

SUMMARY OF CIVIL ENGINEERING SOCIETY ACTIVITIES - 2017



ANNUAL GENERAL MEETING

- ❑ Civil Engineering Society (CES) Annual General Meeting 2016/17 was held on 29nd September 2016 at 5.00 p.m. at the CAD Laboratory.
- ❑ Members for CES Executive Committee were elected at this gathering.



LAB CLEANING DAY

- ❑ CES lab cleaning day was held on 12th of January 2017 as the first CES activity of the year.
- ❑ Approximately 200 CES members including academic staff members participated eagerly in this event.
- ❑ All the laboratories of the department were cleaned under this activity.





Civil Engineering Society
University of Peradeniya



Lab Cleaning Day

**Lab Cleaning Day
has organized by the
Civil Engineering Society**

**On
Thursday, 12th January, 2017
8.00 am - 12.00 pm**

**at
Faculty of Engineering
University of Peradeniya**

Your Active Participation is Highly Expected



Let's Keep Clean, Where We Learn



CES WELCOME FOR E-14 BATCH

- ❑ CES Welcome for E-14 batch was organized in 6th of February DO II.





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Edited by: Kaushal Amarasinghe

CES TALK SERIES 2017

- ❑ Throughout the year, CES successfully organized 15 talks carrying the topics in a versatile range.
- ❑ The main objective of this talk series was to improve knowledge of the engineering community in the faculty, updating them with latest trends in the field of Engineering.



TOPICS DISCUSSED IN TALK SERIES

1. Façade Engineering by Dr. Balesh Balachandran

Façade Engineering

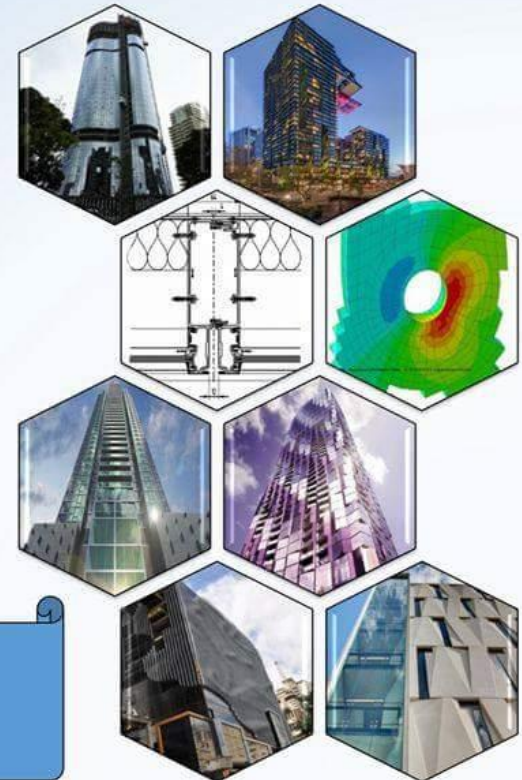
Guest lecture presented by Balesh Baleshan

Façade engineering has become more popular in building and construction industry due to the fact that nearly 20% of the building total cost goes to façades. However, this field is not well known to engineering students since the basic knowledge related to façade systems is not covered in the current engineering curriculum. Façade engineering is a specialized field which makes architect's dream into reality by integrating structural engineering and building physics principles.

This presentation will provide a basic understanding of **selection, analysis and design** of innovative and complex façades and glass structures along with **functionality and aesthetics**. An insight into **fabrication and construction** methods is also presented since they are the integral aspects in the selection and design of façades.

Date: 20th January 2017
Time: 11.00 am. to 12.00 pm.
Venue: Seminar room 2

CES Talk Series 2017





2. Composites in Civil Infrastructure – Innovations in Australia by Prof. Thiru Aravinthan



Composites in Civil Infrastructure Innovations in Australia

By Professor Thiru Aravinthan
University of Southern Queensland, Australia

Date : 26th January 2017 (Thursday)
Time : 5.00 pm
Venue : Seminar Room 1





Professor Thiru Aravinthan is a Professor of Structural Engineering within the Centre for Future Materials (CFM) at the University of Southern Queensland (USQ). After obtaining the BScEng (Hons) degree from the University of Peradeniya in 1991, he pursued his postgraduate studies at Saitama University, Japan obtaining the Master of Engineering and Doctor of Engineering. He then worked as a Senior Research Engineer at DPS Bridge Works, Tokyo for three years and involved in the R&D of the award winning innovative bridge. He joined USQ in 2002.

Prof Aravinthan is a Chartered Professional Engineer and Fellow of Engineers Australia and a registered Professional Engineer at Oregon State, USA. His expertise includes fibre composites structures, prestressed concrete technology, structural rehabilitation and engineering education. He is actively involved in national and international organisations including Engineers Australia, Composite Australia and Council Member of International Institute for FRP in Construction. He has over 25 years of engineering experience in the industry, research and academia and involved in several industry funded projects. He was awarded the USQ Award for Excellence in Research in 2003 (Early Career) and 2009 (Open Category) and several other teaching excellence awards. He was part of the team that was awarded the prestigious JEC Europe 2014 Innovation Award in the oil and gas category for the development of a novel composite clamp for pipeline repair.







3. Structural Failures by Eng. Ian Duckenfield

**CES TALK SERIES**

Structural Failures


By Ian Duckenfield,
BSc, CEng, MICE, MStructE



The lecture will describe, with illustrations, 40 structural failures ranging from minor to major (involving hundreds of deaths). The engineering cause of the failures will be given with clear lessons learnt.

Ian has over 40 years structural design experience. For 10 years he was the Principal Structural Engineer for the largest firm of engineers in Ireland. He was an Examiner for the Institution of Structural Engineers in London. He has worked extensively as an expert witness and has a particular interest in

**Thursday.
30 March - 5.00 pm
@ Seminar Room #1**



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Faculty of Engineering - University of Peradeniya



4. Oil and Gas Development – Offshore platform installation by Eng. Don Dushantha

TALK ON

Oil & Gas Development



By Don Dushantha

BScEng (Peradeniya) 1991,
Civil Engineering professional with
26 years of experience in
developing Oil & Gas fields in
Saudi Aramco (world biggest oil
field), Qatar, India, Caspian Sea,
Gulf of Thailand and recently in
Indonesia as a project manager
for Gas field development



Offshore Platforms Installation



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On 8th May (Monday)
from 5.00 pm to 6.00 pm
@ Seminar Room #1

5. China's South-North Water transfer project by Dr. Wenbin Liu

6. Performance of Membrane Bioreactor coupled with nanofiltration membrane by Prof. Wei Yuansong

China's South-North Water Transfer Project under climate change

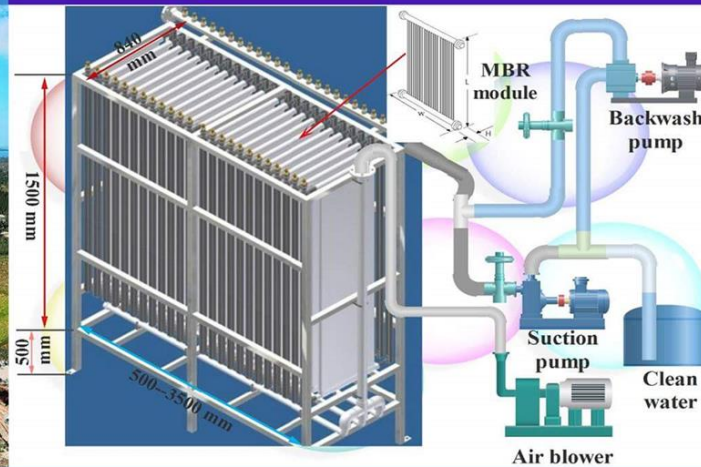


By Dr. Wenbin Liu

Dr. Wenbin Liu is an Assistant Professor in Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences (IGSNRR, CAS). Wenbin has a broad interest in surface-water hydrology and more than five years of experience in a range of interdisciplinary areas, including land-surface hydrological modeling, drought monitoring and climate impacts assessment. He has published more than 20 papers in peer-reviewed journals such as Journal of Geophysical Research, Journal of Hydrology, Hydrology and Earth System Sciences, and Journal of Hydrometeorology.



Performance of membrane bioreactor (MBR) coupled with nanofiltration (NF) membrane treating municipal wastewater



By Professor Wei Yuansong

Professor Wei Yuansong is Vice Director Department of Water Pollution Control, Research Center for Eco-Environmental Sciences (RCEES), Chinese Academy of Sciences (CAS), and Vice Chairman of the Society for Ecological Rehabilitation of Beijing (SECRB). Prof. Wei's current research interests focus on wastewater treatment and reclamation, membrane technology for wastewater treatment and reuse, treatment and resource recovery of organic solid wastes (i.e., sewage sludge, animal manure, and municipal solid wastes), and river restoration. Prof. Wei has published over 140 peer-reviewed papers, and earned 15 authorized invention patents and 1 computer software copyright.






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University of Peradeniya**

Wednesday, March 22 @ 5.00 pm @ Seminar Room I

7. Is my Innovation worthy of a patent ?





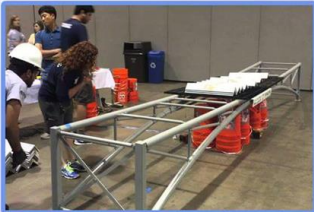
Basics of patenting for innovators by Eng. Jude Parackrama



Is my Innovation Worthy of a Patent? Basics for Patenting for Innovator

By Eng. Jude Parakrama

Date : 1st February 2017 (Wensday)
Time : 5.00 pm - 6.00 pm
Venue: Seminar Room 1



CES Talk Series 2017

8. Gender Imbalance in Engineering by Dr. Achela Fernando



Civil Engineering Society
University of Peradeniya



Why should “Gender Imbalance” in Engineering be of concern to all of us?

By Dr. Achela Fernando

Griffith School of Engineering, Griffith University,
Nathan Campus, Australia

Date : 16th February 2017 (Thursday)
Time : 5.00 pm - 6.00 pm
Venue : Seminar Room 1



Although the belief that “Engineering is a man’s profession” is fading, numbers of females choosing the path of Engineering is still low in most countries. There are several reasons, explanations and even justifications provided for this situation, it is important to look deeper into this situation and take remedial measures if the outcome is beneficial to the individuals – both men and women engineers–, the society, and the engineering industry in general.

This presentation by Dr. Achela Fernando (an adjunct Senior Lecturer of Griffith University in Brisbane, based in New Zealand and Sri Lanka) will shed some light on the barriers the women engineering students and women engineers encounter in their lives and careers based on two surveys. The heavy loss to individuals, the society, and the engineering industry as a whole that result- from a gender-imbalance, and how it has become a cause for concern will be discussed. The roles of both men and women in engineering in addressing these barriers, and measures that can be/have been taken to improve conditions and increase the participation, progression and ultimately, the retention of more women in engineering will be reviewed.

All are Welcome!

CES Talk Series 2017



9. Safe water supply Initiatives in hard to reach areas of Bangladesh by Prof. Mafizur Rahman



Civil Engineering Society
University of Peradeniya



SAFE WATER SUPPLY INITIATIVES IN HARD TO REACH AREAS OF BANGLADESH – TECHNOLOGY & SOCIETY

By Prof. Mafizur Rahman ,
Department of Civil Engineering,
Bangladesh University of Engineering and Technology (BUET),
Dhaka , Bangladesh

Date : 16th March 2017 (Thursday)
Time : 5.00 pm - 6.00 pm
Venue: Lecture Room 2



Prof. Mafizur Rahman is the host researcher of the MIT-BUET joint ongoing research on "Transport mechanism of Arsenic in ground water of Bangladesh " funded by National Science Foundation (NSF), USA

"Study on Solar Desalination Plant for drinking water supply" Project funded by WHO

Principal Investigator of the Alliance for Global Sustainability (AGS) research group (The group being formed by researchers from MIT, Tokyo University and Swiss Institute of Research) working on "Sustainable Water Supply System in Arsenic-affected Asian Environment

Research Interests:

Climate Change impacts on food security, Climate change and water environment, Alternate water resources in urban and rural areas of developing countries, Ground water pollution and Recharge, Environmental and Water Resources Engineering with GIS application, Urban air pollution and impact of climate change

All are Welcome!

CES Talk Series 2017



10. Organization Strategy and balanced scorecard by Dr. Gemunu Nanayakkara



Civil Engineering Society
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CES Talk Series 2017 - Talk 11

Organization Strategy and Balanced Scorecard



Presenter: Dr Gemunu Nanayakkara

Date: 12th July (Wednesday)

Time: 5.00 pm to 6.00 pm

Venue: Seminar Room 01



11. Entrepreneurship for Engineers by Dr. Jagath Pieris

PEFAA and CES Talk

Entrepreneurship for Engineers

Speaker

Eng. (Dr). Jagath Peiris

CEO/ Executive Secretary

IESL

On

Wednesday, 25th January, 2017

5.00 p. m.

at

E. O. E. Pereira Theatre

University of Peradeniya

All are welcome

Peradeniya Engineering Faculty Alumni Association

Civil Engineering Society



12. Green Entrepreneurship through design and construction by Prof. Ranjith Dissanayake



Civil Engineering Society
Faculty of Engineering - University of Peradeniya



CES Talk Series 2017
Talk 12

Green Entrepreneurship, through Design and Construction

Date: 19th July (Wednesday)

Time: 5.00 p.m.

Venue: EOE Pereira Theatre



By Prof. Ranjith Dissanayake

Senior Professor

Dept. of Civil Engineering, University of Peradeniya

“Green entrepreneurship is the activity of consciously addressing an environmental and a social problem through the realization of entrepreneurial ideas with a high level risk, which has a net positive effect on the natural environment and at the same time, is financially sustainable.”

Successes of any entrepreneurship depend on how green it is today, as there are many concerns on the environmental issues and its scale is expanding day by day. If the entrepreneur is not taking care of these issues, they will have to face several issues such as environment, public, material scarcity, etc.

This presentation discusses how green entrepreneurship can be adapted through design and construction to have positive effect on the natural environment and at the same time is financially sustainable. As a case study to damaged bridges due to floods was considered to show how green entrepreneurship is adapted in designing and retrofitting works.



13. Potential future opportunities in Queensland University by Prof. Sritawat Kitiponchai and Dr. Dilum Fernando

Civil Engineering Society
Faculty of Engineering - University of Peradeniya

**Potential Future Opportunities
in
Queensland University
and Australia**

Professor Sritawat Kitiponchai

Dr. Dilum Fernando

**On 9th May (Tuesday)
At 10.30 am to 11.30 pm
In Seminar Room 01**

14. Climate Variability linked changes in characteristics and extremes of Hydroclimatological variables by Prof. Ramesh Teegavarapu



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CES TALK SERIES - TALK 14

Climate Variability Linked Changes in Characteristics and Extremes of Hydroclimatological Variables Implications for Water Resources Management

By Prof. Ramesh Teegavarapu

Associate Professor

Department of Civil, Environmental and Geomatics

Florida Atlantic University, Florida, USA

Climate variability and change is expected to bring several changes to future hydrologic cycles and regimes in different parts of the world. Natural climate variability based on large-scale, global inter-year, quasi-decadal and decadal, and multi-decadal coupled oceanic and atmospheric oscillations (e.g., El Niño southern oscillation (ENSO), Atlantic multi-decadal oscillation (AMO) and Pacific decadal oscillation (PDO), North Atlantic Oscillation (NAO) contribute to regional variations in extremes and characteristics of essential climatic variables in different parts of the globe. Linkages of these oscillations/teleconnections to the variability in regional hydroclimatic variables such as temperature, precipitation, streamflow and others have been the main sources of inter-annual climatic variability in many parts of the world with serious threats and implications for sustainable water resources and disaster management. This talk will focus on the current state of our understanding of the dynamics of individual and coupled ocean and atmospheric oscillations and their influences on characteristics and extremes of precipitation, temperature and sea level in two select regions of the world. Spatially and temporally varying influences of these influences on different hydroclimatic variables with the role played by regional hydroclimatology in restricting the extent of these oscillations-related influences will be elaborated and discussed.

On 17th Thursday

At 4.00 pm

@ Seminar Room 1

15. Women Engineers leadership in water sector



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WOMEN ENGINEERS LEADERSHIP IN WATER SECTOR

Societies enjoy water security when they successfully manage their water resources to satisfy all their water needs; water and sanitation, agricultural, industrial, energy, sustain livable cities, maintain healthy rivers, etc. Since women are the primary users and managers of household water, their leadership in water sector development is imperative in decision making, policy planning, design and implementation of water related projects. This seminar will showcase how a fresh lady engineer could succeed in carrier to become a women leader in water sector amidst cultural attitudes, social norms inherent to the Sri Lankan society.

Role as a Technical Expert

by Eng. Mrs. Vasantha Illangasinghe
Deputy General Manager, NWS&DB

Role as a Policy Planner

by Eng. Mrs. Badra Kamaladasa
Former Director General, Department of Irrigation

Role as an Administrator

by Eng. Mrs. Sunethra Rathnayake
Deputy Chief Secretary,
Engineering Services, Central Provincial Council

On 26th September 2017

From 4 pm to 6 pm

@Seminar Room 1



**Supported by
NORAD WaSo-Asia Project**

COMPETITIONS ORGANIZED BY CES

Several competitions were organized by CES in 2017.
They are,

- ❑ IESL Inter-university Spaghetti Bridge Competition in Techno 2016.
- ❑ CES Spaghetti Bridge Competition 2017 organized as a event in IESL Day.
- ❑ INSEE – IESL Concrete Mix Design Challenge 2017.
- ❑ CES T shirt Design Competition.



CES ANNUAL SEMINAR 2017

- ❑ CES Annual Seminar 2017 was held on 26th of August as the main event of CES Calendar.
- ❑ Topic of this year was “ Civil Engineering for Urban Resilience”.
- ❑ Five talks were conducted under this by several experts in academia and industry.
- ❑ This event was sponsored by Ceylon Steel Corporation and WaSo Asia Project.





CES Annual Seminar 2017

Civil Engineering for Urban Resilience

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WaSo
Water, Society
and Climate Change

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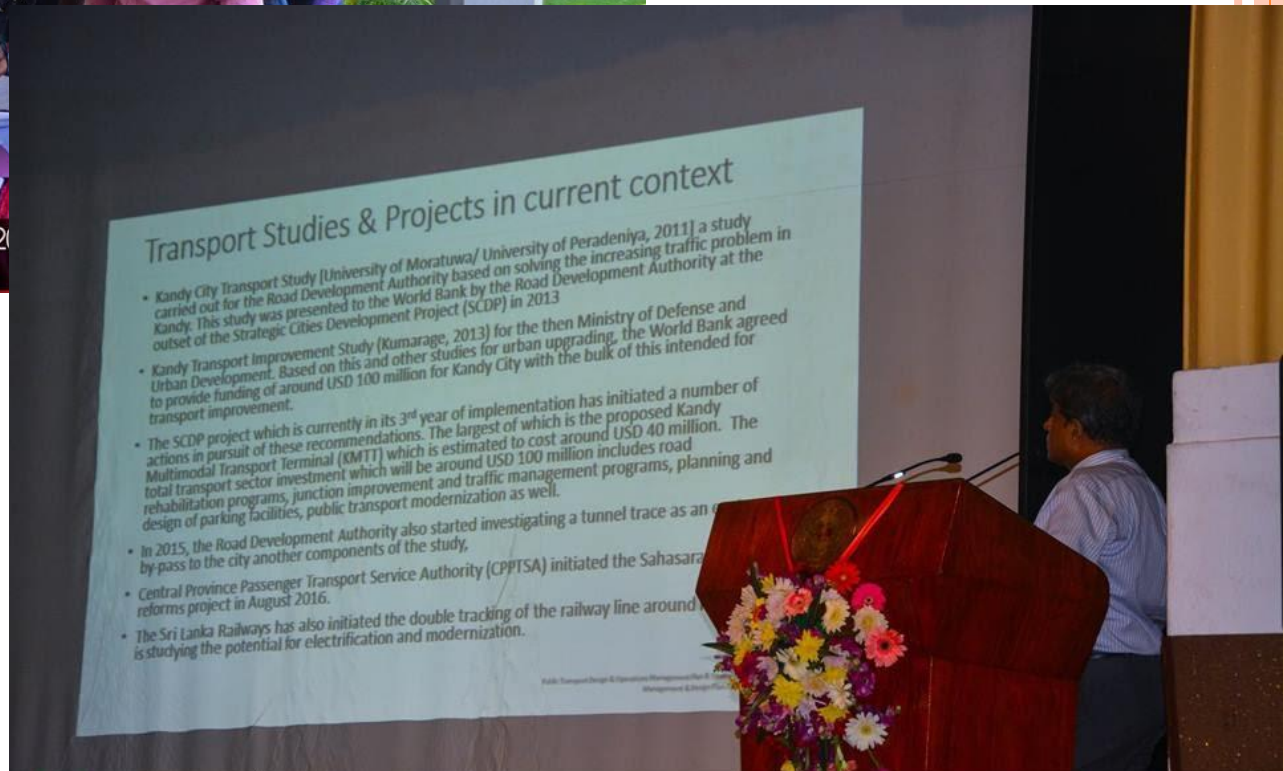
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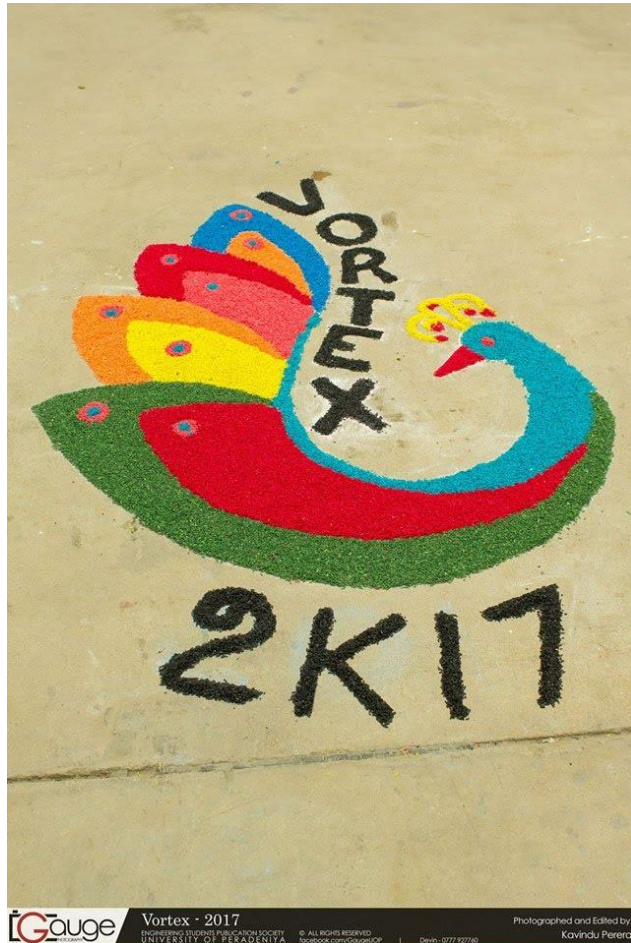
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VORTEX 2017

- Annual Get-together of CES was held on 28th of September at DO II with the participation of academic staff and students





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Thank You

