



## Civil Engineering Society

University of Peradeniya





#### **CIVIL ENGINEERING SOCIETY FACULTY OF ENGINEERING** UNIVERSITY OF PERADENIYA



#### **Executive Committee - 2019**

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14 Batch

Field Representatives 15 Batch





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Heshan Ominda

## About CES

The largest Engineering body.

pre-eminent history of forty-six years.

550 memberships comprising of

- -undergraduates
- -post graduate students
- -academic staff members

unique feature

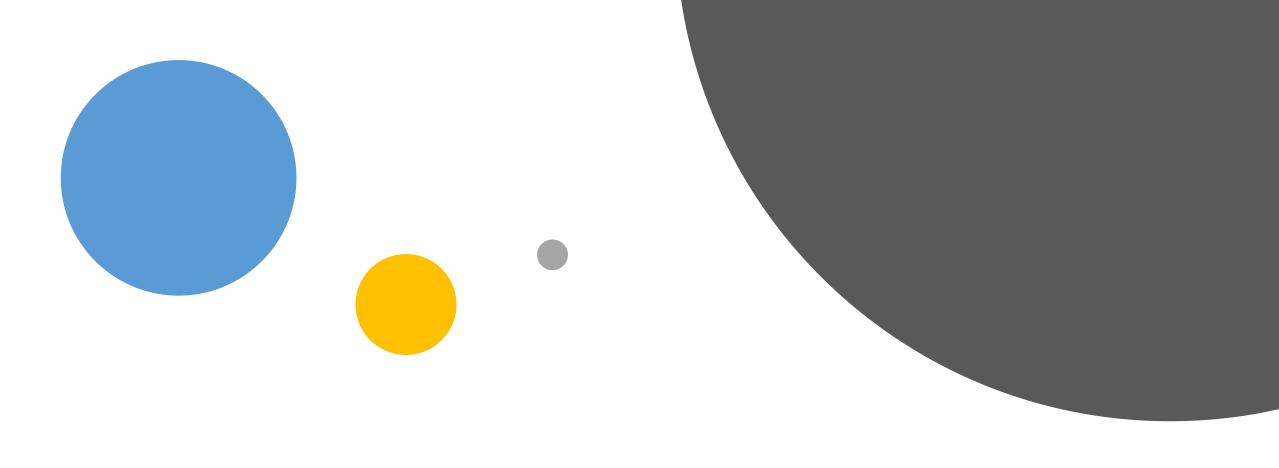
staff and the students are in the same membership.

## Vision

The Civil Engineering Society will be a significant contributor to Faculty of Engineering in achieving its vision of becoming the centre of excellence in engineering education and research in South Asia.

## Mission

The mission of the Civil Engineering Society is to provide a common platform, through various activities, for the civil engineering students, the staff and the industry to interact and thereby, enrich their academic and professional lives.



Brief summary of events organized by CES in 2019 & 2020





## E/16 Welcome



Cricket tournament

## Event Management Workshop

- Conducted by Mr.
   Upali Ariyasiri.
- Mainly targeted at all societies represented by all the departments.
- Two sessions
- talk about key points in event management
- -practise session at EOE Pereira theatre















### Field visit 01

This field visit is mainly for Final Year students sponsored by INSEE.

#### Locations-

- INSEE batching plant
- New Kelani bridge project
- Proposed solid waste management project at Wattala
- Proposed ODEL mall shopping complex
- Lanka AAC (pvt) Ltd













Organized by:

**Civil Engineering Society** 







## INSEE mix Design Intrauniversity Competition

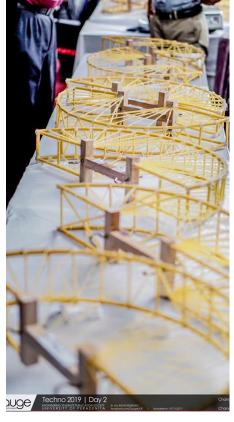
IESL Techno
Inter-University
Spaghetti
Bridge
competition

Main organizer is Civil Engineering Society of University of Peradeniya in collaboration with IESL young member section since 2012.

This is one of the popular competition among civil engineering students from all Universities in sri Lanka.







## Spaghetti Bridge competition 2019







### CES Talk Series 2019



Up to now CES has organized 3 talks with a versatile range of topics related to the civil engineering field.



Both students and academic staff have participated in these talks eagerly and have gathered knowledge on the evolving civil updating engineering world.

## Talk by Dr.Rajendran Arulnathan

Planning and Design of a 1.5\$ billion new reservoir and Design of a near surface disposal facility









- Planning and Design of a \$1.5 Billion New Reservoir
- Design of a Near Surface Disposal Facility

by Dr. Rajendram Arulnathan

#### Dr. Rajendram Arulnathan

Dr. Arulnathan formerly managed the geotechnical services group for the Northern California region of AECOM. He is a registered geotechnical engineer in California with a broad range of geotechnical, dam, levee, waterfront structures, nuclear, and foundation projects. He has been a leading subject matter expert in seismic analysis and design of various infrastructures including dams and levees in the nation. Dr. Arulnathan has conducted soil-structure interaction analyses of hydraulic structures, nuclear power plants, bridges, and harbor facilities. He has directed the investigation, engineering analyses, and design of flood control structures.





### Talk by Prof. M.P. Ranaweera

### Technological advances of Sri Lankan stupas

















## Tall Buildings design workshop





## TALK SERIES 2020 Innovative Composite Materials for Sustainable Civil Infrastructure

#### by Prof. Thiru Aravinthan

#### Abstract

This presentation will highlight some of the innovative applications on composites in civil infrastructure in Australia. These include bridge structures, pile systems, railway sleepers, rehabilitation of existing structures, and other innovative applications of FRP composites in civil infrastructure. The development and progress of the innovative technology in civil infrastructure will be discussed including the need for appropriate education and training of students and engineers.

#### Prof. Thiru Aravinthan

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 Saltama 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 Charted 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 28 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.

February 7<sup>th</sup> Friday 3.00 - 4.30 p.m.



CAD Lab
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society

## Talk by Prof. Thiru Aravinthan

Innovative composite materials for sustainable Civil infrastructres

## lockdown

We are unstoppable





## Talk by Eng. Nandana Abeysuriya

Design and construction of deep basement for ODEL Mall at Ward place



President - Society of Structural Engineers- Sri Lanka

#### Abstract

Design and construction of deep basements are very common in developed countries. There is a new trend in Sri Lanka to go for more than one basement due to space limitations in the lands available. Top down and bottom up construction methods are widely used with the construction of deep basements and Bottom up construction method is adopted for the construction of Five basements for the proposed ODEL. Mall, while having a temporary slab at ground floor level standing on temporary king posts to use as customer car parks for the existing ODEL shopping mall.

The Diaphragm wall is selected as the most appropriate earth retaining wall system compared to other possible systems such as secant piles, sheet pile walls etc., The advantage of using Diaphragm wall is that the same shall be used as the permanent retaining wall for the basements. Design of diaphragm wall is done by considering the soil conditions, depth of excavations, floor to floor height, construction sequences, temporary and permanent lateral supports provide to the

The conventional temporary lateral bracing systems done with steel beams, were replaced with concrete beams for the

The design approaches, limitations in the serviceability limit to ensure safety of adjacent properties and the practical issues handled during the constructions etc. will be discussed in the presentation.

May 13th Wednseday 3 - 4 p.m. GMT+5:30





Password: ces@12345



# Talk by Dr. Naveed Anwar

#### ONLINE TALK SERIES

A PRESENTATION ON

STRUCTURAL MODELING

FOR BUILDINGS AND BRIDGES
-A FRESH PERSPECTIVE

#### **Dr. Naveed Anwar**

Vice President for Knowledge Transfer (VPKT) and Affiliated Faculty, School of Engineering and Technology, AIT.

**Dr. Naveed Anwar**, A Pakistani-born structural engineer and academician, currently working as Vice President for Knowledge Transfer and as an Affiliated Faculty in Structural Engineering at School of Engineering and Technology of Asian Institute of Technology, (AIT) in Thailand.

In over 37 years of professional engagement, Dr. Anwar has the unique opportunity to work in a very broad spectrum of the Civil/Structural Engineering knowledge cycle, in teaching of graduate programs, post graduate research supervision, publications, development of tools and technologies for application, training and capacity building of professional neers, and direct engagement in hundreds of international projects, all of which feeding back into the teaching, research and development. All of this is done in a truly international setting, spanning over twenty countries, under the unique opportunity to work in a very broad spectrum of the Civil/Structural Engineering knowledge cycle, in teaching of graduate programs, post graduate research supervision, publications, development of tools and technologies for application, training and capacity building of professional neers, and direct engagement in hundreds of international projects, all of which feeding back into the teaching, research supervision, publications. All of this is done in a truly international setting, spanning over twenty countries, under the unique opportunity to work in a very broad spectrum of graduate programs, post graduate research supervision, publications, development of tools and technologies for application, training and capacity building of professional neers, and direct engagement in hundreds of international projects, all of which feeding back into the teaching, research supervision.

Dramwar has been invited as key note speaker in numerous international conferences, has authored over one hundred ications including books, conferences papers, journal papers and magazine articles and reports. In addition to structural engineers, he has been developing and leading the development of many software for engineering applications and worked as associate of Computer and Structures Inc., USA. He has supervised/co-supervised many MS and PhD research thesis and taught several academic courses for MS program in structural engineering.



## Talk by Dr. Thinesh Selvaratnam





ONLINE TALK SERIES

**ALGAL-BASED** 

BIOREMEDIATION OPPORTUNITIES AND CHALLENGES

BY

#### Dr. Thinesh Selvaratnam

Assistant Professor Civil and Environmental Engineering Lamar University, Texas, USA.

#### Abstract

Algae are a polyphyletic group of microorganisms that includes both eukaryotic organisms and prokaryotic cyanobacteria. Algae account for more than 50% of the global organic carbon fixation. In common terms, algae are green cell factories that convert light, CO2, and nutrients (both inorganic and organic) into a variety of molecules of high economic value. The main industrial advantages of algae are its ability to grow with minimum freshwater and utilize agriculturally nonproductive lands. Algal-based bioremediation (Phycoremediation) is the use of micro or macroalgae for the removal/biotransformation of pollutants such as nutrients, xenobiotics, heavy metals, and waste gases from various industrial and agricultural activities. Over the past few decades, algal-based systems are explored as a sustainable platform for municipal wastewater treatment. This research talk is focused on our past efforts to bioremediate municipal wastewater and explore various avenues to utilize the findings from the past.

June 10<sup>th</sup> Wednseday 3.00 - 4.00 p.m.



Live Webinar via ZOOM
Password: CES@2020
link: https://bit.lv/30sEcIIP

This live cast will be free from data charges for the participants from Sri Lanka (SL ISP)

Organized by Civil Engineering Society

# Memories from previous events (Committee 18/19).





CES Annual Seminar

CES ANNUAL SEMINAR ON

## COASTAL LAND RECLAMATION & CITY DEVELOPMENT

January 12 th 2019



All are welcome



Contact: 081 239 3502 / 077 734 6619 E-mail::ces@eng.pdn.ac.lk

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FACULTY OF ENGINEERING
UNIVERSITY OF PERADENIYA





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CES Ani

CES ANNUAL SEMINAR ON

### COASTAL LAND RECLAMATION & CITY DEVELOPM



Introduction to Coastal Land Reclamation and Port City Development Mr. Thulci Aluwihare Head, Strategy & Business Development,

CHEC Port City Colombo (Pvt) Ltd.



Geotechnical Cor Reclamation Proj Eng. (Mr.) Bimal P Deputy Project Dire Port City Developme Ministry of Megapol



January 12<sup>th</sup>

2019

Hydrodynamic and Coastal Engineering Considerations of Port City Development Eng. (Ms.) Manori Fernando Consultant - CPCC ElA Team (Civil & Coastal Engineer) Coastal Engineer and Engineering Manager, Lanka Hydraulic Institute.



Breakwater and Oti Construction of Cor Projects Eng. (Mr.) Lalith W Deputy Project Director Port City Development P



#### All are weld



From 8.00 AM to 4.00 PM

For more information

**E** 

Contact: 081 239 3502 / 077 734 6619 E-mail : ces@eng.pdn.ac.lk

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## Thank You