Sri Lanka Association for the Advancement of Science

79th SCIENTIFIC SESSIONS

GLANCE PROGRAMME

"Science Diplomacy as a Powerful Force for National Unity and Friendship among Nations"

Ceremonial Inauguration:	10th December 2023	BMICH
Theme Seminar:	11th December 2023	The Open University of Sri Lanka
Scientific Sessions:	12th - 13th December 2023	The Open University of Sri Lanka
Mini Symposia:	14th December 2023	The Open University of Sri Lanka
AGM (Eligible Members only)	15th December 2023	SLAAS Headquarters

LIST OF VENUES - SCIENTIFIC SESSIONS AT THE OPEN UNIVERSITY OF SRI LANKA

Oral Presentations – Sectional Venues

Section A	Colombo Regional Center: Room No 1
Section B	Colombo Regional Center: Room No 2
Section C	Colombo Regional Center: Room No 3
Section D	Colombo Regional Center: Room No 4
Section E1	Colombo Regional Center: Room No 7
Section E2	Colombo Regional Center: Room No 8
Section E3	Colombo Regional Center: Room No 9
Section F	Colombo Regional Center: Room No 10

Poster Presentations:	Colombo Regional Center – Block 4

Ceremonial Inauguration	Bandaranaike Memorial International Conference Hall; Jasmin Hall
Theme Seminar:	New Auditorium, Faculty of Health Sciences, The Open University of Sri Lanka
SLAAS Office:	OUSL - Colombo Regional Center Lobby – Ground Floor
Sectional Business Meetings:	Respective Sectional Venues
Presidential Addresses:	OUSL - Colombo Regional Center Auditorium in Block 7

Special Council Meeting:	Faculty Board Room, Faculty of Natural Science *(Only for Council Members)*
Mini Symposium:	New Auditorium, Faculty of Health Sciences, The Open University of Sri Lanka
Refreshments:	OUSL - Colombo Regional Center Lobby – Ground Floor
AGM:	SLAAS Headquarters, 120/10, Wijerama Mawatha, Colombo 07 *(Only for Eligible Members)*

Sri Lanka Association for the Advancement of Science

79th ANNUAL SESSIONS

Ceremonial Inauguration

(Invitees Only)

Under the theme of

Science Diplomacy as a Powerful Force for National Unity

on

Sunday, December 10, 2023 at 2.00 p.m.

at the

Bandaranaike Memorial International Conference Hall
Jasmin Hall

Chief Guest

Deshamanya Professor Mohan Munasinghe

Chairman, Munasinghe Institute for Development (MIND) and MIND Group

Programme

2.00 p.m.	Arrival of Members and Guests
2.20 p.m.	Arrival of the Chief Guest
2.30 p.m.	Introduction of Members of the Council
2.40 p.m.	Commencement of the Ceremonial Procession
2.45 p.m.	Lighting of the Traditional Oil Lamp
2.55 p.m.	National Anthem
3.00 p.m.	Welcome Address Professor Ranjith Senaratne General President / SLAAS
3.05 p.m.	Felicitations from Sister Associations
3.15 p.m.	Address by the General President Professor Ranjith Senaratne
3.45 p.m.	Address by the Chief Guest Deshamanya Professor Mohan Munasinghe Chairman, Munasinghe Institute for Development (MIND) and MIND Group
4.15 p.m.	Presentation of Awards
4.50 p.m.	Vote of Thanks Professor R. D. Wijesekera General President-Elect, SLAAS
5.00 p.m.	Refreshments

Sri Lanka Association for the Advancement of Science

79th ANNUAL SESSIONS

Theme Seminar

On invitation

Monday, December 11, 2023

From 8.30 am to 2.00 pm

At

New Auditorium, Faculty of Health Sciences

The Open University of Sri Lanka

Under the theme

'Science Diplomacy as a Powerful Force for National Unity and Friendship among Nations'

For more information

Please Contact
SLAAS Headquarters
120/10, Wijerama Mawatha,
Colombo 07

Phone: 011 2688 740

08.00 a.m. – 08.30 a.m.*	**Registration of Participants**
08.30 a.m. – 08.40 a.m.	**Welcome Address and Opening Remarks** Prof. Ranjith Senaratne, General President/ SLASS
08.40 a.m. – 09.10 a.m.	**Keynote Speech: "Science Diplomacy as a Powerful Force for National Unity and Friendship among Nations"** Sir Prof. Peter Gluckman, President, International Science Council (ISC)
09.10 a.m. – 09.30 a.m.	**Address by the Chief Guest** H.E. Sandile Edwin Schalk, Ambassador for South Africa in Sri Lanka
09.30 a.m. – 09.50 a.m.	**"Elevating Sri Lanka's Global Influence: The Role of Sri Lankan Scientists in Science Diplomacy"** Emeritus Professor Saroj Jayasinghe, Faculty of Medicine, University of Colombo, Sri Lanka
09.50 a.m. – 10.10 a.m.	**"Science Diplomacy for Reconciliation, Peace and National Development"** Prof. P. Balasundarampillai, Former Vice-Chancellor, University of Jaffna, Sri Lanka
10.10 a.m. – 10.30 a.m.	**Tea Break**
10.30 a.m. – 10.50 a.m.	**"Science Diplomacy and the Asia Pacific Region: Challenges and Opportunities"** Dr Baskar Balakrishnan, Fellow for Science Diplomacy, Research and Information System (RIS) for Developing Countries, India
10.50 a.m. – 11.10 a.m.	**"Science and Innovation Diplomacy for and from the Global South"** Mr Pedro Ivo Ferraz da Silva, Head of Science, Technology & Innovation and Technical Cooperation at the Embassy of Brazil in Berlin
11.10 a.m. – 11.30 a.m.	**"Science Diplomacy in the Middle East and Neighboring Regions: Slogan or Reality?"** Dr Gihan Kamel Badie, Principal Scientist, Synchrotron-light Project for Experimental Science and Applications in the Middle East (SESAME), Jordan
11.30 a.m. – 11.50 a.m.	**"Science Diplomacy: Lessons learned from the European Region"** Prof. Pierre-Bruno Ruffini, Professor of International Economics at the Faculty of International Affairs, University of Le Havre, France
11.50 a.m. – 12.40 p.m.	**Panel Discussion:** "Application of Science Diplomacy in Promoting National Unity and Friendship among Nations" **Chairman:** Ambassador Sumith Nakandala, Former Secretary General of BIMSTEC and Former Additional Foreign Secretary **Rapporteur:** Ms Thilinakumari Kandanamulla, Scientific Officer, National Science Foundation, Sri Lanka

(*All Times are in Sri Lanka Standard Time)

12th December 2023 (Tuesday) MORNING				
Time	**Section A**	**Section B**	**Section C**	**Section D**
08:00 am	**101/A** Detection of Acute Toxicity in Water from Colombo and Anuradhapura Districts using Zebrafish Egg and its Correlate to Some Water Quality Parameters *M.G. Thammitiyagodage, R.Karunakaran, A.B.M.G. Deshapriya , S Corea and D. Wanniarachchi.*	**201/B** Determination of functional and physiochemical properties of flower sap, toddy and honey of three selected palm species in Sri Lanka *L.R.N.P. Fernando , R.G.S. Wijesekara , and D.C. Abeysinghe*	**301/C** Transfer based Bus Transport Networks: A Modified Concept on Feeder Bus Operations *S. Sharic, S. Bandara, and N. Silva*	**401/D** Analysis of putative xylanase enzyme in Mycobacterium tuberculosis *T.R.M. Madusanka and I.C. Perera*
08:15 am	**102/A** Health and environmental impacts of extensive unregulated agrochemical usage: An online public awareness survey. *H. P.Sandeepani, D.T.D.Warnakulasuriya, S. U.Bandara, C. W.Subasinghe*	**202/B** Comparative analysis of yield, bioactive compounds and antioxidant capacity of essential oil extracted from leaves of *Citrus reticulata* Blanco. belonging to five different varieties *H.W.L.S. Gunarathna , R.M. Dharmadasa , I.J. Amadoru , and D.C. Abeysinghe **	**302/C** Variation of particulate patter in different seasonal conditions in colombo city *R. Navaratne, S. Himanujahn, H.D.S. Premasiri, and B.C.L. Athapattu*	**402/D** Isolation of abiotic stress regulated OsBBX13 promoter from Rice (*Oryza sativa*) *S.N.C.M. Dias, and C.M. Hettiarachchi*
08:30 am	**103/A** A study to compare the dosage variation in five types of Ayurvedic pills, used in Sri Lanka in four different commercial preparations. *T. Hewavithana, D. H. G. A. N. Keerthirathne, G. M. T. M. Piyasekara, L. A. N. Madushani, and T. A. N. R. Gunaratna*	**203/B** Functional properties and proximate composition of immature fronds of different fern species as underutilized vegetables *T.D.R.S.P. Jayasinghe and D.C. Abeysinghe*	**303/C** Optimization of coagulation and flocculation process of palm oil mill effluent using natural coagulant and flocculent *C. M. E. Arachchi, S. Himanujahn, and B. C. L. Atapattu*	**403/D** Characterization of growth-related cyanotoxin production in selected cyanobacteria *H.M.S.A.T.Gunathilaka, and D.N. Magana-Arachchi*
08:45 am	**104/A** Anti-inflammatory activity of Murungadi Lepaya: A traditional formulation used for joint diseases. *C.G. Kalubowila , W. J. A. B. N. Jayasuriya , H M D R Herath , J M Dahanayake*	**204/B** Development of a poly-herbal beverage incorporated with tranquilizing bioactive compounds using *Withania somnifera* (Ashwagandha), *Valeriana jatamansi* (Thuwarala), *Bacopa monnieri* (Lunuwila), and *Acorus calamus* (Wadakaha) *G.K. Balasuriya and P. De A. Abeysundara*	**304/C** Explore the implementation of BIM for building projects in Sri Lanka to improve project performance and yield better results at the design stage *H. Bandara, U. Perera, and K.N.R. Silva*	**404/D** Anti-fungal effects of endophytic fungi isolated from Plumeria rubra leaves against pathogenic fungi; Fusarium, isolated from diseased leaves of *Epiphyllum oxypetalum* *M.K.S.R. Fonseka and A. V. K Udalamaththa*

09:00 am	**105/A** *In-vitro* anti-urolithic activity and phytochemical analysis of ethanolic extract of Varuna (*Crateva adansonii* DC.) stem bark *D.M. Nallaperuma and A.P.A. Jayasiri*	**205/B** Development of sugar sprinkles with antioxidant properties by incorporating refused black tea extract as a natural food colorant *B.S. Senevirathne , M.A.D. Somendrika, and W.S.M. Chandrathilaka*	**305/C** Assessing the sustainability of a cascade system: A case study of Kimbulawala Lake and connected waters *W. Gammanpila, R.S.M. Samarasekara, and A. Siriwardana*	**405/D** Effect of cadmium, chromium, and lead on mortality and kidney functions of zebrafish (*Danio rerio*) embryo *I. B. K. Thomas,, C. D. Jayasinghe , D. T. Abeysinghe , and R. Senthilnithy*

12th December 2023 (Tuesday) MORNING				
Time	**Section E1**	**Section E2**	**Section E3**	**Section F**
08:00 am	**501/E1** Investigating outburst characteristics of YZ Cancri dwarf nova through TESS photometry *N.I. Medagangoda, H. L. P. M. Karunaratne, W. M. D. M. Wickramasinghe,K.M. Munasinghe , and A. G. S. Sandumini*	**601/E2** Nanosilver-embedded polycaprolactone and gelatin electrospun scaffolds: understanding their distribution effect on antibacterial activity and cell viability *K. V. D. T. Chandraguptha, V. U. Godakanda, S. R. Samarakoon, K. M. N. de Silva, and W. R. M. de Silva*	**701/E3** Monitoring system for thriving agriculture in Sri Lanka *R.R.P. De Zoysa, M.B.T.H. Perera, H.I.S. Ranjith, T.Y. Wiladdaragamage, A. Rajakaruna, and H. Hikkaduwa*	**801/F** Agricultural extension needs of licensed tea leaf dealers: a case study in Matara district, Sri Lanka *M.K.Samaraweera, and M.Wijeratne*
08:15 am	**502/E1** Study of the effect of chemical composition on the standard compressive strength of ordinary Portland cement with the same mixed design *T.M.B. Arachchige and S.P. Guluwita*	**602/E2** Preparation and characterization of electrospun membrane embedded with visible light active cobalt doped ZnO nanohybrids for food packaging *S. D. Deshapriya, Dr. I. Munaweera*	**702/E3** Identification of Sinhala fake news on social media platforms *H.G.H.S. Hathnapitiya and S. Ahangama*	**802/F** An analysis of dried fish price mark-up: a case study in urban and rural dried fish market in Batticaloa *U. P.G.K.J. Thilakshana, D. N. Koralagama*
08:30 am	**503/E1** Design and fabrication of 360-degree rotatable eyepiece unit for Newtonian reflectors as an ergonomic improvement of astronomical instrumentation *A.V.M. Jayawardana*	**603/E2** Development of an extended-release insect repellent bio-composite by encapsulation of *Acronychia pedunculata* essential oil into Cloisite 20A against Sitophilus oryzae (L.) (Coleoptera: Curculionidae) *H.T. Liyanage, S.D.M. Chinthaka, and A.G.W.U. Perera*	**703/E3** Adoption of Health Information Systems *T. Senthilrajah and S. Ahangama*	**803/F** An assessment of the preferred drying technology of dried fish producers: a case study in Negombo, Sri Lanka *J.A. Amanda*, D.N. Koralagama*

08:45 am	**504/E1** Investigation of the reverse piezo response of tropocollagen using molecular dynamics simulations. *D.M.U.S. Dissanayaka, and W.A.M. Madhavi*	**604/E2** Synthesis of hollow hydroxyapatite (HHAp) and its composites for enhanced photocatalytic performance *H. T. S. J. Madusankha, K. M. N. de Silva and W. R. M. de Silva*	**704/E3** UI Builder: an automatic code generation tool for design and implementation of user interface *S. Sanjay, H. M. K. Navodya, D. P. K. Gimshani, and N. Kodagoda*	**804/F** Expectations of small-scale maize farmers towards the public-private collaborative promotional projects: a case study in Polonnaruwa District, Sri Lanka *Athapaththu A.W.D.N.K, Sandika A.L., Samaraweera G.C.*
09:00 am	**505/E1** XRD and SEM characterization and performance analysis of rGO/carbon black incorporated positive electrode in lead acid battery *R. J. Dissanayeka, W.G.K.S. Buddhika, K.K. Pipun Randika, M.K.T. Madushan, C. Manathunga, R.C.L De Silva, A.M.K.L. Abeykoon and I.R.M Kottegoda*	**605/E2** Preparation and investigation of slow-releasing NPK fertilizer films using protein extracts from fish-waste *K.P.A.M. Sandaruwan, R.D. Wijesekara, H.D.D. Bandupriya, and S.M. Vithanarachchi*	**705/E3** A review of object detection algorithms: R-CNN, YOLO and SSD *M. Z. A. Careem and B. V. K. I. Vidanage*	**805/F** Thai Pongal festival and social harmony in Sri Lanka *W.M.U.Weerakoon*

12th December 2023 (Tuesday) MORNING				
Time	**Section A**	**Section B**	**Section C**	**Section D**
09:15 am	Presidential Address – Section A			
10:15 am	**Sectional Business Meetings**			
11:10 am	**Tea Break**			
11:30 am	Presidential Address – Section E3			
12:30 pm	**Lunch Break**			
01:15 pm	Presidential Address – Section E2			
02:15 pm	Presidential Address – Section E1			
03:15 pm	**Tea Break**			

12th December 2023 (Tuesday) EVENING				
Time	**Section A**	**Section B**	**Section C**	**Section D**
03:30 pm	**106/A** Evaluation of acid-neutralising activity of *Asparagus racemosus* Wild. in tablet form *R.K.D.S.H. Rajapaksha, W.J.A.B.N. Jayasuriya, H.M.D.R. Herath, J.M. Dahanayake and L.D.A.M. Arawwawala*	**206/B** Development of button mushroom (*Agaricus bisporus*) based savoury cream for the fast food industry *B.P.S. Rajapakshe, K.A.V. Maneesha, and S.B. Navarathne*	**306/C** Vertical settlement of Samanalawewa Dam: Results of 10 years of observations on its vertical control network *J. Rajavarathan, M. Gunathilaka, and S. Lakshan*	**406/D** Effect of altering circadian rhythms during post-harvest storage on the shelf life of *Basella alba* (Spinach) leaves *W.D.N. Perera, and R. Wimalasekera**
03:45 pm	********	**207/B** Analysis of nutritional composition, chemical and functional properties of Salacia reticulata (kothalahimbutu) aqueous extract incorporated drinking yoghurt *K.A.V. Maneesha, B.P.S. Rajapakshe, and S.B. Navaratne*	**307/C** The historical modulations of Sri Lankan rainfall by El Niño and La Niña held between 2007 and 2023 *N. Alahakoon, D. Kulasooriya, Y. Razi, K. M. A. U. Senevirathna, and L. Zubair*	**407/D** Effect of water stress on the morphological, physiological and biochemical parameters of Quinoa (*Chenopodium quinoa* Willd.) variety Amarillo Marangani *A.I.L. Silva, and R. Wimalasekera*
04:00 pm	********	**208/B** Development of a keto-diet support avocado muffin by incorporating avocado flour, pulp and rice flour *B.K.B. Navodya , R.A.U.J. Marapana, and D.C. Abeysinghe*	**308/C** Comparative study of alternative dispute resolution clauses in FIDIC conditions of contract and CIDA standard bidding document *A. N. Perera and V. Edirisinghe*	**408/D** Evaluation of co-digestion for domestic biogas production under tropical climate conditions *G.P.S.Senevirathna, and S.N.C.M.Dias*
04:15 pm		**209/B** A comparison of water absorption capacity during hot soaking and proximate composition of At-405 rice variety at different milling stages *M.M.D.L. Bandara and M.A.J. Wansapala**	**309/C** An investigation of the physicochemical characteristics of intermittent streams in the dry zone, Sri Lanka *M.D.D. Perera*	**409/D** A preliminary study on the comparative effects of Bisphenol-A and Bisphenol-S on human erythrocyte membrane stability and blood clotting *G K.H.P.P. Kodithuwakku, and G. Rajapaksa*

04:30 pm	********	**210/B** Impact of grinding method and pre-grinding parameters on the quality of *Cinnamomum zeylanicum* Blume (cinnamon) powder *W.K.T. Lakmali , A.A. Wijeweera , G.K.M. Rajapaksha , M.J. Dheerasinghe , and B.S.W. Karunarathna*	**310/C** Application of remote sensing data in flood mapping- a case study in the Nilwala River basin *C. I. Madhushani and U. Rathnayake*	**410/D** Development of a screening method to differentiate Sri Lankan virgin coconut oil, palm oil and homemade coconut oil using ATR-FTIR technique A.D.S. Prathibha, B.A.T. Amalka , K.M. Binduhewa, D.C.K.K. Dissanayake , and I Wijesekara

12th December 2023 (Tuesday) EVENING				
Time	**Section E1**	**Section E2**	**Section E2 (Parallel)**	**Section F**
03:30 pm	Please see December 13 morning for the (rest of presentations ********	**606/E2** Purification and characterization of Sri Lankan vein graphite obtained by acid leaching method *D.B.H.I.Bandara , S.D.M.Lakshani, A. D. K. I. Weeraratne, R.C.L De Silva, A.M.K.L. Abeykoon, M.H.T. Dulaj and I.R.M Kottegoda*	**612/E2** A study on physicochemical and antioxidant properties of different brands of 'Nimba Arishta' in Sri Lanka *M.A.J. Wansapala, T.M.S.G. Tennakoon, and P.W.D. Thakshila*	**806/F** Improving teacher competencies through ICT integration: An online gamified learning intervention using Kahoot S. Amarasinghe
03:45 pm	********	**607/E2** XRD, FTIR and SEM characterization of graphite oxide synthesized using Sri Lankan vein graphite. *S.D.M. Lakshani, D.B.H.I. Bandara, T.N. Senapathi, R.C.L De Silva, A.M.K.L. Abeykoon, M.H.T. Dulaj and I.R.M Kottegoda*	**613/E2** In-vitro anti-inflammatory activity of aqueous extracts of *Dialium ovoideum* Thwaites leaves *D. C. J. Liyanage and H. I. C. De Silva*	**807/F** Formative assessment practices in secondary teaching and learning: a critical explanatory study I.G.C.Chandrakumara
04:00 pm	********	**608/E2** Effect of solvent parameters on electrochemical exfoliation of graphene *O.N. Malawalaarachchi, and N.P.W. Rathuwadu*	**614/E2** Quercetin-3-β-D-galactoside from *Ziziphus oenoplia* (L.) Miller with enhanced cell migration and proangiogenic activity *W. M. P. Samarasinghe, C. Ranasinghe, K. H. Jayawardana and G. M. K. B. Gunaherath*	**808/F** Discernment towards online learning during the COVID-19 pandemic: a vivid analysis in the University context in Sri Lanka S.S.M. Peramunagama, L. D. M. Zoysa, N. Sanotharan and D.N. Koralagama

04:15 pm	********	**609/E2** Antifungal, antioxidant, and anti-inflammatory potentials of an authenticated Ayurveda herbal formula *M.I. Rahmah, R.D.H. Kulatunga, P. Pranagama, C.M. Hettiarachchi*	**615/E2** Development of a formulation for sprouted legumes-based probiotic beverage with coconut milk: determination of its probiotic count and proximate composition *A.L.D. Dashmika, and C. Jayathilake*	**809/F** The use of *Azolla* as a sustainable protein and mineral supplement for livestock feed N.Sanotharan, and S.S.M.Peramunagama
04:30 pm	********	**610/E2** Determination of antifungal properties of endophytic fungi isolated from *Wendlandia bicuspidate* *H. A. V. Fernando and C. M. Hettiarachchi*	**616/E2** Physicochemical and nutritional characterization of nutrient rich snack bar formulated with Cucurbita moschata and local ingredients for school children *Kumari A.W.P.N., Senanayake G.S.A.*	**810/F** Addressing aversion to learning science via content and language integrated learning (CLIL) activities: an action research case study N.A.L.A Nettikumara.
04:45 pm	********	**611/E2** Development of a hydrophobic antibacterial cotton substrate using bio-based fatty acids *W.D.M.H. Karunarathna, C.J. Narangoda, L.D.C. Peiris, L. Karunanayake*	**617/E2** Design and development of a CRISPR/Cas9 tool kit to silence the allosteric activator binding domain of PFK-1 in cancer cells as novel therapeutic approach for cancer *W.T.S.K De Silva and G.N. Silva*	**811/F** An overview of food and beverages global value chain of Sri Lanka M.D.D. Perera.

13th December 2023 (Wednesday) MORNING				
Time	**Section B (parallel)**	**Section B**	**Section C**	**Section D**
08:00 am	**219/B** Comparative study on the physicochemical properties, antioxidant activities and quality parameters of commercially available vinegar in the local market *T.D.G.L.R.T. De Silva and I. Wickramasinghe*	**211/B** Assessing the effectiveness of eco-friendly extracts to control *Aleurodicus disperse* (spiraling whitefly) in *Cocos nucifera* (coconut) *R. Thibisha, S. Keerthika, P.A. Shiromiya, S. Karunakaran, and R.F. Niranjana*	**311/C** Analytical assessment of issues and solutions, and proposal for a physical model at a critical meandering location in Deduru Oya *S. Gimhana*	**411/D** Development and analysis of nutritional properties of gluten free cookies incorporated with Water Lily Rice ("Oolu Haal", *Nymphaea* Sp.) *W.D.U. Deemanka and W.L.I. Wijesekara*
08:15 am	**220/B** Exploring the starch composition of underutilized flour varieties in Sri Lanka compared to refined wheat flour *N.S. Nirmani , C. Jayathilake , R. Liyanage. Wickamasinghe , and M.A. Jayasinghe*	**212/B** Evaluating the potency of formulated pesticides from Acorus calamus Linnaeus, 1753 (sweet flag) to fend off cowpea grain deterioration by *Callosobruchus maculatus* Fabricius, 1775 *S. Keerthika and R.F. Niranjana*	**312/C** Assessment framework for disaster management in passenger terminals *S. K. Manamperi, and A. J. Perera*	**412/D** Molecular xenomonitoring of brugian filariasis in two filariasis endemic areas *V.A.C.B. Amarasiri , D.K.R. Aluthge , S.U. Nimalrathna , and H. Harischandra*
08:30 am	**221/B** Optimization of surface sterilization and in vitro shoot proliferation protocols of shoot tip explants of *Aloe vera* (L.) Burm. f. *K.M.K. Madarasinghe and P.S. Warakagoda*	**213/B** Use of cassava flour as a possible replacement for wheat flour in selected commercial and conventional products *S.M.C.N. Senanayake, M.A. Jayasinghe, M.A.D. Somendrika, and C. Jayathilake*	**313/C** Efficacy of green building rating systems to protect biodiversity of Sri Lanka *S. Navimanage*	**413/D** Variation of water quality and brush park fish diversity: A study in Negombo Estuary *R. P. P. Ratnayake, and W. U. Chandrasekara*
08:45 am	**222/B** Spice gardens in web-based experiential tourism: A study from Matale divisional secretariat, Sri Lanka *D.A.L.H. Delpearachchi, L.B. Dunsford , and L.P.S.S. Pathirathna*	**214/B** An evaluation of the residential gardens as suitable habitats for wildlife conservation: A case study in butterfly fauna associated with residential gardens in Gampaha divisional secretariat *J.K.W.N. Subashini, K. Yakandawala , and E.S. Minor*	**314/C** Harmony of elements: Investigating the impact of macronutrient levels on water quality in the North Colombo coastal region of Sri Lanka *H. Siriwardana and R.S.M. Samarasekara*	**414/D** Herpetofaunal diversity and endemism in a fragmented forest patch: *S. P. M. Sandeepa, and W. U. Chandrasekara*

09:00 am	**223/B** Evaluation of selected electrophysiological properties of *Dovyalis hebecarpa* (Ketambilla) under moisture and nutrient stimuli *S.T. Warusavithana, J.A.S. Chathurika , and N.P.W. Rathuwadu*	**215/B** An evaluation of supercritical fluid extraction method against the conventional Soxhlet extraction method using *Pouteria campechiana* (Kaha Lawulu) fruits *T.T. Samarasinghe and C. Jayathilake*	**315/C** Spatiotemporal investigation of plan geometry of Deduru Oya to identify causes of aggressive river meandering *A. M. A. D. Attanayake* and P. I. A. Gomes*	**415/D** Morphological and vocal characterization of Western and Eastern Yellow Wagtail allospecies complex (*Motacilla flava – tschutschensis*) in Sri Lanka *N. S. Samarasinghe , G. Allport and S. S. Seneviratne*
09:15 am	**224/B** Combined tolerance to anaerobic germination and submergence in Sri Lankan *Oryza sativa* L. (rice) germplasm indicates their compatibility to grow in prolonged floods to suppress weeds *P.A.M. Krishanthi , H.M.S. Herath , and S.A.D.P. Senadheera*	**216/B** Effectiveness of a biodegradable antimicrobial packaging film developed from food industrial wastes in preserving minimally processed *Psidium guajava* (guava) fruits *S. Anandavadivel and J.M.J.K. Jayasinghe*	**316/C** Exploring the role of ephemeral streams in mountainous regions on landslides and understanding the level of regulation *B. G. A. E. Gamage and P. I. A. Gomes*	**416/D** Parasite load and host immune response in avian communities along the elevational gradient *H.D.J.M. Karunarathne , M.S. Mapalagamage , S. N. Weerakkody , V. R Gunasekara , and S.S. Seneviratne*

13th December 2023 (Wednesday) MORNING				
Time	**Section E1**	**Section E2**	**Section E2 (Parallel)**	**Section F**
08:00 am	**506/E1** Measurement of airborne indoor radioactivity from alpha emitting isotopes in Colombo municipal council schools *T.P. Adikari, M.R. Lamabadusuriya, and C.sS. Sumithrarachchi*	**618 /E2** Investigation of the effect of selected hydrotropes on the solubility of drug-like molecules from Sri Lankan flora: a computational approach *I.C.M. Ranaweera and Samantha Weerasinghe*	Please visit room 8 from here onwards	**812/F** Harnessing the overseas expatriate base to leverage local science, technology innovation (STI) capacities: initiatives by some science funding agencies from developing countries K.A.T.K.G. Kandanamulla* and J. G. Shantha Siri.
08:15 am	**507/E1** Impact of seawater intrusion on the groundwater in the Hikkaduwa area *T.N. Millawithanachchi and V. Edirisinghe*	**619 /E2** Design and development of a CRISPR/Cas9 toolkit for silencing PFKFB3 to attenuate cancer progression *S. Shashmeera, G.N. Silva*	********	**813/F** Economic evaluation of conventional and organic pineapple cultivation incorporating externalities

				M. A. Gunawardena* and E. Y. K. Lokupitiya
08:30 am	**508/E1** Light curve analysis of Kepler-observed eclipsing binary star systems: KIC3858884, KIC8504570, and KIC6629588 *L. V. A. N. Perera, J. Adassuriya, and K. P. S. C. Jayaratne*	**620 /E2** Determining the structural stability and dynamics of relaxin family peptide receptor- 1 (RXFP1) through in silico approaches *M.A. Gnanapragasam, K.S. Mendis, R.K. Dissasekara, A. Bandara, and T. Jayakody*	********	**814/F** Benefits to beach users: A travel cost analysis of multiple recreational activities L. H. P. Jayarathna, J. M. M. Udugama and G. A. N. D. Ganepola
08:45 am	**509/E1** Machine learning application for binary and pulsation star classification *D. Anuruddha, J. Adassuriya, and K. P. S. C. Jayaratne*	**621/E2** Investigation of the effect of divalent metal ions on the secondary structure of α-synuclein: an in-silico approach *I.P. Nicholas and M.S.S. Weerasinghe*	********	**815/F** Effect of lean tools in minimizing waste: a case study of Sri Lankan apparel industry D.D.P. Chathumadhara, J.M.M. Udugama, U.A.D.P. Gunawardena, K.D.De S. Jayasekara.
09:00 am	********	**622/E2** Examining the impact of phenylindane on the stability of tau protein secondary structure in the presence of metal ions: implications for Alzheimer's disease progression *W.B.L. Perera and M.S.S. Weerasinghe*	********	**816/F** Assessment of the cost of agriculture production loss due to salinity intrusion in the coastal regions of Jaffna Peninsula: a case study in Irupalai South M. M. Rachel, U. A. D. P. Gunawardena.
09:15 am	********	**623/E2** Engineering marine bacterium *Pseudoalteromonas atlantica* KCTC 22877 as a microbial chassis for red algal biorefinery *D. Pathiraja, I.G Choi, P. Stougaard*	********	**817/F** Determinants of consumer attitudes towards an antioxidant-rich herbal tea made from blue butterfly pea flower (*Clitoria ternatea* L.) M.K.C.Y. Nanayakkaraa, J.M.M. Udugamaa*, K.M.G.K. Pamunuwab* and G.A.N.D. Ganepolaa

13th December 2023 (Wednesday) MORNING				
Time	**Section A**	**Section B**	**Section C**	**Section D**
09:45 am	Presidential Address – Section F			
10:45 am	**Tea Break**			
11:15 am	Presidential Address – Section D			
12:15 pm	**Lunch Break**			
01:15 pm	Presidential Address – Section C			
02:15 pm	Presidential Address – Section B			
03:15 pm	**Tea Break**			

13th December 2023 (Wednesday) EVENING				
Time	**Section B (parallel)**	**Section B**	**Section C**	**Section D**
03:30 pm	********	**217/B** Effect of in vitro digestion on antioxidant activity of selected breakfast foods *S.D. Epa Arachchi and R.A.U.J. Marapana*	**317/C** Improving road safety of bicycles through vibration-based energy generation *D K. Fernando and N. Medagedara*	**417/D** Microplastic contamination in Morawala intertidal rocky shore in Negombo, Sri Lanka: possible threats towards molluscs during Southwest and Northeast monsoon seasons. *A.A.D.N. Thathsarani , R.S. Rajakaruna , and U.A. Jayawardena*
03:45 pm	********	**218/B** Antifungal efficacy of Gracilaria, Sargassum and Ulva extracts against selected fungal pathogens of Solanum melongena under *in vitro* conditions *B.K.D.M. Rodrigo, A.H.D. Alahakoon, H.M. Herath, P. Edirisinghe, and R.P. Wanigatunge*	**318/C** Development of an improved biomass stove for urban households *S. Jatunarachchi*	**418/D** Study of gastrointestinal parasitic infections in isolated, semi-wild population of critically endangered hog deer (*Axis porcinus*) in Honduwa island sanctuary in the wet zone of Sri Lanka *G.P. Harischandra , I.C. Perera , P.K.P. Perera , N. Dayawansa*
04:00 pm	********	Please visit Section B parallel sessions on December 13 at the venue of CRC- Room no 4. ********	********	**419/D** Nestling development in *Dinopium* Flamebacks of Sri Lanka: A study using endoscope nest cameras *E.D.J. Chathurya , T.S.P. Fernando , and S.S. Seneviratne*
04:15 pm	********	********	********	**420/D** The effect of genetic introgression in shaping phenotypic diversity in *Dicrurus drongos* *A.D.S. Madumali, S. Weerakkody, V.R. Gunasekara, and S.S. Seneviratne*

04:30 pm	********	********	********	**421/D** Microplastics occurrence in the gut content of Bluestripe herrings Herklotsichthys quadrimaculatus (Rüppell, 1837) along the Southern coastal waters of Sri Lanka *T.R.I. Gamage, M.I.G. Rathnasuriya and W.A.A.U. Kumara*
04:45 pm	********	********	********	**422/D** Spatial distribution of vectors carrying brugian parasites in a transmission active locus in the Puttalam District, Sri Lanka. *D.K.R. Aluthge , V.A.C.B. Amarasiri , S.U. Nimalrathna and H. Harischandra*

13th December 2023 (Wednesday) EVENING				
Time	**Section E1**	**Section E2**	**Section E3**	**Section F**
03:30 pm	********	**624/E2** Synthesis and characterization of novel sulfonamide derivatized copper dipicolymine complexes towards promising biological applications. *W.V.D.L.A. Wevitavidana, and N.T. Perera*	********	**818/F** Preference of farmers to participate in a Leptospirosis (rat fever) control program in Kurunegala District *G.A.N D. Ganepola, R.D.M.U.B. Dissanayake and J.M.M. Udugama*
03:45 pm	********	**625/E2** Design and development of riboswitch-based whole-cell biosensor to detect fluoride level in drinking water *W. M. R. Ariyarathna, L. N. A. J. P. Nissanka, E. K. D. Abeyrathne, M. Satharasinghe, P. Banushan and G. N. Silva*	********	********

04:00 pm	********	**626/E2** Development of sulfonamide-derivatized dipicolylamine ligands as fluorescent probes for the selective determination of Fe^{2+} / Fe^{3+} ions *A. D. D. De Zoysa, N. T. Perera, and A. Cooray*	********	********
04:15 pm	********	**627/E2** Microplastics in the gut content of salt-dried smoothbelly sardinella (*Amblygaster leiogaster*) *K.M.S.M. Samarakoon, D.M.S.S. Daundasekara and R.S. Rajakaruna*	********	********
04:30 pm	********	]********	********	********
04:45 pm	********	********	********	********

Poster Presentations 12th & 13th December 2023

Section A

901/A	Analysis of the treatment outcome of Plasmodium falciparum and non-falciparum malaria parasites in the malaria POR phase in Sri Lanka, by iDES. *W. M. K. T. de A. W. Gunasekera1*, R. G. Premaratne2, R.M.I.D. Rathnayake1, S. Premawansa3, O.V.D.S.J. Weerasena4, S.M. Handunnetti4, D. Fernando5*
902/A	Anxiolytic activity of an herbal preparation in rats subjected to light dark exploration model. *K.N.A.Dharmasena1*, A.R. Murthy 2 , K. Choudhary 3 , G.Sharma 4*

Section B

903/B	Development of a ready-to-eat, vegan sandwich filler by incorporating underutilized food commodities in Sri Lanka *H.T. Kodithuwakku and P. De. A. Abeysundara*
904/B	Development of strained yogurt spread incorporated with fresh mint leaves and coriander leaves and evaluation of its quality parameters *A.P.D.G. Pathirana*, K.K.J.S. De Alwis, M.V.I. Kumari, and W.A.P.P. Weeragalla*
905/B	Assessing the suitability of in-bottle pasteurization techniques for small-scale dairy production *K.K.J.S. De Alwis 1 *, A.P.D.G. Pathirana 1 , D.R.T Preasadini 2 , and M.V.I. Kumari 1*

Section B *(Continued..)*

908/B	Exploring the adoption levels of scientific practices in agroforestry home gardens: a case study in Weligama divisional secretariat (DS), Sri Lanka *M.G.D. Abeysinghe, G.C. Samaraweera, and M. De Zoysa*
909/B	The role of hydrophobic characteristics in organic soil amendments on aggregate stability *I.S. Wijeysingha and D.A.L. Leelamanie*
910/B	Development of functional malted powder with selected pulses and date seeds *M.M. Samarasinghe and M.A.J. Wansapala*
911/B	Development of a ready to serve beverage using Dioscorea esculenta (Kukulala) *W.A.S.C.A.W. Arachchi and M.A.D. Somendrika*
912/B	Effect of hot water, ultrasound-assisted and microwave-assisted extractions on bioactive compounds of spent tea from mid-country, Sri Lanka *P.D. Asheena* and R.A.U.J. Marapana*
913/B	Technical efficiency comparison and the socio-economic factors influencing the coconut plantations maintained under different cropping systems: A case of Kuliyapitiya Division, Kurunagala District, Sri Lanka *S.K.T. Rajapaksha and K. Umashankar*

906/B	Evaluation of the physicochemical characteristics of milk fat obtained from two locally reared pure European cattle breeds of Friesian and Ayrshire in Sri Lanka *W.A.Y.A. Wickramaarachchi, G.S.A. Senanayake, and R.A.U.J. Marapana*
907/B	The effect of different types of biowaste based-vermiwash in combatting *Aphis fabae* (black bean aphids) *P.A. Shiromiya and R.F. Niranjana*

914/B	Dung removal, seed dispersal by dung beetles and germination success of the dispersed seeds *P.S.S. Pathirana, E.P. Kudavinage, and L.D. Lekamge*
915/B	Developing a seedling pot and seed balls using elephant dung *S.S.R.M.D.H.R. Wijesekara 1 , E.P. Kudavidanage 1 , S.K. Gunatilake 1 , H.A.C.S. Hapuarachchi 2 , Mihiran Medawela 3 , and K.G.R.R. Jayaweera 1,3 **

Poster Presentations 12th & 13th December 2023

Section D

916/D	Assessment of the effect of traditional Sri Lankan spice mix on selected haematological and immunological parameters in male Wistar rats *S. S. Gunasekara, I. C. Perera, and M. S. MapalagamageS. S.*
917/D	Species richness and activities of bird communities against different climatic variables along a 1km elevational gradient in the Issengard Biosphere Reserve, a submontane forest in Belihuloya, Sri Lanka *A.S. Adikari, S.J. Perera, S.S. Seneviratne*
918/D	Analysis of the impact of rainfall variation on landslide occurrence at village and sub-district scale: Case study in Akurana sub-district of Kandy District *K. M. A. U. Senevirathna, D. Kulasooriya, N. Alahakoon and L. Zubair*

Section E2

925/E2	Removal of nitrate by biosynthesized iron nanoparticles using Coffea arabica leaf extract *K. A. P. Gaminda, D. T. Abeysinghe, C. D. Jayasinghe and R. Senthilnithy*
926/E2	Development of gluten-free cookies using a composite flour mixture of rice, mung bean, and horse gram flour *C.T. Wijekulathilaka, S.A. Senanayake*
927/E2	Evaluation of antimicrobial activity of saponins extracted from *Sapindus emarginatus* *L.P.R.K. De Saram, A.I. Ratnayake, P.R.R. Lakruwan, C. Padumadasa, T.D.C.P. Gunasekara, M.A. Siriwardhene, C.J. Narangoda*

919/D	Evaluation of antioxidants, antioxidant-activity, and mineral composition of commercially cultivated mushroom species in Sri Lanka *H. M. U. I. Medawatta , P. Ranasinghe , M. N. A. Mubarak , D. Fernando , and R. M.Dharmadasa*		**928/E2**	Determination of functional and physicochemical properties of vitamin enriched tea beverages during the shelf-life *H.R Palangasinghe, G.S.A Senanayake, A.C Liyanage and I.R Palangasinghe*
920/D	The current status of the human- purple faced langur conflict in the Matara District, Sri Lanka *W.H.A.T. Murthi, and M.R. Wijesinghe*		**929/E2**	Air Quality Status, its correlation with meteorological variables, and transport pathways of the air pollutants before, during, and after lockdown periods in Sri Lanka *P. U. Santhiyago, L. D. Jayasuriya, M. J. S. D. Jayarathna, J. J. M. A. D. Jayasundara, H. M. P. S. K. Ellegala*
921/D	An evaluation on clinical waste in small healthcare sector in Dehiwala Mount-Lavinia area and current waste management practices *A.A.F.Irfana, and S. N. C. M Dias*		**930/E2**	Development of a novel method to stabilize neat (-)-Epigallocatechin gallate (EGCG) and their applications. *W. R. M. D. Fernando, R. M. I. N. Ranatunga, K. M. N. de Silva, P. N. Punyasiri, V. U. Godakanda, and W. R. M. de Silva*
922/D	A rapid assessment of phytoplankton assemblages in Mundel Lagoon, Sri Lanka *J.K.P.C. Jayawardhane and N.D. Hettige*		**931/E2**	Comparative evaluation of excipient properties of local yam starches for potential pharmaceutical applications *D.H. De Zoysa, S.M. Vithanarachchi, and H.D.S.M. Perera*
923/D	Physicochemical and sensory properties of rice flour-based cookies incorporated with germinated mung bean flour *U.H.S. Abeyrathne, M.H.U. Siriwardana, K.H.C.H. Kumara, and I. Wijesekara*			
924/D	Development and assessment of proximate composition of gluten-free crackers incorporated with two curry leaves varieties *Murraya koenigii* and *Clausena indica* *S. Uduwana , P. U. Menaka , I. Wijesekara and S. M. C. U. P. Subasinghe*			

PRESIDENTIAL ADDRESSES

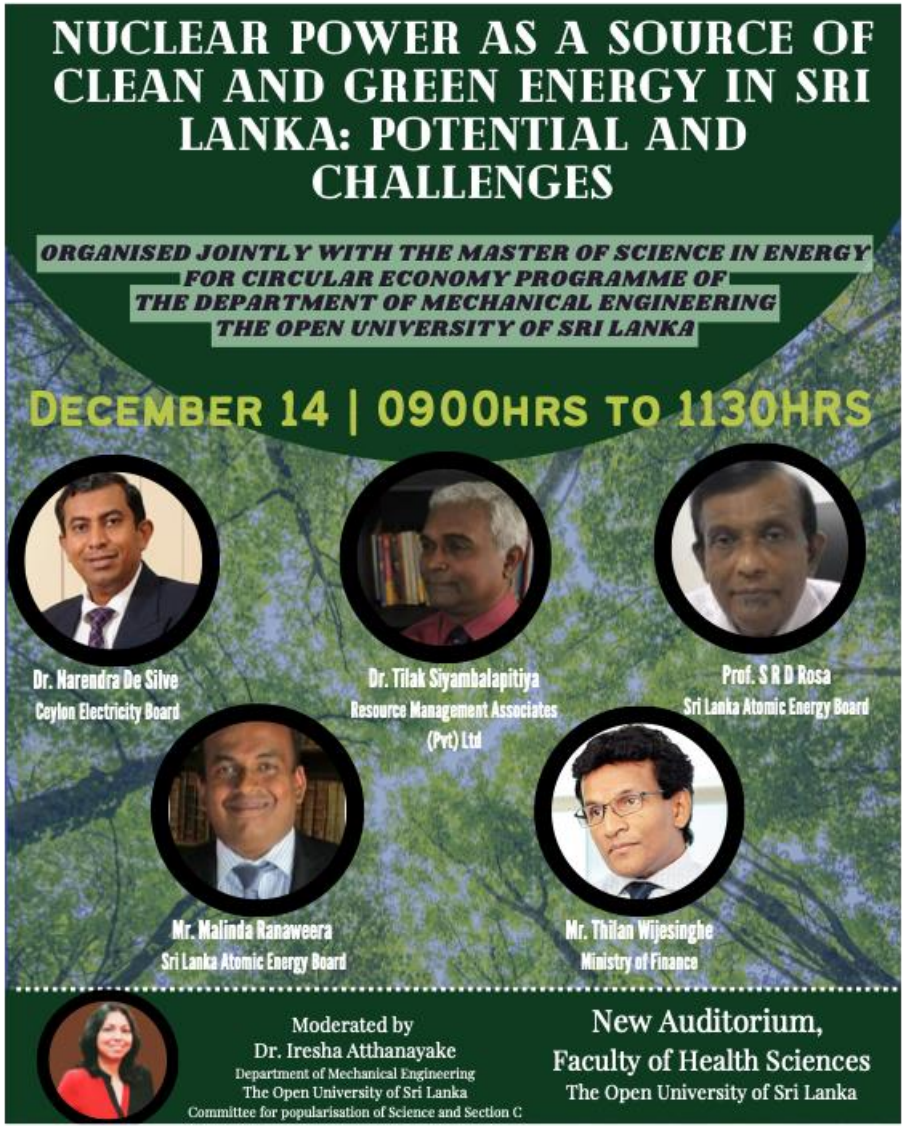
Venue: Colombo Regional Center Auditorium in Block 7, The Open University of Sri Lanka

On the

12th and 13th December 2023

Section	Title	Presenter
A	Medical Tourism as a Growing Industry for a Sustainable Economy: New approach through Science Diplomacy	Dr Thilina Wanigasekera
B	Algae in Food and Agriculture Industry: Recent Advances and Future Prospects	Dr Rasika Wanigatunge
C	Recognising the Value of Non-perennial (ephemeral) Streams	Prof Ayantha Gomes
D	Coping Drought Stress: Plant Adaptive Responses and Approaches to Alleviate the Adverse Effects	Dr Rinukshi Wimalasekera
E1	Astronomy and Space Science in Sri Lanka: Reinventing the Future from the Past & Present	Dr Janaka Adassuriya
E2	The Secret Life of Enzymes: Dynamics and Functions	Dr Thelma Abeysinghe
E3	Advances in Deep Learning for Medial Image Analysis	Professor S. Vasanthapriyan
F	Shifting paradigms toward wellbeing assessment	Dr Dilanthi Koralagama

Mini symposia – December 14, 2023



Sri Lanka Association for the Advancement of Science
79th ANNUAL SESSIONS

Mini-symposium on Interdisciplinary and Transdisciplinary Studies.

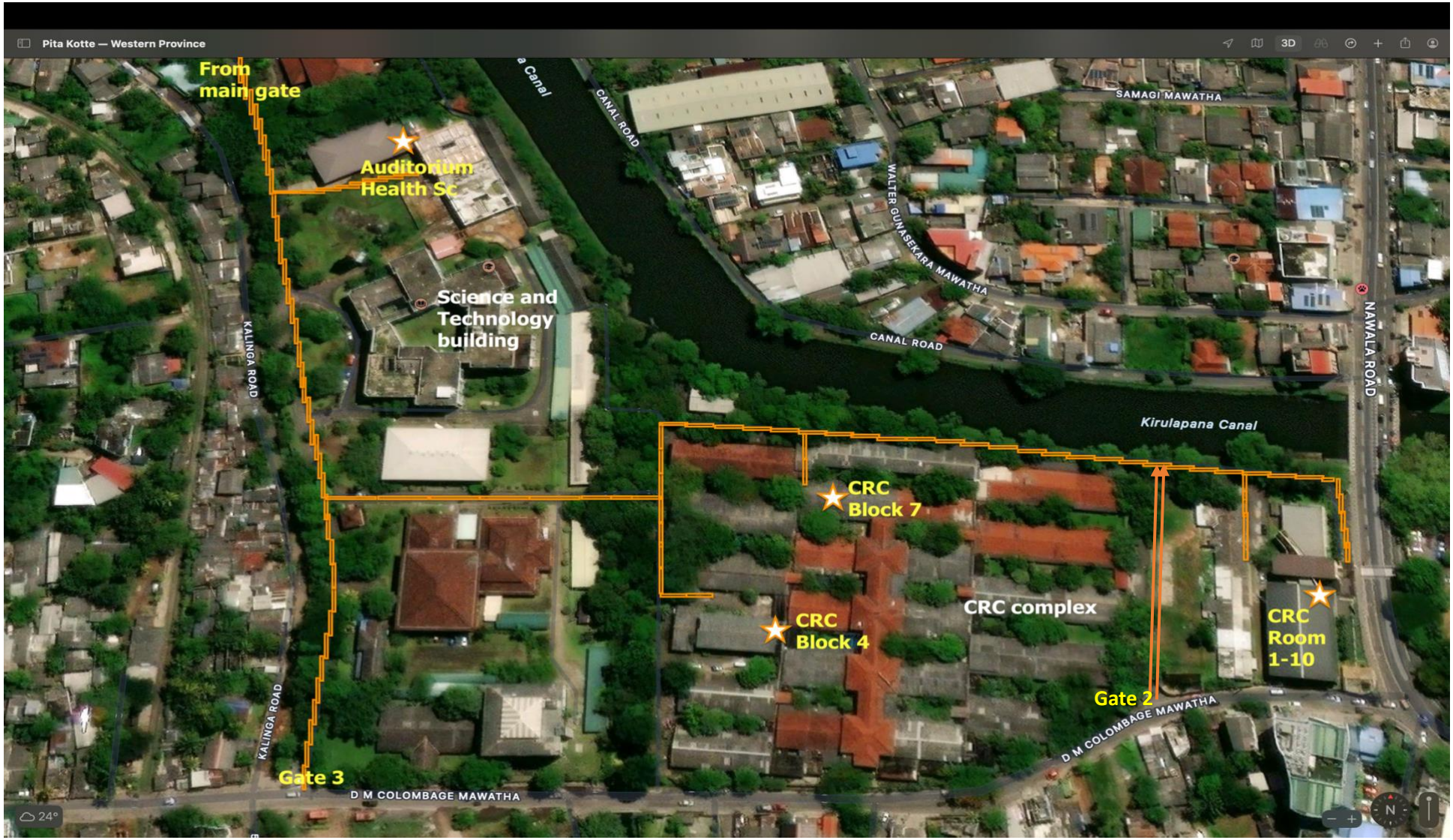
Date and time: Thursday - 14th December | 2.00 p.m. - 5.00 p.m.

Venue: New auditorium, Faculty of Health Sciences, The Open University of Sri Lanka

Programme

2.00 p.m.	Welcome speech by the Session Chair, Prof. Saroj Jayasinghe
2.10 p.m.	Speech by the General President of SLAAS, Prof. Ranjith Senaratne
2.20 p.m.	Key note speech – *[Speaker to be announced later]*
2.50 p.m.	Oral presentation of abstracts
4.50 p.m.	Vote of thanks by the Secretary, Dr. Gaya Nayomi Jayakody
5.00 p.m.	Refreshments

Venues of the Annual Sessions of SLAAS



Oral Presentations – Sectional Venues

Map location

Section A	Colombo Regional Center: Room No 1
Section B	Colombo Regional Center: Room No 2
Section C	Colombo Regional Center: Room No 3
Section D	Colombo Regional Center: Room No 4
Section E1	Colombo Regional Center: Room No 7
Section E2	Colombo Regional Center: Room No 8
Section E3	Colombo Regional Center: Room No 9
Section F	Colombo Regional Center: Room No 10

CRC room 1-10

Poster Presentations: Colombo Regional Center – Block 4

CRC block 4

Presidential Addresses: OUSL - Colombo Regional Center Auditorium in Block 7

CRC block 7

Mini Symposia: New Auditorium, Faculty of Health Sciences, The Open University of Sri Lanka

Auditorium health Sc

Refreshments: OUSL - Colombo Regional Center Lobby – Ground Floor

CRC room 1-10