

71st Annual Sessions 30th November - 4th December 2015

Ceremonial Inauguration

Date: Monday 30th November 2015 (from 1.30 pm to 4.30 pm)
Venue: BMICH (Committee Room B)

Scientific Sessions

Date: 2nd to 4th December 2015
Venue: Faculty of Applied Sciences, University of Sri Jayewardenepura

School Inventors' Competition & Exhibition

Date: 2nd & 3rd December 2015
Venue: Faculty of Applied Sciences, University of Sri Jayewardenepura

Theme Seminar: "Wealth Creation through Science"

1st December 2015

Auditorium, Ministry of Disaster Management

'Creating new market spaces leveraging Sri Lankan resources sustainably'

Mr Ravi Fernando, Operations Director, Malaysia Blue Ocean Strategy Institute, Malaysia

'Wealth creation through power and technology'

Hon Patali Champika Ranawake, Minister of Power and Energy

'Enabling Inter-phases for smart health and well-being'

Prof Suranga Nanayakkara, Assistant Professor of Singapore University of Technology and Design, Director of Augmented Human Lab

'Wealth creation through agriculture'

Mr Rizvi Zaheed, Managing Director, Hayley's Agriculture Holdings Ltd

'Wealth creation through electronics'

Mr Rohan Pallewatte, Chief Executive Officer, Lanka Harness

'Functional carbon materials: translating fundamental interfacial chemistry into new applications'

Prof Paula E Colavita, Trinity College, Dublin

'Wealth creation through apparel'

Mr Ranil Vitarana, Director, MAS, Research & Innovation Centre

Early Bird Registration:

Members, Rs 2,500/-; Non Members, 3,000/- (on or before 21st November 2015)

Late Registration:

Members, Rs 3,000/-; Non Members, Rs 3,500/- (after 21st November 2015)

Students (Undergraduate / Postgraduate)

Maximum 50 seats available (First come first served basis)

Early Bird Registration:

1,000/- (on or before 21st November 2015)

Late Registration:

Rs 1,500/- (after 21st November 2015)

To register please contact:

Administrative Officer, Sri Lanka Association for the Advancement of Science, "Vidya Mawatha", 120/10, Wijerama Mawatha, Colombo 07.

Phone: (011) 2688740 / 2691681

Visit www.slaas.lk for latest updates and programme details.

Sectional Activities

SECTION A

- ◆ Lectures on '**Rational use of agrochemicals**' were conducted by Prof Daya Ahangama (University of Peradeniya) and Ms Hansini Karunaratne (The Open University of Sri Lanka) on 2 September 2015 for agricultural instructors and farmers in the Dompe Agrarian Services Center.
- ◆ Workshops on '**Stress management**' were conducted by Dr Piyanjali de Zoysa (Faculty of Medicine, University of Colombo) for veterinary surgeons practicing in the Colombo city, on 9 September and 8 October 2015.
- ◆ Dr Murali Vallipurathan (Ministry of Health) was the resource person at the workshop on '**Scientific writing and plagiarism**' conducted on 9 September, for postgraduate students of the Sri Lanka Dental Association.
- ◆ Dr Geethani Galagoda (Consultant virologist, Medical Research Institute) was the resource person in a radio programme on '**Measles**' broadcast on 7 and 14 September 2015.
- ◆ A programme on '**Postharvest standardization of agrochemicals/ food preservatives in agriculture**' by Dr Nimsha Weerakkody and Ms Hansini Karunaratne (The Open University of Sri Lanka) was held at the Agrarian Services Centre, Nittambuwa on 30 September 2015.
- ◆ Dr Suresh Shanmuganathan (General Hospital, Kalutara) and Drs Vasantha Sivaguru and H M Senadheera (Dental Institute, Colombo) conducted a programme on '**Oral health**' for NSF staff and other stakeholders on 14 October 2015.



Upcoming Events:

- Lecture discussion on '**Being active**' on 30 October, in collaboration with Section D / SLAAS, for the Alumni Association, University of Peradeniya. Resource person: Dr Shreenika Weliana
- '**Dog sterilization programme**' in Wariyapola, in collaboration with the Animal Health Division, Department of Animal Production & Heath on 7 November 2015.
- Programmes on the '**Role of Ayurveda in disease notification and prevention**' for practitioners of Ayurveda and other stakeholders in the Ayurvedic Teaching Hospital, Borella. Resource person: Dr Carukshi Arambepola, Dates: 29 October and 12 November.
- Drs Thashi Chang and Enoka Corea (Faculty of Medicine, University of Colombo) and Dr Jude Jayamaha (Medical Research Institute) will be the resource persons at a seminar on '**Emerging infectious diseases**' to be held at the National Hospital, Colombo in late November /December. Topics to be addressed: West nile virus infection, melioidosis and influenza.

The following educational programmes:

- '**Nutritional benefits of milk and egg consumption**' for farmers in Dambulla. Resource persons: Dr Tharanga Thoradeniya (Faculty of Medicine, University of Colombo) and Dr Susantha Mallawaarachchi (Hayley's Agro). The activity will be sponsored by Hayley's Animal Health Division.
- '**Glycemic index of food and nutritional value food**' by Prof Sagarika Ekanayake and Dr Sureka Chackreworthy in November, at the Head Office, Agrarian Services Centre, Ratmalana.
- '**Human rabies awareness**' for veterinary surgeons/other stakeholder in collaboration with the Sri Lanka Veterinary Association (SLVA) in October /November by Drs Kanthi Nanayakkara and Dulmini Kumarasighe (Consultant virologists, MRI). Venue: Organization of Professional Associations
- Workshop on '**Student leadership**' at Visakha Vidyalaya, Sapugaskanda in late October/November. The activity is conducted in collaboration with the Women's Health Committee, SLMA & Section F/ SLAAS.

SECTION B

♦ A programme which included practical sessions on **yoghurt production, cattle management, clean milk production, goat management, layer bird management & broiler bird management and pig management** was conducted at the farm of the Sabaragamuwa University of Sri Lanka for 130 O/L Agriculture students from R/ Pathakada Vidyalaya, Pelmadulla and R/ Meddekanda Vidyalaya, Kalthota, Balangoda on 10 July 2015. Resource persons were: Dr T S P Jayaweera, Ms Gayani Herath and Mr Nimesh Madhushanka (Dept. of Livestock Production, Faculty of Agricultural Sciences, SUSL)

♦ Dr T S P Jayaweera conducted a seminar for 240 A/L Bio systems technology students on 23 July at St. Joseph's Balika Vidyalaya, Kegalle.

♦ A two day workshop on '**Sustainable forestry and ecosystem conservation in estates lands**' was held on 2 and 3 October 2015 in collaboration with the Center for Sustainability, Department of Forestry and Environmental Science, University of Sri Jayewardenepura, for 15

participants from various plantation companies around the country. Topics addressed: Forest management concept and planning, Economic aspects of forest management, Harvest and replant scheduling, Soils and best practices of soil conservation, Sustainable forestry and forestry certifications: goals, principles and criteria, Biodiversity conservation and ecosystem protection in forest plantations/estates. Resource persons were Drs Upul Subasinghe, Priyan Perera, Daham Jayewardana and Mr K P Ariyadasa.

♦ An extension programme on '**Grafting of plants, insect identification and animal husbandry**' was conducted by Dr T S P Jayaweera with technical assistance from Mrs D G Yasawathie and Mr M D Dissanayake (Department of Export Agriculture, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka), on 9 October 2015, for 25 O/L students of Galhira Vidyalaya, Balangoda. The programme was conducted at the biology and livestock laboratories of the university.



SECTION C

♦ The following events were conducted as a part of the series of scientific community-focused talks in a range of disciplines in engineering and architecture to encourage debate on issues of local and global relevance.

Public lectures on '**Marine pollution in Sri Lanka**' (Dr Mahesh W Jayaweera, Department of Civil Engineering, University of Moratuwa) and '**Recent developments in the electronic industry in Sri Lanka**' (Dr Ajith Pasqual, Department of Electronic and Telecommunication Engineering, University of Moratuwa) at the SLAAS Auditorium on 6 April and 24 June 2015 respectively.

♦ **Manamperi Award 2015:** Eight applicants presented their projects to a panel of judges on 19 September 2015 at the

SLAAS Headquarters. Y A I Yatawara, a student of the Department of Electrical and Computer Engineering of The Open University of Sri Lanka is the recipient of the award for 2015, for his project on '**Automated rubber tapping machine (latex tapper)**'.

Upcoming Events:

- Public lecture on '**Green building technology for sustainable development**' by Prof Ranjith Dissanayake, (Dept. of Civil Engineering, University of Peradeniya) in October.
- **A visit to the UNESCO World Heritage Site of Galle Fort** on 4 November 2015. Students interested in Architecture and members of Section C will participate.

SECTION D



• ‘How to prepare a research proposal on biodiversity and animal adaptations’ by Dr D H N Munasinghe, for student members of the Environmental Pioneer programme at Soba Ketha, Rumassala, Galle, on 22 July 2015. The activity was coordinated by the CEA.

• ‘Habitat enrichment of wildlife’ by Dr U P K Epa for a group of foreign students at the University of Kelaniya, on 1 September 2015. The activity was carried out together with the AISSEC students’ society, University of Kelaniya.

◆ In collaboration with Section D/ SLAAS and Genetics Society, University of Sri Jayewardenepura a workshop on ‘Genetics’ was conducted by Prof Nissanka de Silva for A/L students on 24 September 2015. Following the lecture series, a practical session was held at the molecular biology laboratory of the Department of Zoology, University of Sri Jayewardenepura for the 50 participants.



◆ Prof Nissanka de Silva and Dr U P K Epa conducted a seminar for A/L students of Sirimavo Bandaranayake College on 9 July 2015. About 150 students and teachers participated. Prof de Silva delivered a lecture on ‘Techniques in molecular biology’ while Dr Epa discussed the ‘Career pathways available for students in the A/L biological science stream.’

◆ An article on ‘Risks involved in consuming fruits ripened using ethaphone’ by Dr Dinihi Peiris was published in Vidusara on 15 July 2015.

The following lectures were conducted:



◆ Dr D H N Munasinghe delivered a lecture on ‘Importance of adaptations of animals for their survival’ at the district camp of Environmental Pioneers, at Deniyaya Central, Matara, on 19 September 2015. 150 students and teachers from ten schools and staff members of the CEA (Matara branch) participated. The activity was organized by CEA (Matara Branch).

SECTION E1

◆ A guest lecture on ‘X-ray total scattering measurements of functional materials at atomic and nanoscale’ was delivered by Dr Shinji Kohara (Research and Utilization Division, Japan Synchrotron Radiation Research Institute, Japan) at the PLR3 hall, University of Colombo, on 9 June 2015. The activity was organized in collaboration with the Institute of Physics Sri Lanka and Physics Society, University of Colombo.



- With the intention of popularizing science among the general public, the following articles were published in 'Vidusara' during the month of August.

'Nanotechnology' by Dr Sasani Jayawardhane (Department of Physics, University of Sri Jayewardenepura)

'Teaching mathematics is a challenge' by Dr Naleen Ganegoda (Department of Mathematics, University of Sri Jayewardenepura)

Upcoming Events:

- A guest lecture on '**Lighting risk management for sustainable development**' by Prof Chandana Jayaratne, on 22 October 2015 at the University of Sri Jayewardenepura. The activity is organized in collaboration with the Physics Society of the university.

SECTION E2

♦ A workshop on '**Safety and good laboratory practices**' was conducted for technical officers in universities and private sector laboratories on 30 July, 2015 at the Faculty of Science, University of Kelaniya, with the aim of building awareness about global practices in laboratory management.

The following topics were addressed:

'Overview of GLP' (Dr Vayanga Ratnayake, Dept. of Microbiology, University of Kelaniya)

'How to proceed in obtaining accreditation' (Dr Indika Abeygunawardena, Dept. of Microbiology, University of Kelaniya)

'Importance of human resource aspects of quality management' (Dr D U Mohan, University of Kelaniya)

'Role of calibration of instruments for quality assurance' (Dr Nalin Liyanawaduge, ITI)

'Health and safety aspects' (Ms Ishani Mellawa Padmaperuma, Global Consulting Inc., Washington DC, USA).

Prof N A K P J Seneviratne, Dean, Faculty of Science, University of Kelaniya was the Chief Guest at the event.



♦ The committee decided to initiate a '**University Chemistry Honours Degree Student Forum**' to provide opportunities for undergraduates following these programmes to interact with each other. In this regard Section E2 organized an '**inter-university quiz competition**' on 19 September 2015, at the Faculty of Science, University of Colombo.

Teams from the universities of Colombo, Kelaniya, Sri Jayewardenepura, Rajarata, Ruhuna and the College of Chemical Sciences, IChemC participated. The judging panel comprised, Dr Sujatha Hewage, Mr M Haniffa and Dr Positha Premaratne. The University of Colombo team won the competition and the team from University of Peradeniya were the runners up. The awards will be presented at the SLAAS Annual Sessions 2015.



♦ A lecture on '**Lanthanide based nanoparticles with improved luminescent properties for potential biomedical applications**' was delivered by Dr Channa de Silva (Western Carolina University, USA) on 4 August, 2015 at the Department of Chemistry, University of Kelaniya.

♦ In collaboration with the Regional Health Services Office, North Central Province a programme was organized for agricultural extension officers of Madawachchiya on the '**Environmental impact on CKDu**' on 9 October at the Regional Director's office in Anuradhapura. The aim of the workshop was to make the farming community aware of the complexity of the problem and the importance of scientific inputs in solving the problem. Prof Janitha Liyanage in her keynote address gave an overview of '**Current knowledge regarding CKDu**'. Presentations were made by Dr Jeewantha Premaratne (**Importance of the aquatic environment on CKDu**) and Mr R C Watawala (**Irresponsible use of agro chemicals and its impact on CKDu**).



SECTION F

♦ A workshop on '**Research training and academic writing**' was conducted on 31 August 2015 at the Faculty of Humanities and Social Sciences, Rajarata University of Sri Lanka for about 150 final year students of the Department of Social Sciences. A training session on data collection and analysis was carried out by Dr Susima Weligamage. Mr Dilan Gunawardena (Rajarata University) organized the event at which Section F and its activities were also promoted.

♦ A panel discussion on '**Ageing population – Are we prepared?**' was held on 28 September 2015 at the Mahaweli Centre Auditorium.

The event consisted of short presentations on various aspects of the topic and a discussion, for which about 40 participated. This discussion was held in collaboration with Royal Asiatic Society of Sri Lanka. The panelists included: Mr Ravi Bamunusinghe (Research Consultancy Bureau and former President Section F), Ms Madu Dissanayake (Family Planning Association), Mr Feizal Samath (Sunday Times - Business Times), Prof Indralal de Silva (University of Colombo) and Dr Nishan de Mel (Verite). Dr Hema Goonatilake (President, RASSL) and Dr Susima Weligamage (President, Section F) co-chaired at the event.



ENVIRONMENT COMMITTEE

♦ A presentation on '**Environment for the future**' by Archt. Veranjan Kurukulasuriya (Director General, National Physical Planning Department) was held on 27 August 2015 at SLAAS Headquarters. Mr Nishantha Edirisinghe (Deputy Conservator, Forest Department) also made a brief presentation of his views regarding the '**National Physical Plan**'.



Upcoming Events:

- A school programme on '**Impacts of climate change and biodiversity**' for two schools in the Gampaha District in October 2015, in collaboration with the Ministry of Mahaweli Development & Environment.
- Two awareness workshops on '**Waste disposal**' for school children, in October.

GENERAL RESEARCH COMMITTEE

◆ The Bernard Soysa Memorial Oration entitled, 'Bernard Soysa: Case study of a professional politician' was delivered by Prof Narada Warnasuriya, on 25 August 2015 at the SLAAS Auditorium, to a distinguished gathering which included members of the family of the late Hon. Minister Bernard Soysa.

◆ The second and third of the series of seminars on 'Scientific research: Planning, implementation and dissemination' were conducted at staff development centres of The Open University of Sri Lanka (7 August 2015) and Rajarata University of Sri Lanka (6 October 2015). Resource persons: Profs Chandrani Wijeratne, Kamal B Gunaherath, J C N Rajendra, Sumedha Jayanetti and Drs M C M Iqbal & Asoka Ramanayake.

◆ Several newspaper articles on topics of current scientific interest were published in the Ceylon Daily News:

'Lightning safety: Myths and facts,' by Prof Vernon Coorey and Dr Mahendra Fernando (26 May 2015)

'Human elephant conflict: A science based solution' by Prof Devaka Weerakoon (16 June 2015)

'Nutritional knowledge: What does food do for you?' by Prof Manel Attygalle (20 August 2015)

'Casuarina and pine plantations: Do they affect soil properties?' by Prof D A L Leelamanie, (21 September 2015)



COMMITTEE FOR THE POPULARIZATION OF SCIENCE

◆ The second medicinal plant garden (MPG) programme for the year was conducted at Kadugannawa Central College, Kadugannawa on 2 October 2015 by Drs R M Dharmadasa and J M J K Jayasinghe.

Galhena, M N Kaumal, Mr Gemenu Gunathilake, Dr Muditha D Senarath-Yapa (JKF) and Mrs Nadhee Jayaweera (JKF).

◆ The fourth and fifth 'science day programmes' (SDP) were conducted on 18 Sep 2015 at Gamini Vidyalaya, Vavuniya and Vembadi Girls High School, Jaffna. More than 150 students from 9 schools participated in the SDP at Vavuniya. Resource persons were Prof E Wikramanayake, Drs J M J K Jayasinghe, Prasanna Galhena, M N

Galhena, M N Kaumal, Mr Gemenu Gunathilake, Dr Muditha D Senarath-Yapa (JKF) and Mrs Nadhee Jayaweera (JKF).

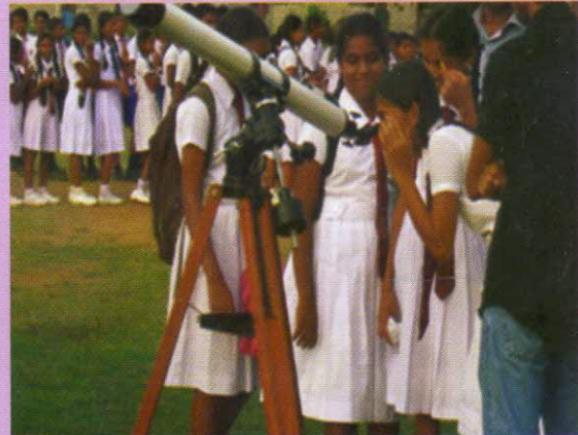
◆ There were about 260 students from 19 schools at the SDP, Jaffna. Drs A K Chandana and Pahan Godakumbura (CPS), and Mr Dharshan Joseph, Miss Pavisha Kasilingam, Miss Kobiga Amirthalingam, Miss Tharani Senathirajah, Miss Thedchajini Vijayanathan, Miss Luxana Thavaraj and Mrs Sathyaa Senathirasa Digamadulla from the Department of Chemistry, University of Jaffna served as resource persons.



♦ The sixth SDP was conducted on 16 October 2015 at the Town Hall, Ampara. Prof E Wikramanayake, Drs J M J K Jayasinghe, Pahan Godakumbura, A K Chandana, Charitha Goonasekera, Bandunee C L Athapattu and M N Kaumal served as resource persons. More than 260 students from 17 schools participated.

Financial support to conduct SDPs was provided by John Keells Foundation, and the refreshments were provided by Fonterra Lanka (Pvt) Ltd & Ceylon Biscuits Ltd.

♦ In collaboration with the Astronomical Association, University of Colombo, Prof Chandana Jayaratne conducted two '**Astronomy programmes**' on 18 September and 16 October 2015 at Gaminī Vidyalaya, Vavuniya and Town Hall, Ampara respectively. More than 200 students and teachers participated.



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