



# PROGRAMME GUIDE

# PGIS RESEARCH CONGRESS

## 2015

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9<sup>th</sup> and 10<sup>th</sup> October 2015

RESEARCH

Earth and Environmental Sciences

ICT, Mathematics and Statistics

Life Sciences

Physical Sciences

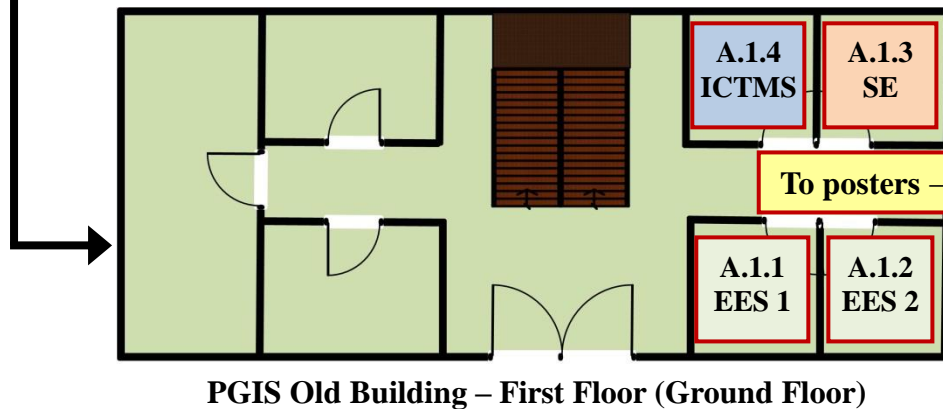
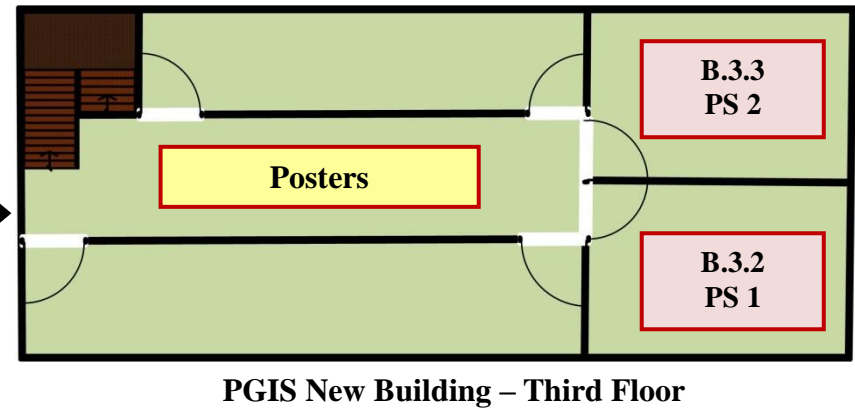
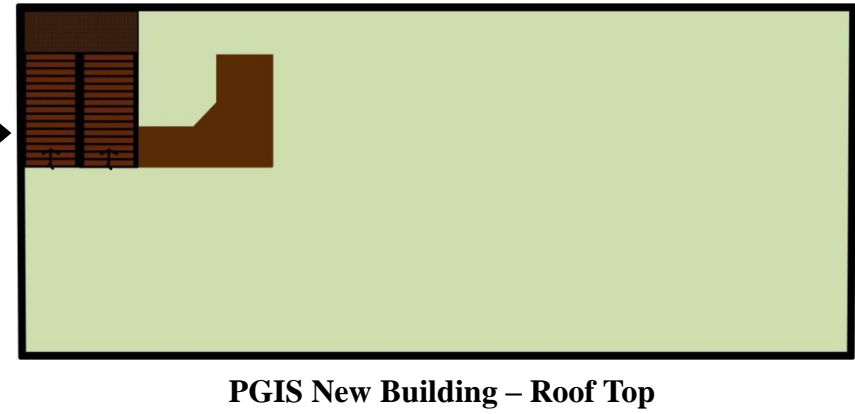
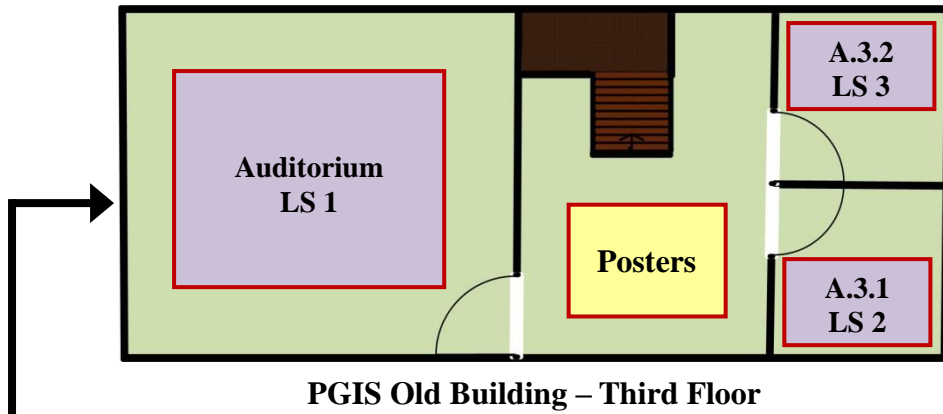
Science Education

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Cinnalanka Spice (Pvt.) Ltd.

## PGIS Research Congress – Session Venue Map



Session Theme	Venue
Earth & Environmental Sciences (EES)	Session EES 1 – Room A.1.1
	Session EES 2 – Room A.1.2
ICT, Mathematics and Statistics (ICTMS)	Session ICTMS – Room A.1.4
Life Sciences (LS)	Session LS 1 – PGIS Auditorium
	Session LS 2 – Room A.3.1
	Session LS 3 – Room A.3.2
Physical Sciences (PS)	Session PS 1 – Room B.3.2
	Session PS 2 – Room B.3.3
Science Education (SE)	Session SE – Room A.1.3
Poster Session	PGIS Car Park, Auditorium Lobby, New Building (2 <sup>nd</sup> Floor)

**PGIS Research Congress – 2015**  
**TECHNICAL SESSIONS**  
**Saturday 10<sup>th</sup> October 2015**

Theme		Earth & Environmental Sciences		ICTMS	Life Sciences			Physical Sciences		Science Education
Session	Time									
	07:30 – 08:20	<b>Registration</b>								
Morning 1	08:20 - 08:50	Invited Lecture – <b>EES 1</b> , Invited Lecture – <b>LS 1</b> , Invited Lecture – <b>PS 1</b>								
	09:00 - 10:20	EES 1 Room A.1.1	EES 2 Room A.1.2	ICTMS Room A.1.4	LS 1 PGIS Auditorium	LS 2 Room A.3.1	LS 3 Room A.3.2	PS 1 Room B.3.2	PS 2 Room B.3.3	SE Room A.1.3
	10:20 - 11:00	<b>Morning Tea and Poster Session</b>								
Morning 2	11:00 - 13:00	EES 1 Room A.1.1	EES 2 Room A.1.2	Invited Lecture – <b>ICTMS 1</b>	LS 1 PGIS Auditorium	LS 2 Room A.3.1	LS 3 Room A.3.2	PS 1 Room B.3.2	PS 2 Room B.3.3	<b>SE 1</b>
				IMS Room A.1.4						SE Room A.1.3
	13:00 - 14:00	<b>Lunch and Poster Session</b>								
Afternoon	14:00 - 14:30	EES 1 Room A.1.1	EES 2 Room A.1.2	Lecture – <b>LS 2</b>			Invited Lecture – <b>PS 2</b>	Invited Lecture – <b>PS 3</b>		
	14:40 - 16:20			IMS Room A.1.4	LS 1 PGIS Auditorium	LS 2 Room A.3.1	LS 3 Room A.3.2	PS 1 Room B.3.2	PS 2 Room B.3.3	SE Room A.1.3
	16:20 – 17:00	<b>Afternoon Tea and Poster Session</b>								

# 10th October, 2015 (Saturday) @ PGIS – Technical Session 1

07:30 – 08:20

Registration

	EES Parallel Session 1 (Room:A.1.1)	EES Parallel Session 2 (Room:A.1.2)	ICTMS (Room:A.1.4)	LS Parallel Session 1(Auditorium)
08:20 – 08:50	Invited Lecture ( <b>EES 1</b> ): 'Water management in Africa' <i>Prof. Brigitte Schütz, Freie University, Germany</i> <b>Venue: Molecular Biology Auditorium</b> Invited Lecture ( <b>LS1</b> ) Title: 'The challenge of conserving point endemic species' <i>Prof. Devaka Weerakoon, University of Colombo, Sri Lanka</i> <b>Venue: PGIS Auditorium</b> Invited Lecture ( <b>PS1</b> ): 'Tip-enhanced Raman scattering spectroscopy of carbon materials' <i>Prof. Masamichi Yoshimura, Toyota Technological Institute Japan, Venue: Room B.3.2</i>			
09:00 – 09:20	Impact of organic amendments and microbial inoculants on carbon mineralization in surface ultisols ( <b>ID:148</b> ) <i>S.R. Amarasinghe, S.D. Wanniarachchi, T.T. Somasiri, D.D.N. Kumara</i>	Relationship between catchment land-use practices and stream water quality in Uma Oya catchment ( <b>ID:165</b> ) <i>W.D.T.M. Gunawardhana, J.M.C.K. Jayawardhana, E.P.N. Udayakumara</i>	Euclidean lie algebra and the associated non-hermitian hamiltonians with an anti-linear symmetry ( <b>ID:14</b> ) <i>T. Mathanaranjan, A. Nanayakkara, S.P.C. Perera</i>	Use of biofilmed biofertilizers to improve yield and quality of strawberry ( <i>Fragaria ananassa</i> ) under field conditions ( <b>ID:02</b> ) <i>I.D. Singhalage, G. Seneviratne, H.M.S.P. Madawala</i>
09:20 – 09:40	Antimicrobial activity of calcium bearing natural mineral sources ( <b>ID:147</b> ) <i>A.U. Wijenayake, H.M.T.G.A. Pitawala, B.M.R. Bandara, C.L. Abayasekara</i>	Groundwater potential in confined sandy aquifers of Mullaitivu, Sri Lanka ( <b>ID:89</b> ) <i>U.G.C. Bandara, H.A. Dharmagunawardhane, J. Gunatilake</i>	A new method to generate steiner quadruple systems using Matlab programming ( <b>ID:67</b> ) <i>H.M.I.C. Herath, A.A.I. Perera, A.A.C.A. Jayathilaka</i>	Morphological diversity of Sri Lankan mosses ( <b>ID:10</b> ) <i>N.C.S. Ruklani, S.C.K. Rubasinghe</i>
09:40 – 10:00	Quality characterization of commercial compost fertilizer – An alternative for the contamination risk of inorganic fertilizers ( <b>ID:170</b> ) <i>W.M.A.K. Wijesinghe, K.R. R. Mahanama, M.N.A. Mubarak, S. Malavipathirana</i>	Unravelling the subsurface and groundwater conditions of Jaffna limestone using two-dimensional electrical resistivity survey ( <b>ID:33</b> ) <i>I.G.C.I. Kumara, J. Gunatilake</i>	An approach for line clipping against a convex polyhedron ( <b>ID:79</b> ) <i>K.R. Wijeweera, S.R. Kodituwakku</i>	Salt stress response of selected improved rice varieties in Sri Lanka ( <b>ID:23</b> ) <i>M.D.M.I.M. Dissanayake, M.P.C.S. Dhanapala</i>
10:00 – 10:20	Enhancement of Sri Lankan vein graphite for novel technological applications ( <b>ID:100</b> ) <i>H.P.T.S. Hewathilake, R.M.N.M. Rathnayake, H.W.M.A.C. Wijayasinghe, N.W.B. Balasooriya, H.M.T.G.A. Pitawala</i>	Selenium in groundwater in relation to the chronic kidney disease of uncertain aetiology in Sri Lanka ( <b>ID:111</b> ) <i>S. Diyabalanage, R. Chandrajith</i>	Construction of bipartite graphs from non-normalized Hadamard matrices ( <b>ID:86</b> ) <i>A.R.C.De Vas Gunasekara, A.A.C.A. Jayathilake, A.A.I. Perera</i>	Mining for novel <i>Pup1</i> genomic regions in Sri Lankan rice germplasm for marker assisted breeding ( <b>ID:56</b> ) <i>Y.C. Aluwihare, M.D.M.I.M. Dissanayake, N.N.H. Karannagoda, A.G.M.L.K. Dayananda, D.N. Sirisena, W.L.G. Samarasinghe, S.D.S.S. Sooriyapathirana</i>
10:20 – 11:00	Morning Tea & Poster Session			

## 10th October, 2015 (Saturday) @ PGIS – Technical Session 1

### Registration

LS Parallel Session 2(Room:A.3.1)	LS Parallel Session 3(Room:A.3.2)	PS Parallel Session 1(Room:B.3.2)	PS Parallel Session 1(Room:B.3.3)	SE (Room:A.1.3)
Invited Lecture <b>(EES1)</b> : 'Water management in Africa' <i>Prof. Brigitte Schütz, Freie University, Germany</i> <b>Venue: Molecular Biology Auditorium</b> Invited Lecture <b>(LS1)</b> Title: 'The challenge of conserving point endemic species' <i>Prof. Devaka Weerakoon, University of Colombo, Sri Lanka</i> <b>Venue: PGIS Auditorium</b> Invited Lecture <b>(PS1)</b> : 'Tip-enhanced Raman scattering spectroscopy of carbon materials' <i>Prof. Masamichi Yoshimura, Toyota Technological Institute Japan</i> <b>Venue: Room B.3.2</b>				
Camptothecin induces CHK-2 mediated, MAPK dependent G2/M phase cell cycle arrest <b>(ID:28)</b> <u>R.G.P.T. Jayasooriya, M.G. Dilshara, C.H. Kang, H.J. Kim, Y.H. Choi, G.Y. Kim</u>	A rare secondary metabolite from the endophytic fungus <i>Penicillium citrinum</i> from <i>Carcinia mangostana</i> fruits <b>(ID:129)</b> <u>M.M. Oader, N.S. Kumar, L. Jayasinghe</u>	A comparative study on the binding of cell penetrating peptides to siRNA using docking simulations <b>(ID:119)</b> <u>P.V.G.M. Rathnayake, B.G.C.M. Gunathunge, D.N. Karunaratne, R.J.K.U. Ranatunga</u>	Crystallinity and porosity of hydrothermally synthesised hydroxyapatite nanoparticles in a mixed solvent system <b>(ID:59)</b> <u>K.K.H. De Silva, W.P.S.L. Wijesinghe, R.M.G. Rajapakse</u>	
The 6'-O-β-d-glucopyranosyl-12a-hydroxy-dalpanol from <i>Amorpha fruticosa</i> : Anti-inflammatory effects in LPS-stimulated BV2 microglia cells <b>(ID:30)</b> <u>M.G. Dilshara, R.G.P.T. Jayasooriya, C.H. Kang, H.J. Kim, Y.H. Choi, G.Y. Kim</u>	Bioactive secondary metabolite from an endophyte isolated from <i>Carica papaya</i> fruits <b>(ID:141)</b> <u>T. Sritharan, N.S. Kumar, L. Jayasinghe</u>	Simultaneous adsorption of Cr(III) and Cu(II) on thermally-treated Muthurajawela peat (MP): comparison of linear and nonlinear isotherm analysis <b>(ID:36)</b> <u>N. Priyantha, S. Wickramasooriya, L.B.L. Lim</u>	Synthesis of magnetite (Fe <sub>3</sub> O <sub>4</sub> ) nanoparticles, and nitrate removal in drinking water <b>(ID:107)</b> <u>W.S.H.K. Jayawansa, S.V.R. Weerasooriya, W.M.A.T. Bandara</u>	Using problem-based learning (PBL) in teaching of physics concepts in grade eight <b>(ID:60)</b> <u>W.A.C.P. Wanniarachchi, S. Karunaratne</u>
Efficacy of natural yeast cell wall polysaccharides against commonly used antibiotic growth promoters in poultry farming <b>(ID:65)</b> <u>T.T. Alawathugoda, A.A.S.Y. Adikari, J.G.S. Ranasinghe, A.P.D.G. Pathirana, N. Priyankarage, S.S.P. Silva</u>	Potential probiotics isolated from finger millet <b>(ID:161)</b> <u>D.M.W.D. Divisekera, J.K.R.R. Samarasekera, C. Hettiarachchi, J. Gooneratne, S. Gopalakrishnan</u>	Interface modification of dye-sensitized solar cells using self-assembled monolayer <b>(ID:34)</b> <u>T. Jaseetharan, P. Ravirajan, A.C.A. Jayasundera</u>	Preparation of niobium-doped titanium dioxide nanorods using refluxing sol-gel method <b>(ID:153)</b> <u>R.B.S.D. Rajapaksha, C.A. Thennakoon, R.M.G. Rajapakse</u>	Multi-approach teaching method to improve students' motivation towards the inorganic chemistry section in G.C.E. (A/L) syllabus: A case study <b>(ID:78)</b> <u>S. Jeyarani, W.D. Chandrasena, A.C.A. Jayasundera</u>
Enhancement of <i>in vitro</i> skin permeation parameters of β-carotene in o/w microemulsion in the presence of a glycolipid <b>(ID:74)</b> <u>E.P.N. Premaratne, A.D.L.C. Perera, D.N. Karunaratne</u>	Determination of bioactivity and nutritional properties of aerial parts of <i>Trichosanthes cucumerina</i> <b>(ID:185)</b> <u>H. Nadeeshani, C. Jayathilake, V. Rizliya, R. Liyanage, S. Wimalasiri</u>	Surface binding properties of natural dyes <i>cis</i> -bixin and <i>cis</i> -norbixin capped Ag nanoparticles <b>(ID:101)</b> <u>G. K. Ginige, P. M. Jayaweera</u>	Electrochemical impedance analysis of plasmonic dye sensitized solar cells based on silver nanoparticles. <b>(ID:162)</b> <u>J.M.K.W. Kumari, M.A.K.L. Dissanayake, G.K.R. Senadeera, C.A. Thotawatthage</u>	A pilot investigation for acquiring information on strategies to improve students' chemistry learning through practicals <b>(ID:127)</b> <u>T. Sakeetharan, A.D.L.C. Perera, T.M.S.S.K. Y. Ekanayake</u>
<b>Morning Tea &amp; Poster Session</b>				

10th October, 2015 (Saturday) @ PGIS – Technical Session 1

10:20 – 11:00

Morning Tea

11:00 – 11:20

**EES Parallel Session 1 (Room:A.1.1)**

Species diversity and abundance in the vegetation of serpentinite site at Ussangoda, Sri Lanka **(ID:58)**  
Y.A.S. Samithri, M.C.M. Iqbal, D.S.A. Wijesundara, G.A.D. Perera

**EES Parallel Session 2(Room:A.1.2)**

Formation of disinfection by-products in Greater Kandy water supply scheme with other water quality parameters **(ID:150)**  
A.A.G.D. Amarasooriya, S.K. Weragoda, T.C. Rathnasiri

**ICTMS (Room:A.1.4)**

Invited Lecture **(ICTMS1)**:  
Development of a mobile application for farmers, Prof. Gihan N. Wikramanayake,  
University of Colombo School of Computing, Sri Lanka

**LS Parallel Session 1(Auditorium)**

Fig-wasp relationships and syconial characters of *Ficus hispida* l. (moraceae) in three different localities in Kandy district, Sri Lanka **(ID:62)**  
W.M.G.A.S.T.B. Wijetunga, W.A.I.P. Karunaratne, A.M.T.A. Gunaratne, R.D. Harrison

11:20 – 11:40

Effects of location on growth rates of tree species in Sinharaja forest **(ID:179)** M.N. Meenabhashini, K.M.L.K. Mahanayake, I.A.U.N. Gunatilleke, C.V.S. Gunatilleke, R. Punchi-Manage

Quantitative determination of NO<sub>2</sub>, SO<sub>2</sub> and SPM exposure levels on bus passengers within the Colombo metropolitan area in Sri Lanka **(ID:175)**  
K.A.D.U. Pemasiri, H.D.S. Premasiri, B.C.L. Athapattu, A.N. Navaratne

**Venue: Molecular Biology Auditorium**  
**Time: 11.00 – 11.30**

Growth performance of cauliflower (charming snow-F1 hybrid) in sand and coconut coir as culture supportive media in aquaponic system **(ID:63)** J.M.N. Jayasundara, J.M.C.N. Jayasundara, A.H.M.S.S.K. Abesinghe

11:40 – 12:00

Soil organic carbon fractions in disturbed and undisturbed forest sites in Riverston area of Knuckles forest region **(ID:166)** R.P.S.K. Rajapaksha, H.M.S.P. Madawala, S. K. Gunathilake, R.R. Ratnayake

Heavy metal air pollution study in the city of Anuradhapura using moss (*Hyophila involuta*) as a biomonitor during two monsoon seasons in Sri Lanka **(ID:182)**  
K.G. Jayalath, M.P. Deeyamulla, R.C.L. De Silva

Performance comparison of emerging high efficiency video coding (HEVC) and H.264/AVC standards **(ID:87)**  
D.L.B. Abeyrathna, M.B. Dissanayake

Soil application of soluble silicon reduces the postharvest disease incidence in bitter melon (*Momordica charantia* l.) fruits **(ID:66)** R.M.R.N.K. Ratnayake, W.A.M. Daundasekera, H.M. Ariyaratna, M.Y.U. Ganehenege

12:00 – 12:20

Flood risk reduction and preparedness plan for Batticaloa municipal council area **(ID:57)** K.L.A.S. Wijesinghe, K.D.W. Nandalal

Implication of lead (Pb) in fast moving enamel paints available in the domestic market – progressive changes with the enforcement of the control act **(ID: 163)** R.A.D.S.M.R. Weerasekera, M.N.A. Mubarak, A.C.A. Jayasundera, S. Malavipathirana

Fuzzy based membership identification in social networks. **(ID:90)**  
A. Galappaththi, M.A.P. Chamikara, Y.P.R.D. Yapa, S.R. Kodituwakku, J. Gunatillake

Morphometrics of starch granules in seeds of Sri Lankan *cycas* taxa **(ID:68)**  
M.M.A.W.P. Mudanayake, S.D.S.S. Sooriyapathirana, P. Samaraweera, G.A.D. Perera

12:20 – 12:40

Mangrove and fishery associated with Pottuvil lagoon ecosystem in the east of Sri Lanka **(ID:132)** M.G.M. Prasanna, K.B. Ranawana

Construction of nemogram towards the automation of Al<sup>3+</sup> dosing for drinking water treatment: A case study for Ma Oya upper catchment area **(ID:160)** D. Ilangangedara, L. Wijesinghe, A.N. Navaratne

Multi-objective fuzzy linear programming in agricultural production planning **(ID:114)**  
H.M.I.U. Herath, D.M. Samarathunga

Effects of seed coatings and storage time on seed quality of rice var. Bg 300 **(ID:72)** V.M. Siriwardana, D.S.D.Z. Abeywardana, N.S. Gama-Arachchige

12:40 – 01:00

Molecular phylogenetic analysis of the dwarf toads: *Duttaphrynus scaber* and *D. atukoralei* (Bufonidae: adnominae) **(ID:151)** B. Jayawardena, G. Senevirathne, N. Wijayathilaka, N. Karunaratna, M. Meegaskumbura

Adsorption of Fuchsin dye by leaves of Bird's Nest fern (*Asplenium nidus* L.) **(ID:24)** D.M.R.E.A. Dissanayake, W.M.K.E.H. Wijesinghe, S.S. Iqbal, N. Priyantha, M.C.M. Iqbal

Application of generalized linear mixed models to analyze mean mortality rates of tree species in Sinharaja forest **(ID:126)** W.R.N. Amunupura, P. Wijekoon, I.A.U.N. Gunatilleke, SA. Ruwan

Level of physical activity among married women in a rural village in Vavuniya district **(ID:8)** R. Mahendran, D. Guruge, N. Gunawardena

01:00 – 02:00

Lunch

10th October, 2015 (Saturday) @ PGIS – Technical Session 1

Morning Tea

LS Parallel Session 2(Room:A.3.1)	LS Parallel Session 3(Room:A.3.2)	PS Parallel Session 1(Room:B.3.2)	PS Parallel Session 1(Room:B.3.3)	SE (Room:A.1.3)
Antioxidant activity of five medicinal plants with potential anticancer properties (ID:136) <u>N. Wedamulla, T. Madhujith, B.M.R. Bandara</u>	Evaluation of the effect of edible oils on absorption of caffeic acid in the intestine using a rat model (ID:51) <u>W.C. Prasadani, K.N. Seneviratne, S. Ekanayake, B.M. Jayawardena</u>	Invited Lecture (PS3) 'Surface controlling of TiO <sub>2</sub> nanoparticles for dye-sensitized solar cells' Prof. M. Shimomura, Graduate School of Engineering, Shizuoka University, Japan		Invited Lecture (SE1): 'The change of perspectives of science education research'. Dr. U.M. Sedere, Sri Lanka International Buddhist Academy, Sri Lanka <b>Venue: Zoology Lecture Theatre</b> <b>Time: 11.00 – 11.30</b>
Antimicrobial activity of <i>n,n'</i> -ethylenebis (acetylacetonimine) complexes of nickel(II), copper(II) and cobalt(III) (ID:145) <u>W.M.S.S. Amunugama, M.Y.U. Ganehenege</u>	Evaluation of antioxidant potential in extracts of guava leaf, coconut cake, rice bran and sesame cake (ID:52) <u>C.M. Senanayake, K.N. Seneviratne, B.M. Jayawardena</u>	<b>Venue: Room B.3.2</b> <b>Time: 11.00 – 11.30</b>		
Antimicrobial, antioxidant, cytotoxic activity and phenolic content of <i>Acrotrema uniflorum</i> (ID:152) <u>Y.A. Priyadarshana, M.P. Thomas, A. Wickramasinghe, S. Jayasinghe, S. Rajapakse</u>	Alkaloids and flavonols as chemotaxonomic markers: Potential applications in breeding <i>Camellia sinensis</i> (tea) (ID:92) <u>M.A.B. Ranatunga, J.D. Kottawa-Arachchi, M.T.K. Gunasekera, D.M.D. Yakandawala, P.A.N. Punyasiri, J. Brasathe, I.S.B. Abeyasinghe, B.M.R. Bandara</u>	Inhibitive action of selected model compounds of eugenol on aluminium corrosion in HCl solution (ID:43) <u>M.S.M. Zayan, N. Priyantha</u>	Improvement of mechanical strength of rubber using calcium carbonate nanoparticles (ID:169) <u>M.A.A.H. Ratnayake, M.M.M.G.P.G. Mantilaka, H.M.T.G.A. Pitawala, R.M.G. Rajapakse, D.G.G.P. Karunaratne</u>	Investigation of teachers' perception on teacher support material and in-service teacher training for revised G.C.E.(A/L) biology curriculum (ID:189) <u>M.A.F.F. Farlin, T.M.S.S.K.Y. Ekanayake</u>
Antioxidant activity and phenolic content of selected medicinal plants used for treating asthma (ID:154) <u>B.S.B. Karunathilaka, Y.A. Priyadarshana, L. Jayasinghe, A. Wickramasinghe</u>	Isolation of rock phosphate solubilizing bacteria from a phosphate deposit in Eppawala, Sri Lanka for biofertilizer production (ID:40) <u>H. Panchalingam, A.A.L. Ratnatilleke</u>	Corrosion Inhibition of galvanized steel in hydrochloric acid solution by eugenol (ID:85) <u>I.N. Wickramathilaka, N. Priyantha</u>	Performance of the SnO <sub>2</sub> /CaCO <sub>3</sub> -based dye-sensitized solar cells with cobalt phenanthroline-based redox shuttle (ID:143) <u>W.M.N.M.B. Wanninayake, K. Premaratne, R.M.G. Rajapakse</u>	Application of authentic instruction and assessment in junior secondary school biology teaching in Sri Lanka. (ID:186) <u>R.M. N. Rajapaksha, U.M. Sedere, A.M. Karunaratne</u>
Antibacterial activity of alkaloid-montmorillonite composites from <i>Catharanthus roseus</i> against <i>Staphylococcus aureus</i> (ID:177) <u>S. Thilakarathne, N.C. Bandara, A.U. Wijenayake, C.L. Abayasekara, B.M.R. Bandara</u>	Comparison of fatty acid composition and phenolic content of first and second extracts of coconut milk (ID:117) <u>U.N. Wijayarathna, W.C. Prasadani, N. Jayathilaka, K.N. Seneviratne</u>	Eugenol extracted from cinnamon leaves as a green corrosion inhibitor for aluminium in salty and acidic media (ID:44) <u>N. Priyantha, K.S. Godigamuwa</u>	Performance of metal-free organic dyes with complimentary absorption in zinc oxide dye-sensitized solar cells (ID:176) <u>L.Y. Rangali, E.N. Jayaweera, C.S.K. Ranasinghe, G.R.A. Kumara, R.M.G. Rajapakse</u>	Enhancing teacher education through environment based activities. (ID:172) <u>R.P.P. Lenora, A.N. Navaratne, U.M. Sedere</u>
Effect of glycemic control and microalbuminuria on haemoglobin concentration in long term diabetes mellitus patients (ID:18) <u>R.M.D. Udayangani, R. Sivakanesan, P.L. Kuruppuarachchi</u>	Phenazine derivatives from fungal endophytes <i>Nigrospora oryzae</i> isolated from <i>Coccinia grandis</i> leaves (ID:123) <u>D. Thanabalasingam, N.S. Kumar, L. Jayasinghe</u>	CdS thin film fabrication by combined electro-deposition and chemical bath deposition methods (ID:137) <u>M.R.M.B. Abeykoon, W.G.C. Kumarage, V.A. Senaviratne, B.S. Dassanayake</u>	Liquid/gel-polymer electrolytes for efficient dye-sensitized solar cells based on composite films (ID:158) <u>E.N. Jayaweera, C.S.K. Ranasinghe, G.R.A. Kumara, R.M.G. Rajapakse</u>	Use of television as a supportive tool for students' science learning (ID:130) <u>H.M.N. Herath, T.M.S.S.K.Y. Ekanayake</u>

Lunch

10th October, 2015 (Saturday) @ PGIS – Technical Session 1

Lunch				
1.00 – 2.00	EES Parallel Session 1 (Room:A.1.1)	EES Parallel Session 2(Room:A.1.2)	ICTMS (Room:A.1.4)	LS Parallel Session 1(Auditorium)
2:00 – 2:20	Geochemical characteristics of sediments of water bodies of Mahaweli System E and System C: A preliminary study (ID:157) <u>A.G.P. Aravinna, N. Priyantha, H.M.T.G.A. Pitawala, S.K. Yatigammana, T.G.S. Sanjeevani, R.K.D. Madhusa, V.A. Waduge</u>	Treatment of phenol-contaminated water using modified dimensionally stable anodes (ID:82) <u>P.B. Jayathilaka, K.U.K. Hapuhinna, A. Bandara, N. Nanayakkara, N.D. Subasinghe</u>	Invited Lecture (LS2) ‘Leishmaniasis in Sri Lanka: Towards its control and elimination’ <u>Prof. Nadeera Karunaweera, University of Colombo, Sri Lanka</u> <b>Venue: PGIS Auditorium</b>	Invited Lecture (PS2) ‘Porous silicate non-conventional and energy conventional applications’ <u>Prof. Stalislav Ferdov, University of Minho, Portugal</u> <b>Venue: Room B.3.2</b>
2:20 – 2:40	Investigation of topographic-soil relationships to support spatial prediction of soil properties. (ID:81) <u>K.P. Jayakody, U.W.A. Vitharana, J. Gunatilake</u>	Parameter optimization for bioremediation of Cr(III) and Pb(II) from synthetic wastewater by peel of <i>Artocarpus nobilis</i> fruits. (ID:37) <u>P.A. Kotabewatta, T.P.K. Kulasooriya, N. Priyantha</u>	Invited Lecture (PS2) ‘Porous silicate non-conventional and energy conventional applications’ <u>Prof. Stalislav Ferdov, University of Minho, Portugal</u> <b>Venue: Room B.3.2</b>	
2:40 – 3:00	Assessment of aquifer characteristics in alluvial sandy aquifer in Heda Oya for future development (ID:98) <u>K.G.D.T. Wijesinghe, J. Gunatilake</u>	Prototype treatment facility for small scale raw rubber processing wastewater and biogas generation (ID:45) <u>N.M.J. Nissanka, W.M.G. Senavirathna, N. Priyantha, S. Malavipathirana</u>	Growth rate analysis of tree species in Sinharaja forest using hierarchical and longitudinal models (ID:138) <u>D.M.D.M. Dissanayake, P. Wijekoon, I.A.U.N. Gunatilleke</u>	Diversity of the goblin spider genus <i>Brignolia</i> (family: <i>Oonopidae</i> ) in Sri Lanka (ID:88) <u>U.G.S.L. Ranasinghe, N. Athukorala, P. Samaraweera, S.P. Benjamin</u>
3:00 – 3:20	Mapping of Cambodia paddy area using active remote sensing data (ID:112) <u>C.A. Karandana, J.S.J. Wijesinghe</u>	Green synthesis of nanoparticles of zero-valent iron (N-ZVI), characterization and application for nitrate removal (ID:69) <u>S.K.K. Galagedera, A. Bandara, R. Weerasooriya, G.G.A.S. Nuwankumara, H.M.S.P.I. Randiligama</u>	Determinants of consumption patterns of dairy products in Sri Lanka (ID:159) <u>S.A.F. Zahra, Y.P.R.D. Yapa, A.M.R.S.B. Alahakoon</u>	Acaricide resistance of the cattle tick <i>Rhipicephalus (boophilus) microplus</i> from two cattle farms in Kurunegala district (ID:108) <u>K.M.U.J. Bandara, T.C. Weeraratne, S.H.P.P. Karunaratne</u>
3:20 – 3:40	Mineralogical and geochemical constraints on provenance of Sri Lankan marble (ID:180) <u>T.B.N.S. Madugalla, H.M.T.G.A. Pitawala</u>	Chemical reduction of nitrate by zero valent iron (ID:156) <u>S. Randiligama, S.K. Weeragoda, A. Bandara, S. Indrarathne, R. Weerasooriya</u>		Small mammal reservoir hosts of <i>rickettsiae</i> and their <i>arthropod</i> vectors in Kurunegala district (ID:115) <u>S. Yathramullage, M. Meegaskumbura, S. Meegaskumbura</u>
3:40 – 4:00	Assessment of effectiveness of biochar on soil productivity (ID:61) <u>A.R.H. Mohideen, P. Loganathan, M.S.R. Akther</u>	Removal of Pb(II) using unmodified coconut coir dust (ID:38) <u>W.S.A. Weththasinghe, N. Priyantha</u>		Small mammal reservoir hosts of <i>leptospira</i> in Kurunegala district (ID:135) <u>S. Yathramullage, M. Meegaskumbura, S. Meegaskumbura</u>
4:00 – 4:20				
4:20 – 5:00	Afternoon Tea			



## 10th October, 2015 (Saturday) @ PGIS – Technical Session 1

### Lunch

LS Parallel Session 2 (Room:A.3.1)	LS Parallel Session 3 (Room:A.3.2)	PS Parallel Session 1(Room:B.3.2)	PS Parallel Session 1 (Room:B.3.3)	SE (Room:A.1.3)
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Invited Lecture (LS2) 'Leishmaniasis in Sri Lanka: Towards its control and elimination' Prof. Nadeera Karunaweera, University of Colombo, Sri Lanka Venue: PGIS Auditorium

Invited Lecture (PS2) 'Porous silicate non-conventional and energy conventional applications' Prof. Stalislav Ferdov, University of Minho, Portugal Venue: Room B.3.2

**Time: 2.00 – 2.30**

<p>Molecular identification of non-tuberculous mycobacteria (NTM) in bronchial washings using SYBR green mediated multiplex real-time PCR (ID:95) <u>T.P. Keerthirathne, D.N. Magana-Arachchi, R.M.D. Madegedara, S.D.S.S. Sooriyapathirana</u></p>	<p>Evaluation of stability of total antioxidant capacity and starch hydrolase inhibitory activity of commonly used spices in an <i>in vitro</i> model of digestion (ID:11) <u>N. Jayawardena, M.I. Watawana, T. Jayathilaka, V.Y. Waisundara</u></p>	<p>Surface modification of textile materials for super hydrophobic properties (ID:139) <u>C.A. Thennakoon, R.B.S.D. Rajapakshe, I.M.C.C.D. Bandara, M. P.G.Mantilaka, R.M.G. Rajapakse, R.G.S.C. Rajapaksha</u></p>	<p>Enhancement of efficiency in dye sensitized solar cells by TiO<sub>2</sub> nanofiber/nanoparticle composite electrode (ID:47) <u>H.K.D.W.M.N.R. Divarathne, M.A.K.L. Dissanayake, G.K.R. Senadeera, C.A. Thotawattage</u></p>	<p>Special Lecture: Why Education Matters for a Sustainable Future: New Challenges after the UN Decade of ESD " Prof. Yoshiyuki Nagata, University of the Sacred Heart, Tokyo, Japan</p>
<p>Kidney injury and repair related gene expression in blood of patients with chronic kidney disease of unknown aetiology (ID:120) <u>S. Sayanthooran, D.N. Magana-Arachchi, S.D.S.S. Sooriyapathirana, L. Gunarathne, T. Abeyskera</u></p>	<p>Antibacterial activity and antioxidant activity of <i>Walidda antidysenterica</i> (ID:83) <u>L.P. Gunatilake, N.G.D. Anuradha, A.N. Godavillathanna, M.G.N. Perera, I. Nicholas, M.N. Wickramaratne</u></p>	<p>Cyclodextrin-mediated intercalation of lycopene into cation-exchanged montmorillonite clays (ID:128) <u>A.M.N.K. Adikari, B.M.R. Bandara</u></p>	<p>A study on gel polymer electrolyte based on polyacrylonitrile, <math>\gamma</math>-butyrolactone, ethylene carbonate and tetrapropyl ammonium iodide salt for quasi-solid-state dye-sensitized solar cells (ID:149) <u>A.M.C. Senevirathne, V.A. Seneviratne, O.A. Ileperuma</u></p>	<p>Effectiveness of bilingual education in Kandy District (ID:133) <u>A.M.L. Atapattu</u></p>
<p>Chronic co-exposure effect of environmental toxins in drinking water for the epidemics of chronic kidney disease of unknown etiology (CKDu); toxic synergic effect of heavy metals, F and hardness (ID:124) <u>H.M.S. Wasana, J. Bandara</u></p>	<p>Reduction of lingering sweet aftertaste of sucralose in the anti-diabetic formula of 'Aloe vera' incorporated ready-to-serve beverage (ID:104) <u>M.A.R.N. Wijesinghe, A.N. Navaratne, C.K. Ileperuma, K.A. Naser</u></p>	<p>Intercalation of <i>Coccinia grandis</i> alkaloids into cation-exchanged montmorillonite clays (ID:174) <u>F.Y. Thanzeel, S.T.K. Ubayawardhana, N.C. Bandara, B.M.R. Bandara</u></p>	<p>A novel polymer free electrolyte based on fumed silica for dye sensitized solar cells (ID:134) <u>A.M.J.S. Weerasinghe, M.A.K.L. Dissanayake, G.K.R. Senadeera, V.A. Senaviratne, C.A. Thotawatthage</u></p>	<p>Teachers' and students' perceptions on G.C.E. (A/L) student projects: A case study at Nuwara Eliya educational zone (ID:94) <u>P.M.J.R. Piyatissa, W.D. Chandrasena</u></p>
<p>Storage, durability and antibacterial efficacy of antibiotic-coated gauze (ID:181) <u>J.B. Epakanda, G.S.C. Rajapaksha, R.M.G. Rajapakse</u></p>	<p>Antifungal and cytotoxic activity of <i>Holarrhena mitis</i> (ID:131) <u>W.G.D. Wickramasingha, V. Karunaratne, W.A.S. Wijendra, S. Jayasinghe</u></p>	<p>Growth and lipid content of <i>Chlorella</i> species in outdoors: for the production of biodiesel (ID:93) <u>T.M.M.Marso, M. Y.U. Ganehenege, C.S. Kalpage</u></p>	<p>Platinum free, cobalt sulphide based counter electrode for low cost dye sensitized solar cells (ID:121) <u>A. Manjiceevan, J. Bandara</u></p>	<p>Academic performance of science students at university level in relation to their socio economic background: A case study (ID:125) <u>W.M.C.K. Basnayake, W.D. Chandrasena, A.C.A. Jayasundera</u></p>
<p>Effect of banana (<i>Musa acuminata</i> colla) blossom incorporated diets on serum cholesterol and serum glucose levels in rats fed with cholesterol (ID 184) <u>R. Liyanage, S. Gunasegaram, P. Weththasinghe, V. Rizliya, C. Jayathilake, B. Jayawardana, J.K. Vidanarachchi</u></p>		<p>Palladium/polypyrrole/carbon black composite as an electrocatalyst for oxygen reduction reactions (ID:142) <u>K.G.C. Senarathna, R.M.G. Rajapakse</u></p>		<p>A study on absenteeism of students in G.C.E. (A/L) classes in Sri Lanka (ID:53) <u>J.M.C.N. Jayasundara, B.H.A.C.K. Hettiarachchi, S.A.B. Maheshinee, K.M.M.N. Meddegoda, W.D. Chandrasena</u></p>

### Afternoon Tea

## 10th October, 2015 (Saturday) @ PGIS – Poster Session

### Information & Communication Technology, Mathematics and Statistics (ICTMS)

XML based approach for customizing modern web user interfaces (ID:26) A.M.S.N.B. Attanayake, S.R. Kodituwakku

A performance evaluation of various SVM tools and different feature selection strategies (ID:39) T. Kokul

Requirements traceability interpolation for health level seven (HL7) specification generation (ID:91) M.I. Sabar, P.M. Jayaweera, E.A.T.A. Edirisuriya

An algorithm to find the optimum solution of a univariate function (ID:106) M.M.R. Balasooriya, D.M. Samarathunga

Risk identification and management methodology for social media networks (ID:116) K.D.B.H. Subasinghe, S.R. Kodituwakku, H.S.C. Perera

### Life Sciences (LS)

Microbiological quality of ready-to-eat meat based food products available in Colombo, Sri Lanka (ID:15) S.G.M.R.L. Wimalasekara, G.D.D.K. Gunasena

Comparative nutrient analysis of neglected fresh water fish and a crab species (ID:35) D.S.B. Dissanayake, A.D. Premarathna, A.P. Jayasooriya

Biocompatibility of TiO<sub>2</sub> coated nanorods and nanoparticle with HeLa cells (ID:48) N.S. Khalid, F.I.M. Fazli, N.K.A. Hamed, M.L.M. Napi, M.K. Ahmad, S.C. Fhong

Physicochemical properties and antioxidant activity of peel and pulp of 'Karuthacolomban' and 'Willard' cultivars of mango (*Mangifera indica L.*) in Sri Lanka (ID:50) A. Kuganesan, G. Thiripuranathar, A.N. Navaratne, P.A. Paranagama

Identification of lactic acid bacteria present in house hold curd samples (ID:55) A.U. Tennakoorn, J.G.S. Ranasinghe, R. Jinadasa

Preliminary characterization of Sri Lankan anopheline mosquitoes using DNA barcodes (ID:70) T.C. Weeraratne, M.D.B. Perera, C.S. Wondji, L. Reimer, N.S. Surendran, S.H.P.P. Karunaratne

Determination of age structure of Sri Lankan *Aedes albopictus* mosquitoes using transcriptional age grading technique (ID:71) T.C. Weeraratne, C.S. Wondji, L. Reimer, N.S. Surendran, S.H.P.P. Karunaratne

Efficacy of disinfectants used in the poultry industry against gram-positive and gram-negative bacteria (ID:75) H.D.A. Wimalarathne, E. Pathirana, I. Pathirana

Preliminary study on variation in floral shape and colour in *Exacum* (binara) population in Nuwara Eliya district (ID: 122) H.M.P. Peiris, D.S.A. Wijesundara

### Earth and Environmental Sciences (EES)

Preparation and characterization of air stable nano zero valent iron using radiation grafter copolymer. (ID: 9) S.Y. Ratnayake, M. Makehelwala, R.L. Wijayawardana, A. Bandara, R. Weerasooriya

Synthesis, characterization and electrocatalytic activity of nickel(II) tetraaza macrocyclic complex derived from [bis(benzil)(1,2-phenylenediamine)] for CO<sub>2</sub> reduction (ID:13) M.C.R. Peiris, M.Y.U. Ganehenege

Participatory and mobile GIS based community hazard warning system (ID:42) A. Chinthaka and J. Gunatilake

Developing a risk code and evaluating the safety against direct physical injuries in high rise building construction projects (ID: 164) U.S.N.B. Dissanayake, W. Wickramasinghe

### Physical Sciences (PS)

Dependence of electrolyte salt concentration on the performance of dye sensitized solar cells based on a polyacrylonitrile based gel polymer electrolyte (ID:16) Y.M.C.D. Jayathilake, K.S. Perera, W.A.D.S.S. Weerasinghe and K.P. Vidanapathirana

Zinc oxide/poly(methyl methacrylate) nanocomposite as a food packing material (ID:140) S.A.J.A. Kumari, M.M.M.G.P.G. Mantilaka, C.A. Thennakoon, W.P.S.L. Wijesinghe, R.M.G. Rajapakse

Properties of CdS and in substituted CdS thin films prepared by chemical bath deposition (ID:144) K. Paramanathan, M.A.K.L. Dissanayake, G.K.R. Senadeera, C.A. Thotawattage, K. Balashangar, P. Ravirajan

DendriGen: A graphical tool the preparing dendrimer models for computer simulation (ID:167) P.N. Wimalasiri, I.M. Chandrasiri, R.J.K.U. Ranatunga

Sri Lankan natural graphite as a low cost counter electrode for dye sensitized solar cells (ID:187) W.M.S.S. Wanigasekara, A.L. Bandara, G.R.A. Kumara, R.M.G. Rajapakse

Bogala graphite as a catalytic counter electrode for SnO<sub>2</sub>/ZnO composite dye-sensitized solar cells (ID:188) A.L. Bandara, W.M.S.S. Wanigasekara, G.R.A. Kumara, R.M.G. Rajapakse

### Science Education (SE)

A study on student contribution for the soil pollution by the use of polythene in Sri Lankan schools (ID:25) R. Angunawala, L.D. Athulugama, I.W.M.A.N. Bandara, H.G.I.L. Edirisinghe, N. Wijethunga, W.D. Chandrasena

Science teachers' views on their continuous professional development (ID:96) R.P. Kalupahanage, T.M.S.S.K.Y. Ekanayake

A study on performance of bakery and value addition centre, University of Agricultural Sciences, Bangalore, Karnataka (ID: 110) B. Krishnamurthy, D. Harshitha, Y.M. Gopala

