



12<sup>th</sup> ANNUAL RESEARCH SESSION  
SABARAGAMUWA UNIVERSITY OF SRI LANKA

06<sup>th</sup> DECEMBER 2022

SABARAGAMUWA UNIVERSITY OF SRI LANKA, BELIHULOYA, SRI LANKA

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**12<sup>th</sup> Annual Research Sessions of Sabaragamuwa University of Sri Lanka**  
**ARS 2022**

06<sup>th</sup> December 2022

Venue: Faculty of Geomatics

Sabaragamuwa University of Sri Lanka

Belihuloya, Sri Lanka

***Programme at a Glance (FAGS)***

<b>Time</b>	<b>06<sup>th</sup> Dec. 2022</b>
<b>08.15 - 08.30 am</b>	The arrival of the invited guests and the delegates
<b>08.30 – 10.30 am</b>	Inauguration ceremony
<b>10.30 - 1:00 pm</b>	Morning Sessions
<b>1.00 – 01.45 pm</b>	Lunch
<b>1.45 – 03.45 pm</b>	Evening Sessions

## *Inauguration Ceremony*

### *Agenda*

Date: 06<sup>th</sup> December 2022

Venue: Auditorium, Faculty of Geomatics, Sabaragamuwa University of Sri Lanka

Join Zoom Meeting

<https://learn.zoom.us/j/67834604155?pwd=dExRd0M5SVpsOUNEQ25RaUNoYmNjQT09>

8:00 am – 8:15 am	Arrival of Guests
8:15 am – 8:30 am	The lighting of the Traditional Oil Lamp and the National Anthem
8:30 am – 8:40 am	Welcome Address by Dr. R.V.S.P.K. Ranatunga Chairperson, ARS-2022
8:40 am – 8:50 am	Address by Prof. M.L.M. Chandrika Dissanayake Director, Center for Research and Knowledge Dissemination (CRKD) Sabaragamuwa University of Sri Lanka
8:50 am – 9:00 am	Address by Prof. M.N. Wickramaratne Dean, Faculty of Medicine, Sabaragamuwa University of Sri Lanka
9:00 am – 9:10 am	Address by Prof. H.M.S. Priyanath Dean, Faculty of Graduate Studies, Sabaragamuwa University of Sri Lanka
9:10 am – 9:20 am	Address by Prof. R.M.U.S.K. Rathnayake Vice Chancellor, Sabaragamuwa University of Sri Lanka
9:20 am – 10:05 am	Introduce the Keynote Speaker by Prof. K. R. Koswattage Dean Faculty of Technology, Sabaragamuwa University of Sri Lanka
	Keynote Address by Prof. Gamini Rajapaksha Senior Professor Department of Chemistry Faculty of Science University of Peradeniya, Sri Lanka
10.05 am -10.10 am	Presenting the Tokens of Appreciation
10.10 am – 10.15 am	Launching and publishing an e-version of the Abstract Book
10.15 am – 10:25 am	Vote of Thanks by Dr. Gihani De Silva Secretary, ARS-2022
10:25 am	University Song and closing the inauguration

**Arrival of Guests**  
08:15 am – 08:30am



**Inauguration Session**  
08:30 am – 10:20 am



**PARALLEL SESSIONS**



	<b>Professional Forum</b>	<b>Postgraduate Forum</b>		
Morning 10.30 am – 1.05 pm	Session I 10 Presentations <b>Geomatics Auditorium</b>	Session II 08 Presentations <b>Venue - A1</b>	Session III 07 Presentations <b>Venue - A2</b>	Session IV 07 Presentations <b>Venue – A3</b>
12:20 -1:45 pm	<b>LUNCH</b>			
	<b>Postgraduate Forum</b>	<b>Faculty of Medicine</b>	<b>Undergraduate Forum</b>	
Evening 1.45 pm - 3.45 pm	Session V 07 Presentations <b>Venue - A1</b>	Session VI 07 Presentation <b>Auditorium</b>	Session VII 07 Presentation <b>Venue – A3</b>	

## *Professional Forum*

### *Session I*

<b>Time</b>	<b>10.30 AM – 1.05 PM</b>
<b>Venue</b>	Online
<b>Subject areas</b>	Agricultural Sciences, Applied Sciences, Management Studies, and Social Sciences and Languages
<b>Session chair</b>	Senior Prof. A.A.Y. Amarasinghe
<b>Rapporteur</b>	Dr. Eranga M. Wimalasiri

Join Zoom Meeting

<https://learn.zoom.us/j/67834604155?pwd=dExRd0M5SVpsOUUNEQ25RaUNoYmNjQT09>

Time	Paper Title and Authors
10.30 - 10.45	Psychological Capital and Affective Organizational Commitment Among Employees of the Handloom Industry in Sri Lanka: The Mediator Role of Work Engagement <i>Kalyani L.D., Priyanath H.M.S. and Gamage A.S.</i>
10.45 - 11.00	Effect of ICT Strength on Transaction Cost and Business Performance: An Empirical Investigation of SMEs in Sri Lanka <i>Ranatunga R.V.S.P.K., Priyanath H.M.S., and Meegama R.G.N.</i>
11.00 - 11.15	Engaging Crystallization in Qualitative Research: A Study on Buddhist Nuns in Sri Lanka <i>Gihani De Silva, Benjamine Schonthal, Ruth Fitzgerald and Elizabeth Guthrie</i>
11.15 - 11.30	The Effect of New Public Governance Policies and Practices on Administrative Performance in Sri Lanka <i>Pathirana G.C.L and Xiangming Leng</i>
11.30 - 11.45	How Fast are Western Tropical Pacific Islands Uplifting? Geodetic Constraints from GPS, Satellite Altimetry and Tide Gauge <i>Kannangara K.K.D.W.S., Kusche J., Karegar M.A. and Uebbing B.</i>
11.45 - 12.00	Water Use Efficiency in The Dry Zone of Sri Lanka <i>Shantha, A.A., Patabandi, K.P.L., Rosairo, H.S.R., Ampitiyawatte A.D. and Dananjaya V.S.</i>
12.00 - 12.15	A Sociological Analysis on the Suffering of Elderly Cancer Patients <i>Welgam, W.M.J.</i>
12.15 - 12.30	Walk the Tightrope: The Risk Entails in the Profession of National Tourist Guide Lecturers in Sri Lanka <i>Dinusha G.V.H. and Gnanapala W.K.A.C.</i>
12.30 - 12.45	Research on the Underwater Acoustic Localization based on Time Difference of Arrival (TDOA) <i>Udayangani H.K.N., and Zhang Zhen Kai</i>
12.45 – 1.00	Research and simulation of ITS (Intelligent Transportation System) Enabled Life-Boats Tracking and Control System for Passenger Vessels. <i>Sellapperuma S.P. and Rizwan Akhtar</i>
1.00 - 1.05	Discussion and summing up the session

## *Graduate Colloquium*

### *Session II*

<b>Time</b>	<b>10.30 AM - 12.35 PM</b>
<b>Venue</b>	Online
<b>Subject areas</b>	Humanities and Social Sciences
<b>Session chair</b>	Prof. Sarath Ananda
<b>Rapporteur</b>	Dr. Pradeep Uluwaduge

Join Zoom Meeting

<https://learn.zoom.us/j/69770714556?pwd=Z2phSmlZWURTK1AzVWhkOEc1c09Zdz09>

<b>Time</b>	<b>Paper Title and Authors</b>
<b>10.30 - 10.45</b>	Imagining a New Spatiality: Re-Examining Ishiguro's Literary Trajectory <i>Jayakody J.M.A.K and Hapugoda H.A.M.A.</i>
<b>10.45 - 11.00</b>	Impact of Climate Change and Variability on Paddy Cultivation in Sri Lanka <i>Dananjaya P.K.V.S., Shantha, A.A., and Patabendi K.P.L.N.</i>
<b>11.00 - 11.15</b>	Rational Ability Driven Uncertainty, Transaction Cost and Livelihoods of the Samurdhi Beneficiaries <i>Habaragamuwa H.R.N.R. and Priyanath, H.M.S.</i>
<b>11.15 - 11.30</b>	An Investigation of Translating Cultural Text from One Language to Another: Translation Techniques and Strategies <i>Hosshanthika M., and Ariyaratne W.M.</i>
<b>11.30 - 11.45</b>	Effect of Structural Aspect of Social Capital on Livelihoods of the Members of Community-Based Organizations in Sri Lanka: A Case of Uwa Province <i>Sachintha M.D.R., Lekamge U.P. and Priyanath H.M.S.</i>
<b>11.45 - 12.00</b>	The Impact of Food Security on the National Security of Sri Lanka <i>Mirahawatta M.M.C. and Ramasamy R.</i>
<b>12.00 - 12.15</b>	Influence of Parenting Styles and Self-Efficacy on Self-Employment Intention: A Conceptual Framework <i>Samantha Pathirathna, Priyanath H.M.S. and Samaraweera G.R.S.R.C.</i>
<b>12.15 - 12.30</b>	Contradictions of the Sri Lankan Indigenization Movement: A Cultural Reading of the Song of Premayen Mana Ranjitha We <i>Kariyakarawana S.M. and Senevirathne S.S.A.</i>
<b>12.30 - 12.35</b>	Discussion and summing up the session

## ***Graduate Colloquium***

### ***Session III***

<b>Time</b>	<b>10.30 AM - 12.20 PM</b>
<b>Venue</b>	Online
<b>Subject areas</b>	Computing & Technology
<b>Session chair</b>	Prof. S. Vasanthapriyan
<b>Rapporteur</b>	Dr. L. Sugeeshwari Lekamge

Join Zoom Meeting

<https://learn.zoom.us/j/64194351336?pwd=eFY5RzFTenhYTIJlVi9wdFB0bGJaZz09>

<b>Time</b>	<b>Paper Title and Authors</b>
<b>10.30 - 10.45</b>	Docker-Based and Virtual Machine-Based Apache Cassandra Database Management System Evaluation <i>Kithuwatta W.M.C.J.T., Jayasena K.P.N., Kumara B.T.G.S. and Rathnayaka R.M.K.T.</i>
<b>10.45 - 11.00</b>	Use of Random Forest Classifier to Identify Counterfeited E-Commerce Listings <i>Gunawardhana H.M.K.T., Kumara B.T.G.S., Rathnayake R.M.K.T. and Jayaweera P.M.</i>
<b>11.00 - 11.15</b>	A Preliminary Study on Computer-Assisted Career Counselling in Higher Education <i>Herath G.A.C.A., Kumara B.T.G.S., Rathnayaka R.M.K.T., and Ishanka U.A.P.</i>
<b>11.15 - 11.30</b>	Social Network Analysis for the Management of Information Propagation: A Study on the George Floyd Incident <i>Nanayakkara A.C., Kumara B.T.G.S. and Rathnayaka R.M.K.T.</i>
<b>11.30 - 11.45</b>	An Integrated Model to Identify Learning Style Using Machine Learning Techniques <i>Wanniarachchi W.A.A.M. and Premadasa H.K.S.</i>
<b>11.45 - 12.00</b>	Comparative Study of the Thermal Properties of Different Grades of Engine Oils at Various Temperatures by Addition of Fullerene (C60) Nano-Particles <i>Galpaya G.D.C.P., Induranga D.K.A., Maduwantha G.D.K.V. and Koswattage K.R.</i>
<b>12.00 - 12.15</b>	Investigation of Thermophysical Properties of Transformer Oil Based Nanofluids <i>Induranga D.K.A., Galpaya G.D.C.P., Maduwantha G.D.K.V., and Koswattage K.R.</i>
<b>12.15 - 12.20</b>	Discussion and summing up the session

## *Graduate Colloquium*

### *Session IV*

<b>Time</b>	<b>10.30 AM - 12.20 PM</b>
<b>Venue</b>	Online
<b>Subject areas</b>	Management & Economics
<b>Session chair</b>	Prof. D.A.I. Dayarathne
<b>Rapporteur</b>	Mrs. M. Vithiyalani

Join Zoom Meeting

<https://learn.zoom.us/j/61576321666?pwd=eUxaQU11YlYyc3cyd0F4T0RMeTZhZz09>

<b>Time</b>	<b>Paper Title and Authors</b>
<b>10.30 - 10.45</b>	The Impact of Analytics and Collaboration-Based Risk Management on Supply Chain Resilience and Robustness: A Conceptual Model Based on Organizational Information Processing Theory and Relational View <i>Jayatilake A.C., Silva C.W.C. and Fernando M.A.C.S.S.</i>
<b>10.45 - 11.00</b>	Impacts of Firm-Specific Factors on Capital Structure and Firm Value: Empirical Evidence from Sri Lankan Listed Firms <i>Baroon A., Dayaratne D.A.I. and Menike L.M.C.S.</i>
<b>11.00 - 11.15</b>	Challenges of Mainstream Co-Management in Small-Scale Fisheries Development <i>Ranatunga R.A.D.S., De Silva D.A.M., Amarasinghe O., and Kularatne M.G.</i>
<b>11.15 - 11.30</b>	A Life Cycle Assessment-Based Methodological Framework to Evaluate the Environmental Impacts of Building and Construction Industry in Sri Lanka <i>Vijerathne D., Wahala W.M.P.S.B, Illankoon C. and De Silva N.</i>
<b>11.30 - 11.45</b>	Factors Affecting the Going Public Decision of Private Companies in Sri Lanka <i>Riyath M.I.M., Dayaratne D.A.I. and Jahfe A.</i>
<b>11.45 - 12.00</b>	Assessing Household Vulnerability to Climate Change: A National Index for Agriculture Sector in Sri Lanka <i>Zihan Zarouk, Milinda Piyasena, Aslam Saja</i>
<b>12.00 -12.15</b>	An Exploratory Multiple Case Study on Mechanical Harvesting Adoption in The Corporate Sector Tea Plantation in Sri Lanka <i>Mahinda T.G.N., Esham M., and Rosairo H.S.R.</i>
<b>12.15 -12. 20</b>	Discussion and summing up the session



**Graduate Colloquium**

**Session V**

<b>Time</b>	<b>1.45 PM - 3.35 PM</b>
<b>Venue</b>	Online
<b>Subject areas</b>	Applied Sciences
<b>Session chair</b>	Prof. S. Malevipathirana
<b>Rapporteur</b>	Mrs. J.W. Amanda Sajeewanie

Join Zoom Meeting

<https://learn.zoom.us/j/69823228114?pwd=dnZzN1RvRVkwNlZscVdiWlRSSmtkQT09>

<b>Time</b>	<b>Paper Title and Authors</b>
<b>01.45 - 02.00</b>	Titanium Dioxide Nanostructures Produced Using Geogenic Ilmenite for Photovoltaic Applications <i>Koswatta A.C.W.W.M.N.P., Sandanayaka S.D.A., Udawatta C.P., Koswattage K.R., and Rathnayaka R.M.K.T.</i>
<b>02.00 - 02.15</b>	A Literature Review on a Comparison of Mental Stress Between Physical Education and Non-Physical Education Teachers Working at National Schools in Sri Lanka <i>Weerasinghe M.M.K.A., and Joniton, S.</i>
<b>02.15 - 02.30</b>	Evaluation of Physical and Sensory Properties of Encapsulated Dandila ( <i>Dioscorea Alata</i> ) Anthocyanin as a Natural Food Colourant <i>Menike W.A.E.M.P., Sajiwanie J.W.A. and Rathnayaka R.M.U.S.K.</i>
<b>02.30 - 02.45</b>	Dung Beetle Communities Change Across Different Land Uses in the Upper Walawe Basin Area <i>Perera P.R.M., Kudavidanage E.P., Udayakumara E.P.N., Wijsekara H. and Lekamge D.</i>
<b>02.45 - 03.00</b>	Effectiveness of Different Reproductive Hormones and Their Dosages on The Breeding of <i>Ompok Ceylonensis</i> (Butter Catfish) Under Captive Conditions. <i>Mudalige A.R., Walpita C.N., Athauda A.R.S.B., Perera S.J. and Jayasinhe M.A.</i>
<b>03.00 - 03.15</b>	Effect of Dietary Inclusion of Black Soldier Fly ( <i>Hermetia Illucens</i> L.) Larvae Meal on Sensory Attributes of Broiler Chicken Meat <i>Ellawidana E.W.D.M., Mutucumarana R.K., Magamage M.P.S., and Ruwandeepika H.A.D.</i>
<b>03.15 - 03.30</b>	Impact of Biofertilizer on the Growth of Winged Bean ( <i>Xanthosoma sagittifolium</i> ) <i>Lakmini P.K., Dewappriya D.S.D., Yapa P.I., Bandara R., Senevirathne W.S.M. and Magamage M.P.S.</i>
<b>03.30 – 03.35</b>	Discussion and summing up the session

## *Faculty of Medicine Colloquium*

### *Session VI*

<b>Time</b>	<b>1.45 PM – 3.35 PM</b>
<b>Venue</b>	Auditorium, Faculty of Geomatics and online
<b>Subject areas</b>	Medicine
<b>Session chair</b>	Prof. M. N. Wickramaratne
<b>Rapporteur</b>	Dr. K.M.G.M. K.K. Kulathunga

Join Zoom Meeting

<https://learn.zoom.us/j/61095496699?pwd=N01objAwbXRITzVsZnREZGFmcC9qZz09>

Time	Paper Title and Authors
<b>01.45 - 02.00</b>	Impact of Covid 19 on Medical Students and Their Needs to Adjust to the New Normal: Students' Perspectives on the Challenges, Coping Strategies, and Expected Support <i>Pathirana S., Dharmawardene V, Perera R., Gamlathge N. Jayasinghe S. and Jayasinghe D.</i>
<b>02.00 - 02.15</b>	Psychological Distress Among Medical Students During the COVID 19 Pandemic: A Quantitative Study <i>Dharmawardene V., Pathirana S., Jayasinghe D., Jayasinghe S., Gamlathge N., Perera R.A.R. and Ratnayake R.M.K.T.</i>
<b>02.15 - 02.30</b>	Identification of <i>Hypnale Zara (Hump-nosed Pit Viper)</i> Using the Nuchal Colour Bands <i>Rathnayaka R.M.M.K.N., Ranathunga P.E.A.N. and Rajapakshe R.P.V.J.</i>
<b>02.30 - 02.45</b>	Cultural Adaptation and Validation of Sinhala Version of Spiritual Needs Assessment for Patients (S-SNAP) Questionnaire: Results of a Pilot Study <i>Ramadasa G.U., Silva F.H.D.S., Madushani R.M. H., Perera G.L.S.N. and Lekamwasam S</i>
<b>02.45 - 03.00</b>	Metabolic Stress Triggers CD36 Activity in Tumour Initiation in Oral Submucous Fibrosis <i>Sumeth Perera M. W., Samadara Siriwardena and Ruwan Jayasinghe</i>
<b>03.00 - 03.15</b>	Microbiological Contamination of Mobile Phones and Mobile Phone Hygiene Practices Among Undergraduates of a Selected Higher Education Institute <i>Shazna M.N.F, Shashikala H.G.K. , Wimalarathna B.R.J. , Thilakaratne .B.M.P.M. , Ameer M.I. , Perera S.S.S.2 , Walpola L.H. and Perera P.D.V.M.</i>
<b>03.15 - 03.30</b>	Molecular Evidence of Other Viral and Bacterial Pathogens Associated with Lower Respiratory Tract Infection in SARS Cov-2 Suspected Patients in District Rathnapura in Sri Lanka. <i>Madhushanka L.W.N., Lakshman G.V.C.P., Sameera A.W.G.M., Dharmaratne A.W.N.U., Samaranyake W.A.M.P and Wageesha N.D.A.</i>
<b>03.30 – 03.35</b>	Discussion and summing up the session

***Undergraduate Poster Presentations  
Session VII***

<b>Time</b>	<b>1.45 PM - 2.25 PM</b>
<b>Venue</b>	Online
<b>Subject areas</b>	Applied Sciences, Agricultural Sciences, Social Sciences and Geomatics
<b>Pannel Memebers</b>	Dr. M.D.E.K. Gunathilaka Dr M.G.A.N. Perera Dr. W.M. A.U.K. M. Wijesekara

Join Zoom Meeting

<https://learn.zoom.us/j/64161727554?pwd=MzFDTnFZeXNubE1FO0g0eHpJME9JQT09>

<b>Time</b>	<b>Paper Title and Authors</b>
<b>01.45 - 01.50</b>	Value Addition and Quality Evaluation of Pasta Formulated Using Chickpea (Cicer Arietinum) Flour <i>Rimaz A.M.M. , Sajiwanie J.W.A , and Lakshani R.S.K</i>
<b>01.50 - 01.55</b>	Impact Assessment of Clear-cutting in a Pinus Plantation in the Nonpareil Area of Belihuloya, Sri Lanka <i>Ashen J.P.R., Jayalal R.G.U., Udayakumara E.P.N. and Withana N.R.P.</i>
<b>01.55 – 2.00</b>	Binding of Amoxicillin to Hemoglobin <i>Rasangani A.W.P., Namal Perera, and Nirmali Wickramaratne M.</i>
<b>02.00- 02.05</b>	Identification and Control of the Fungal Contaminants in Vitro Cultures of Heuchera hybrida (Coral Bells) <i>Udyana A.D.I., Kumara G.D.K., Dissanayake M.L.M.C., Weerasinghe W. W. B. P. B.</i>
<b>02.05 – 02.10</b>	Agricultural Drought Monitoring Using Multispectral Satellite Data: A Case Study of North Central Province in Sri Lanka <i>Saubhagya I.A.B., Ranasinghe A.K.R.N. , and Kalpana P.V.U.</i>
<b>02.10 - 02.15</b>	Comparison of Accuracies Between Different Levels of PPP <i>Lakshan W.H., Munasinghe D.S. and Karandana C.A.</i>
<b>02.15 – 02.20</b>	The Spatiotemporal Urban Expansion in Greater Kandy Development Area (GKDA) <i>Pilapitiya P.G.D., Uduporuwa R.J.M., Subasinghe S.I.S.</i>
<b>2.20 – 2.25</b>	Association Between Alcohol Consumption and Trauma Incidents Among Patients Admitted to General Surgical and the Orthopedic Wards in the Teaching Hospital – Rathnapura. <i>Weeraman N. H., Jayasekara D. J., Balasuriya D. M., Ratnayaka N.Y.S., Madhuranga D. and Dharmawardene V.</i>
<b>2.25 – 2.30</b>	The Alvarado Score in Appendicitis: Can It Enable Antibiotic Therapy, Reducing the Need for Surgical Treatment? <i>De Silva S.H.T.D., Wijesinghe H.M.M.K., Jayathissa B.A.C.M., Sanduni A., Maduwanthi P.K.D.J.5 and Goonewardene I.M.R.6</i>
<b>02.20 – 02.25</b>	Discussion and summing up the session