasoma , and IR Shehal

**An Analysis of Harbor Basin Bathymetry Using Satellite Imagery: A Case Study in  
Kirinda Fishery Harbor, Sri Lanka**

SR Wijewardhane, GP Gunasinghe, KP Manuranga, and H Waligodapitiya

**Examining the Impact of Elevation Mask on Atmospheric Delay Errors in GNSS  
Static Observations**

PAMT Rupathung, JMO Jayamanne, and PAT Hansamal

**Quality Assurance in Designing based Architectural Education and its Holistic  
Assessment in Sri Lanka**

SMM Sanjuneer, H Munasinghe, and FR Arooz

## BASIC AND APPLIED SCIENCES

### **Association between the Sleep Quality and Physical Fitness of undergraduates of the University of Colombo, Sri Lanka**

JSU Thathsarani and GU Jayaweera

### **Investigation of Antioxidant Activity of Selected Sri Lankan Marine Algal Extracts**

WP Attanagoda and DC Aluthge

### **A study of the Influence of Geographical Location on Usually Pathogenic Targeted Bacteria in the Gut of *Nemipterus virgatus* (Golden Threadfin Bream) in Different Marine Locations in the Western Province of Sri Lanka**

RAF Nafla, AIA Imthikab, and GDN George

### **The Evaluation of In-vitro Anti-inflammatory Effect of a given Methanolic Extract of *A. flavus* MM1**

N Premkumar and DH Warawitige

### **Addressing Glamour Attached to Violent Behaviour among Youth in a Sri Lankan Technical College through a Health Promotion Intervention**

N Rathnayake, K Abhayasinghe, J De Silva, and GND Guruge

### **Identification and Quantification of the Biodegradation Potential of Polycyclic Aromatic Hydrocarbon-Degrading Soil Bacteria from Fuel Stations: Implications for Effective Bioremediation**

JMUD Jayasundara, R Fernando, P Mayooraan, R Chandrasekaran, F Shahindha, SF Sabra, JV Arulnesan, HOTO Perera, and RBN Dharmasiri

### **Non-invasive Thermal Sensor Using Zero Heat Flux Method**

MGSJB Meddegoda, WLPK Wijesinghe, WSP Fernando, and MKAJ Maldeniya

### **Maximizing Organic Waste Management through Vermicomposting: A Comparative Study of Red Wigglers and Black Soldier Fly Larvae**

IASR Ileperuma, EA Kariyawasam, JMS Jayalath, and PN Dayawansa

### **Comparative Analysis of *Annona muricata* and *Annona reticulata* Crude Seed Extract: Phytochemical Analysis, Antioxidant Activity and Fatty Acid Composition**

YT Senaweera, MN Molagoda, P Ranasighe, PT Jayasooriya and KW Samarakoon

### **Electrochemical Synthesis of Polyaniline-Graphene Nanocomposite for Advanced Supercapacitor Application**



GDR Lakhari, KR Koswattage, and NPW Rathuwadu

**Phytochemical Screening, Antioxidant and Antidiabetic Activities of Different Solvent Extracts of *Elaeocarpus serratus* (Veralu) and *Elaeocarpus angustifolius* (Nilveralu) Grown in Sri Lanka**

PGNH Dharmasiri, P Ranasinghe, PT Jayasooriya, and KW Samarakoon

**Comparison of N-based and P-based Additives in the Synthesis of Porous Graphene Material for Supercapacitors**

DAS Sharmila and NPW Rathuwadu

**Comparative Analysis of Sri Lankan Cricketers' Performances in the Lanka Premier League and International T20 Matches**

MG Saranga, WPTM Pathirana, PDSS Pitiyage, KH Wickramathunga, and PR Withanage

**Bridging Digital Divide by Boosting IT Skills for Soragune Village Sri Lanka for Socio-Economic Growth**

KH Wickramathunga, PR Withanage, PDSS Pitiyage, WPTM Pathirana and MG Saranga

**Detection of Fake News Using Machine Learning and Natural Language Processing: Addressing the Modern Information Crisis**

WPTM Pathirana, MG Saranga, PR Withange, PDSS Pitiyage and KH Wickramathunga

**Identifying Trends in Blockbuster Films Using K-Means Clustering**

PDSS Pitiyage, MG Saranga, PR Withange, WPTM Pathirana and KH Wickramathunga

**Evaluation of Climate-Related Difficulties and Development of Resilience in Soragune Village, Sri Lanka**

SAR Maleesha, MBF Amna, PDSS Pitiyage and P Laksia

**Evaluation of Phytochemicals, *In-vitro* Antioxidant, and Anti-inflammatory Properties of an Arishta Formula under Three Aging Conditions**

AGN Nirmali, N Kumarasinghe, KW Gunawardana, N Salim and AI Kuruppu

**Cytotoxic Effects of Green Jackfruit (*Artocarpus heterophyllus*) and Ceylon Olives (*Elaeocarpus serratus*) Fruit Extracts on Cancer Cells**

MPT Virajini, MD Bandara, P Jayasooriya, KW Samarakoon and AI Kuruppu

***In-vitro* Anti-Cancer Activity of *Cinnamomum verum* Barks and Leaves**

AS Ameer, CU Widanapathirana, SH Tennakoon, and AI Kruppu

**In vitro Screening of Antioxidant, Anti-inflammatory, and Cytotoxic Activities of Medicinal Herbal Extracts**

MR Jayasinghe, N Jayasundara, KW Samarakoon, and AI Kuruppu

**Evaluating Selected Pharmacognostic Properties and Bioactivities of *Careya arborea***

S Kugaseelan, KW Samarakoon, and AI Kuruppu

**Simultaneous Detection of Bovine and Porcine DNA in Gelatine-based Products Using Species-Specific Duplex PCR**

WTGSL Withana, YM Bandara, H Murali, and AMMH Athapaththu

**Development of a Pressure Sensor Matrix Insole utilizing Velostat for Gait Analysis**

WKMND Bandara, KG Samarawickrama, and UMRMU Kumari

**Comparison between Two Sampling Methods of Airborne Microplastic Particles**

RLK Saumya, MP Deeyamulla, DSM De Silva, A Athukorala, and GR Diwyanjalee

## **ALLIED HEALTH SCIENCES**

### **Physiotherapy:**

#### **Development of a Norm Table and a Device for a Six Corner Agility Test for Age between 16 to 19 Badminton Players in Sri Lanka**

DNV Dangalla, MRMA Jayasinghe, HACS Hapuarachchi, ERJMDDP Wijesekara, and DKA Induranga

#### **Comparison of Physical Activity Level and Health Related Physical Fitness among Type 2 Diabetes Mellitus Patients in General Sir John Kotelawala Defence University Hospital: A Case Control Study**

MADD Munasinghe, LACK Thilakarathna, CJ Kalansooriya, MMPT Jayasekara, and HPM Dabare

#### **Comparison of Health Related and Sport Related Characteristics of High-level and Low-level Under-14 Tour Ranked Tennis Players in Sri Lanka**

KS Weerasinghe, MWKP Upeka, LLS Cabral, SADCS Senavirathna, and SP Senanayake

#### **The Association between Physical Characteristics and Risk of Ankle Injury Occurrence among Professional Handball Players in the Sri Lanka Air Force**

DP Ambegoda, CS Samarasinghe, MAKM Perera, ADP Perera, and RSP Fernando

#### **The Effects of Physiotherapy Management on the Quality of Life Post-Stroke Ambulatory Hemiparetic Patients in the Neurology Unit at the National Hospital of Sri Lanka (NHSL): A Longitudinal Study**

SAK Navamani, FS Naizerdeen, and GAD Perera

#### **Scapula Dyskinesia in Patients with Chronic Neck Pain in Selected Hospitals in Colombo District, Sri Lanka**

KADK Sandamali, MP Wadanamby, AMSDM Gunarathne, R Tudugala, and HPM Dabare

#### **Knowledge and Practice of Ergonomics and Their Associations with Work-related Musculoskeletal Disorders among the Health-supportive Staff of the National Hospital Kandy, Sri Lanka**

UIH Senavirathna, AJB Rathnayaka, and BMC Rathnayake

### **Nursing and Midwifery:**

#### **Spiritual Care Competency and Barriers to Spiritual Caregiving among Student Nurses at Colleges of Nursing in the Western Province of Sri Lanka**

RAND Ranaweera, and PWGDP Samarasekara

**Knowledge, Practices, and Factors Associated with Complementary Feeding among the Mothers of Children Aged 6-24 Months Attending the Child Welfare Clinic at Piliyandala Medical Officer of Health Area**

AKGTD Nimalarathna, HADO Hegoda, CMNYR Chandrasekara, KLKTD Sandharenu, and D Vidanage

**Enhancing Patient Safety: Medication Administration Related Knowledge, Practices and Associated Factors among Nurses at Colombo South Teaching Hospital, Sri Lanka**

ADWBNS Bandara, EDMP Edirisuriya, DT Kalpani, PCD Kumarasinghe, RMCUR Menike, MD Edirisuriya, KHC Hansini, and NSASN Senarath

**Personal Factors Affecting Completion of Health Statistics Course among Undergraduate Nurses: A Cross-sectional Study in a State University of Sri Lanka**

GRC Jeewanthi, DMCJ Dassanayaka, AHM Jayasundara, EGDM Dhananayaka, and KA Sriyani

**Knowledge, Attitudes, and Awareness of Cannabis Use among Final Year Nursing Undergraduates in Sri Lanka**

RMDHK Rathnayaka, PB Kaluarachchi, GASY Nanayakkara, HMP Herath, and NRP Perera

**Assessment of the Awareness and Risk of Pre-diabetes among a Group of Garment Factory Workers in Boralesgamuwa Medical Officer of Health (MOH) Area**

RMID Rajapaksha, GRYN Chandrasoma, CMTS Menike, and D Vidanage

**Digital Sustainability Awareness and Practices among Nursing Students in Gampaha District**

KAP Rasanjana, KHE Fernando, and L Lagoshan

**A study on Ventilator-associated Pneumonia among Critically Ill Adult Patients Admitted to Intensive Care Units of Tertiary Care Hospitals in the Kandy District, Sri Lanka**

GDAM Wimalarathna, S Samarasinghe, and BMC Rathnayake

**Nursing Students' Perception of Artificial Intelligence: An Online Mobile Survey**

WAM Thamel, KHE Fernando, and L Lagoshan

**Knowledge, Attitudes and Practices towards Carcinogenic Foods Consumption and Cancer Prevention among Undergraduate Students of Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University**

HPI Vindya, NMM Ninnadani, THT Gavishki, SDPL Weerawardhana, and NRP Perera

**Knowledge, Practices and Factors Associated with Physical Activities During Pregnancy amongst Primi Mothers Attending Antenatal Clinics in the German-Sri Lanka Friendship Hospital for Women, Galle**

K Aluthdunne, and G Alwis

**Improving Quality of Life of Older Adults through a Health Promotion Intervention in a Rural Village in Puttalam District**

WAGK Munasinghe, ATP Gomas, WDSP Rashmika, MPKW Abhayasinghe, and GND Guruge

**Uptake of Human Papilloma Virus Vaccine and Factors Affecting the Uptake of Human Papilloma Virus Vaccination among Adolescent School Age Children Attending Selected Government and Private Schools in Colombo District, Sri Lanka**

IH Kulathunga, KPBIK Ariyaratna, SMES Samarakoon, GDI Rodrigo, and MN Priyadarshanie

**Knowledge, Attitudes and Practices on Hepatitis B Viral Infection among Nursing Undergraduates in General Sir John Kotelawala Defence University**

GDBDD Senadheera, HHW Wedaarachchi, WMID Nakkawita, and UTN Senaratne

**Medical Laboratory Sciences:**

**The Predictive Significance of Serum Creatinine in Management of Pregnancy Induced Hypertension: A Preliminary Study at the Teaching Hospital, Jaffna**

R Madhurahini, V Balayasothini, J Jeneni, V Arasaratnam, and K Muhunthan

**Cytokines and Lumbosacral Nerve Root Compression in Patients Undergoing Lumbar Microdiscectomy: A Cross-sectional Study**

P Aravinth, ND Withanage, S Pathirage, SII Seyed Shahmy, SP Athiththan, S Perera, and LV Athiththan

**Exploring the Potential of Antibacterial Activity of *Biophytum reinwardtii*: A Natural Ally against Antibiotic Resistance**

LY Amith, N Sainudeen, RD Widanagamage, HEH Perera, CG Patebendige, and M Kothalawala

**Colonization Rate, Associated Factors and ABST Pattern of MRSA in Pregnant Mothers Admitted for Delivery at a Selected Hospital in the Eastern Province, Sri Lanka**

FSS Mafras, VR Francis, HSWS Kudagammana, R Dissanayake, and V Liyanapathirana

**A Preliminary Study to Assess the Impact of Environmental Conditions on Microbiological Water Quality of Dug Wells in the Katuwawala Area, Colombo District, Sri Lanka**

BDTR Dharmakeerthi, JMT Sandareka, PNS Paronavithana, R Wickramasinghe, SPNN Senadeera, and CB Ranaweera

**Synergistic Antimicrobial Activity of Marine Macro Algae *Sargassum crassifolium*, *Ulva fasciata*, *Dictyota spp.* and *Valoniopsis pachynema* against Multi-Drug-Resistant Bacteria**

DDS Ranjith, BS Gamage, CD Widanapathirana, UDGRD Diwyanjali, ODK Perera, and VA Bodhinayaka

**Microbial Composition and Antimicrobial Resistance Patterns in Beach Sand and Sea Water across Three Selected Beaches in the Colombo District, Sri Lanka**

MAD Dias, TA Devindi, PAPN Perera, AAK Aishwarya, VA Bodhinayaka, and ODK Perera

**Pharmacy:**

**The Study of an Anti-diabetic Activity using *Syzygium cumini*, *Costus speciosus*, and *Melastoma malabathricum* Plant Extracts Compared to Standard Acarbose**

BSS Perera, PPCI Pramuditha, HMAJ Halahakoon, and S Sabalingam

**Exploring Factors Influencing Medication Adherence among Hypertensive Patients in the Cardiology Clinic- University Hospital-KDU: A Qualitative study**

HNN Hettiarachchi, AMD Sandamini, AGK Neranja, and SP Senanayake

**Formulation of Anti-inflammatory Topical Application using *Acronychia pedunculata*, *Thespesia populnea* and *Madhuca longifolia* Extracts**

SDS Perera, S Kamalanathan, HMAJ Halahakoon, and S Sabalingam

***In-vitro* Evaluation of Anti-inflammatory Activity and Wound Healing Properties of Water Extract of Leaves of *Camellia sinensis***

HAK Jayathunga, RMD Seneviratne, AI Kuruppu, and AM Abeysekera

**Enhancing the Solubility of Atorvastatin Calcium: A Comparative Study of Solid Dispersions with  $\beta$ -Cyclodextrin, Chitosan, and PEG-4000**

SC Vithana, WH Sandaru, HMAJ Halahakoon, and NRM Nelumdeniya

**Development of Emulgels Including Natural Mucilages and Powders Extracted from Three Selected Plants in Sri Lanka, and Evaluation of Physicochemical Properties, Physical Stability, Lethality, and Drug Release Profile**

NUN Athukorala, GADY Gajadeera, MVHW Masimbula, WK Amarasinghe, HNK Hemale, DBM Wickramaratne, and HHVKN De Silva

**Assessment of Challenges Encountered by Community Pharmacists and Dispensing Staff when Dispensing Medicines**

KGT Sewmini, WASM Warusapperuma, SP Senanayake, and AM Abeysekera

**Evaluation of Antioxidative Properties of Three Common Medicinal Plants Used to Treat Skin Diseases in Sri Lanka**

RMKMK Rathnayake, DYN De Silva, MPAPM Pathirana, MHS Nayanathara, and EHL Perera

**Antibiotics Utilization Patterns of Neonates in the Pediatric Baby Care Unit at Lady Ridgeway Hospital, Sri Lanka**

OSS De Silva, LKDN Wijewardhana, WM Chathurani, NDD Wickramasinghe, and RBJ Buddhika

**Radiography and Radiotherapy:**

**The Relationship between Coronary Artery Calcium Score and Left Ventricular Wall Thickness: A Quantitative Evaluation Using Cardiac Computed Tomography Imaging**

DBC Mannaperuma, VD Goonasekara, WMIS Wickramasinghe, and Janaka Rajapakse

**Characterizing the Brain Network Topology in Patients with Migraine using Wavelet-based Morphometry**

GDCJ Prabhashana, RLT Sirimanne, WKC Withanage, PPCR Karunasekara, and WM Ediri Arachchi

**An Investigation of Patient Perceptions and Experiences of Thermoplastic Mask Use in Radiotherapy Treatment for Head and Neck Cancers**

S Diljashini, MKCK Alwis, V Ramanathan, KASJ Balawardane, and R Tudugala

**Gender-related variations in Broca's and Wernicke's Areas in Healthy Adults: A Structural MRI-based Morphometric Analysis**

NA Lokuliyana, BHTS Muthuranga, AS Pallewatta, WKCS Withanage, and DDN Wimalaratna

**A Comparison of Three-Dimensional Digital Breast Tomosynthesis (3D-DBT) and Two-Dimensional Full-Field Digital Mammography (2D-FFDM) in Characterization of Breast Lesions**

AGOK Wimaladharma, NIA Silva, and HS Niroshani



PLATINUM PARTNERS



GOLD PARTNER



CO-PARTNERS



TECHNICAL PARTNER



MEDIA PARTNERS



HOSPITALITY PARTNER



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