

CIVIL ENGINEERING SOCIETY ACTIVITIES 2018



ANNUAL GENARAL MEETING

- ❑ Civil Engineering Society (CES) Annual General Meeting 2017/18 was held on 4th October 2017 at 4.00 p.m. at the CAD Laboratory.
- ❑ Members for CES Executive Committee were elected at this gathering.

ADVISOR MEETING - E15 BATCH

- ❑ Student advisor meeting for E 15 new civil engineering batch was held on 29th of January 2018 at Drawing office II.
- ❑ Students participated in this meeting and got familiar with their appointed advisors.



CES TALK SERIES 2018

- ❑ Over the last year CES have organized 9 talks with a versatile range of topics related to the civil engineering field.
- ❑ Both students and academic staff participated in these talks eagerly and gathered knowledge on updating civil engineering world.

Risk Based Assessment of European Infrastructure Projects by Prof. Dimitris Diamantidis.



CES TALK SERIES
2018



RISK BASED ASSESSMENT OF EUROPEAN INFRASTRUCTURE PROJECTS

By **Prof. Dimitris Diamantidis**
OTH Regensburg, Germany

Abstract

The lecture discusses experience gained from the implementation of modern risk analysis methods in infrastructure projects. Basic aspects of the risk analysis methodologies are briefly illustrated first. The derivation of risk and reliability acceptance criteria is critically reviewed and illustrated in case studies. Presented studies include the safety of long tunnels in Italy, Switzerland, Austria and Greece, the safety of a new subway system in Denmark, the requalification of older offshore structures in the North and in the Adriatic Sea and the design of flood protection systems in Germany. Finally concluding remarks from the state-of-practice are drawn and ideas for future developments in standards are discussed.



Dimitris Diamantidis

Dimitris Diamantidis was born in Athens, Greece holds a diploma and a doctorate degree in civil engineering from the Technical University of Munich, Germany. He has working experience with the classification society Det Norske Veritas in Oslo, Norway and with the consulting company D'Appolonia in Genova, Italy. Since 1992 he is a professor of structural and risk analysis at the OTH Regensburg, Germany. He is a consulting engineer for various infrastructure projects worldwide and has about 100 publications in technical journals and conference proceedings. He has contributed to various European research and development projects in his field.



February 20th
5 - 6 p.m.



Seminar Room 1
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society



An Introduction to Fire Safety Engineering in the UK by Dr.T.D.Gerard Caniscus.



CES TALK SERIES 2018



AN INTRODUCTION TO FIRE SAFETY ENGINEERING IN THE UK

By **Dr T.D. Gerard Caniscus**
CEng, FISTructE, London, United Kingdom

Abstract
This presentation will provide an introduction to fire safety engineering in the UK. It will start by describing some important aspects related to fires in the built environment and then provides a brief introduction to the UK's fire safety regulations and guidance documents. It will end with several examples from the presenter's practising experience in the UK, in particular where performance-based or risk-based methods to resolve fire safety issues in non-compliant structures or to obtain more economical fire safety solutions.



Dr T.D. Gerard Caniscus BSc(Eng)Hons, MAsC, PhD, CEng, AIFireE
Gerard is a fire safety and risk consultant, who is also a member of CEN (Structural) Project Teams on EN1990 and Robustness. He is a former Head of Fire Engineering at two major consulting engineering firms in the UK: URS and WSP/Parsons Brinckerhoff. He has also worked at Warrington Fire and the Building Research Establishment (the BRE, which pioneered fire safety engineering in the UK); both of which have major fire testing facilities.
Gerard graduated from the University of Moratuwa and did his postgraduate studies at the University of British Columbia (MAsC in Structural Engineering and PhD in Structural Mechanics). He later worked at the BRE for 16 ½ years. Later he became its Head of Concrete Structures, during which period he conducted research on robustness, fire and dynamic performance, impact and gas explosion effects, and structural assessment and rehabilitation. As his first fire engineering project at BRE, Gerard led experimental and analytical post-fire test investigations on the 7-Storey "Cardington Concrete Building".
Since his early times at BRE, Gerard has been involved in Eurocodes, contributing to the development of those on Basis of Design, Accidental Actions, Timber Structures and Concrete Structures. Until 2017, when he decided to phase out non-fire structural code-development work, Gerard was the chairman of the BSI committee responsible for several key Eurocodes on Basis of Design and Actions. For many years he was also the UK's representative at ISO TC98 on Basis of Design, Actions, Reliability and Risk.
Gerard is currently conducting fire safety assessments on four major existing road tunnels in North Wales, and advises the Welsh Government on tunnel fire safety. He is also a member of the CEN project team that is producing a revised version of EN 1990. He is a member of CEN SC10 (Basis of Design) and WG6 (Robustness) and of committees on fire safety of high-speed rail tunnels and of concrete tunnels. For many years, Gerard was a member of many other British and European technical committees, as well as of the Board of Governors of the Joint Committee on Structural Safety (JCSS).



May 9th
5 - 6 p.m.



Seminar Room 1
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society

University of Peradeniya: Remembering Our Roots by Prof. Buddhi Marambe.



CES TALK SERIES
2018



UNIVERSITY OF PERADENIYA Remembering Our Roots

By **Prof. Buddhi Marambe**
Faculty of Agriculture University of Peradeniya

Abstract

"Let us share the stories and memories that have made the strong foundation of our institution - the education that we receive, the facilities that we enjoy, and about people who made it happen. This foundation has influenced us, will continue to influence us, even if we do not consciously know about them."



Prof. Buddhi Marambe

Professor Buddhi Marambe is a graduate of from the University of Peradeniya, who obtained the B.Sc. Agriculture degree in 1985 with Second Class Upper Division Honours. He obtained the M.Agr. in 1991 and D.Agr. in 1993 from the Hiroshima University, Japan in the field of Plant Environmental Sciences. His research interests include weed science, climate change and food security. He has 30 years of service as an academic attached to the Department of Crop Science of the Faculty of Agriculture, University of Peradeniya. He was the Head of the Department of Crop Science (2001-2003), Dean of the Faculty of Agriculture (2003-2009) and Director of the Agriculture Education Unit (AEU; 2009-2015) of the University of Peradeniya.

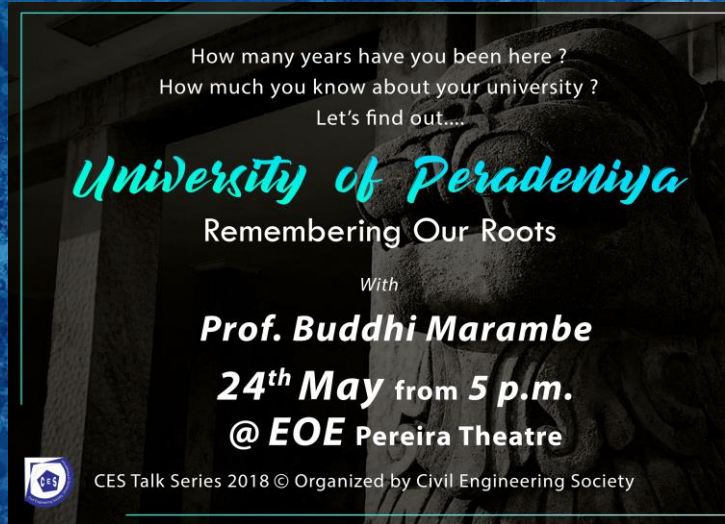
Currently he is the Chairman of the Board of Study in Crop Science of the Postgraduate Institute of Agriculture (PGIA) and Chairman of the National Experts Committee on Climate Change Adaptation (NECCA) of the Ministry of Mahaweli Development and Environment, and was a member of the Governing Council of the Rajarata University of Sri Lanka appointed by the University Grants Commission (UGC). He has also served as an independent member of the Board of Directors of several private sector organizations. Professor Marambe is also a member of the Government Delegation in climate negotiations at the United Nations Framework Convention on Climate Change (UNFCCC) during the past six years. Professor Marambe has published more than 100 research publications and 10 popular articles in his fields of study, and the principal investigator or project coordinator of six multi-country projects supported by international donor agencies. He has provided his services as a National Consultant to the World Bank, UNDP, FAO, UNIDO and CIAT in nationally and internationally important issues related to agriculture.

May 24th Thursday
5 - 6 p.m.





EOE Pereira Theatre
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society










Reinforced Soil Structures Using Geosynthetics by Eng.Gerad Tan.




CES TALK SERIES
2018

**Reinforced Soil Structures Using
Geosynthetics**
By **Eng.Gerad Tan**
Design Engineer
Tencate Geosynthetics



 **June 26th**
5 - 6 p.m.

 **Seminar Room 1**
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society



Forensic Engineering by Prof. Ranjith Dissanayake.



CES TALK SERIES 2018



FORENSIC ENGINEERING

Prof. Ranjith Dissanayake

Senior Professor, Department of Civil Engineering, University of Peradeniya

Abstract

With the increasing demand for high capacities and volumes, altering existing structures and building new structures are a requirement. Parallel to these developments, structural failures too are increasing all around the world. When studying the details of failures, it can be observed that most of the structural failures are due to design and construction errors. Therefore, forensic Engineering in structural engineering, which is the detailed study of structures usually after a failure, is important for learning lessons for future construction.

Mostly, extending existing structures to improve their capacities and volumes is more economically sustainable than constructing new structures. However, such improvements (alterations) to any existing structure should be done only after a complete study of the ability of the existing structure to withstand the changes.

In this presentation, forensic engineering carried out on several structures failed after changes are discussed. The reasons that led to failures are presented using detailed studies on visual inspection, design and structural analysis, finite element modelling and material testing. Based on the results of the case studies, the importance of correct assessments of the existing structures prior any changes and the duties of the consultant, contractor and the client for achieving the objectives are highlighted.



Prof. Ranjith Dissanayake

Prof. Dissanayake was a Fulbright Scholar - Columbia University, USA in 2008, Endeavour Fellow - Monash University Australia in 2008 and JASSO Research Fellow - Ehime University, Japan in 2007. He was awarded the Young Scientist Award in 2007 for Excellence in Scientific Research by the National Science and Technology Commission of Sri Lanka. He received the Overseas Prize of the Institution of Civil Engineers, London, UK in 2007 for a paper he published. He was awarded the Australia Alumni Excellence Award in 2012. He has published over 100 journal papers. He has chaired ten international conferences. He is a fellow of the Institution of Engineers, Sri Lanka.

Presently, he is the Chairman of the Green Building Council of Sri Lanka (GBCSL) and a founding member of it and Vice President of Chamber of Construction Industries of Sri Lanka (CCI).

He is Chairing the 9th International Conference on Sustainable Built Environment which will be held at Earl's Regency, Kandy Sri Lanka in December 2018 (www.icsbe.org).



October 11th Thursday
5 - 6 p.m.



Seminar Room 1
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society



Climate Change Impact on Water Environment : Examples from Asian River Basins by Dr.Sangam Shrestha.



CES TALK SERIES 2018



CLIMATE CHANGE IMPACT ON WATER ENVIRONMENT EXAMPLES FROM ASIAN RIVER BASINS

By **Dr. Sangam Shrestha**

Associate Professor & Program Chair, Asian Institute of Technology

Abstract

Climate change is one of the most significant phenomena of the 21st century which has gained a lot of attention in recent times. It has affected all dimensions of natural and managed ecosystems, from food and energy security to water environment. Knowledge of climate change impacts on water environment can be valuable for water resources management in agriculture, urban and industrial water supply, hydropower generation and ecosystem maintenance. Projection of the state of the global climate system and its consequences on water environment can help managers develop adaptive strategies, and make strategic investments in infrastructure and information sources for integrated water resources management.

This presentation provides the synthesis of case studies on climate change impact on water environment in selected river basins of Afghanistan, Nepal, Pakistan, Thailand and Vietnam. Firstly, a comprehensive modeling framework of climate change impact assessment on water environment will be discussed. Secondly the findings of climate change impact on hydrology, groundwater recharge and nutrient loading into the river systems will be discussed. Finally, some important issues such as data, models and modeling approach will be discussed which can improve the confidence on climate change impact assessment.



Dr. Sangam Shrestha, PhD

Dr. Sangam Shrestha is an Associate Professor and Chair of Water Engineering and Management Program at the Asian Institute of Technology (AIT), Thailand. He is also a Visiting Faculty of the University of Yamanashi, Japan, National University of Laos, and Research Fellow of the Institute for Global Environmental Strategies (IGES), Japan. His research interests are within the field of hydrology and water resources including, climate change impact assessment and adaptation in the water, integrated water resources management and groundwater assessment and management. Dr. Shrestha has published more than 85 papers in peer-reviewed international journals and presented more than 70 conference papers ranging from hydrological modelling to climate change impacts and adaptation in the water sector. His recent book publications include Climate Change and Water Resources (CRC Press), Managing Water Resources under Climate Uncertainty (Springer), Water-Energy-Food Nexus: Principles and Practices (AGU-Wiley) and Groundwater Environment in Asian Cities (Elsevier). His present work responsibilities at AIT include delivering lectures at the postgraduate and undergraduate levels, supervising research to postgraduate students (Masters and Doctoral), and providing consulting services on water and environment related issues to government and donor agencies and research institutions. He has conducted several projects relating to water resources management, climate change impacts, and adaptation with awards from international organizations such as ADB, APN, CIDA, EU, FAO, IFS, IGES, SEI, UNEP, UNESCO, WB. He is also serving in advisory committee of several international organizations. Dr. Shrestha has been awarded 'Distinguished Research Leader Award 2014' at AIT.

October 25th Thursday



5 - 6 p.m.



Seminar Room 1
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society



Women Engineering Leadership in Water Sector Development.



WaSo
Water, Society
and Climate Change

Seminar on
WOMEN ENGINEERS'
LEADERSHIP
IN WATER SECTOR DEVELOPMENT

 **November 13th**
2018 (Tuesday)

 **4.15 p.m.**
- 6.00 p.m.

 **Seminar Room 1**
Faculty of Engineering
University of Peradeniya

*2nd, 3rd and final year female
Civil Engineering undergraduates
are welcome*

Refreshments will be provided

  Organized by Civil Engineering Society



Geopolymers & Alkali Activated Materials by Dr. David Law.



CES TALK SERIES
2018



GEOPOLYMERS AND ALKALI ACTIVATED MATERIALS

By **Dr. David Law**
Senior lecturer at RMIT University

Abstract

Concrete is the most common construction material in the world and the construction industry is one of the major contributors to CO₂ emissions. It has been estimated that 4-6% of global emissions are due to construction and that the use of cement in concrete is the largest contributor, with one ton of cement producing up to one ton of CO₂. Research has recently focussed on the replacement of cement with waste materials, such as fly ash and blastfurnace slag. These can be used as direct replacements from 10-50 % of the cement. However, more recently the use of 100% replacement using high strength alkali activators has become a major research area.

This talk will provide an introduction to geopolymer and alkali activated materials that use fly ash and slag to produce concrete by the activation of these materials with high concentration alkali activators. It will discuss the reaction kinetics, activation pathways and the factors that control the performance of these materials. It will also present some of the most recent research at RMIT University on the subject.



Dr. David Law

Dr Law is a senior lecturer at RMIT University having previously worked at Heriot Watt University in the UK. He has also worked as a consultant for Maunsell and Taywood Engineering. His major areas of research are in materials and durability. In particular the use of waste materials to produce environmentally sustainable concrete and also in the inspection, maintenance and repair of reinforced concrete structures.

November 13th Tuesday



5 - 6 p.m.

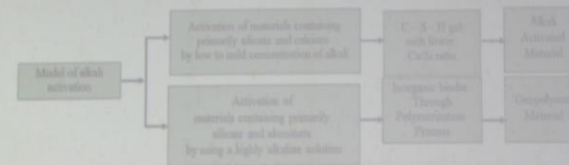


Seminar Room 3
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society

Alkali Activated Materials

> An alternative approach to mitigate the impact is with the use of alkali activated binders using aluminosilicate material.



> Geopolymer can be produced with different source materials

- Metakaolin
- Silica fume
- Clays
- Slag
- Fly ash
- Red mud
- Rice Husk
- Paper Sludge
- Incinerated waste



Engineering Ethics by Eng.P.H.Sarath Gamini.



CES TALK SERIES 2018



ENGINEERING ETHICS

By **Eng. P.H. Sarath Gamini**
Chief Engineer
Kandy North Pathadumbara Integrated Water Supply Project (NWS&DB)

Content

01. Society needs, growing demands of the people and conservation of Resources
02. Challenges for Engineers
03. Role of Engineer
04. Professional and moral responsibility to your selves to your fellow human beings
05. Code of Ethics, How do you practice it?
06. How do we enjoy while practicing Engineering Profession.
07. Things to do/not to do



Eng. P.H. Sarath Gamini
P H Sarath Gamini gathered the difficulties of rural poor by living with them, working with them and also working for them, from his childhood. He deeply thinks that the need of optimizing the use of public funds – of which a major component is collected from the rural poor; should be optimized, to provide sustainable solutions in national development activities. . Graduated from the Faculty of Engineering of University of Peradeniya in 1981 and also after obtaining MEng. From IHE, Delft; THE Netherlands, in 1997; his he conceived a vision on the need of sustainable development in the water sector of Sri Lanka was conceived in his mind.
He joined to the National Water Supply & Drainage Board (NWS&DB) in 1982 as a Civil Engineer and presently working as the Project Director of the Greater Kandy Water Supply Project (GKWSP) since 2001 up to July, 2018. After retirement, now he is working in Kandy North Pathadumbara Integrated Water Supply Project (NWS&DB) as a Chief Engineer.

His works on introducing efforts on creating a quality and sustainable water infrastructure solutions to the nation are not limited to initiating few activities but make include multiple activities linked to each other. Starting from Introducing Sri Lanka Standards for water fittings; to enforce regulations to imports of quality water fittings to the country; collective approach with encouraging the collective participation of all relevant Government Stakeholder Organizations and motivate motivating them to achieve his these valuable objectives.
Rather than working with be constrained by traditional Administrative and financial guidelines, regulations and rules of the organizations; he initiates strategies and opens new paths needed to follow to provide sustainable water infrastructure solutions for the nation.
He is the Chairman of the committee appointed by CIDA on preparation of Guidelines for Cost Estimation, is the IESL representative for the Public Utility Commission of Sri Lanka (PUCSL) on Regulatory Measures for water Conservation.
He is the convener for IESL Procurement Committee which was established for the revision of NPC Procurement Guidelines.

All undergraduates are welcome
20th December Thursday
 **5 - 6 p.m.**  **E.O.E.Pereira Theatre**
Faculty of Engineering
University of Peradeniya

Organized by Civil Engineering Society

INSEE – IESL CONCRETE CHALLENGE

- ❑ Organized with the theme of ‘ Self – Compacting Concrete’ and opened for final and third year students. Pre – workshop was organized for the competition.
- ❑ 3 groups were selected to participate in final rounds included mixing and casting at INSEE, I&A Wet Laboratory, RCW, Galle and crushing test at INSEE, I&A laboratory – Colombo.



INSEE - IESL Concrete Challenge 2018

PRE WORKSHOP

- ✓ Introduction (SCCCL – INSEE Cement)
Kalinda Dasanayake/ Asela Gamage
- ✓ Development of Self-compacting Concrete
Amith Adhikari
- ✓ Competition Objective and Guidance
Asela Gamage

13TH | E.O.E. Pereira Theatre
JUNE | 5 PM Onwards

Attendance is compulsory for competitors



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Civil Engineering Society



SPAGHETTI BRIDGE COMPETITION

- ❑ Spaghetti Bridge Competition selection rounds was organized on 6th October 2018 at DO II.
- ❑ 3 groups were selected to participate in IESL Techno Spaghetti Bridge Competition at BMICH



IESL **Spaghetti Bridge**

Competition '18

Selection Rounds for **TECHNO 2018**

OCTOBER 9 a.m. onwards **6TH** Saturday

6 Members* per group

* Every group should include at least one 2nd year member

👍 All the students are welcome to participate in the competition

👍 Proposals should be submitted to the CAD Lab before 12.00 p.m. on October 2nd (Tuesday)

Top 3 teams will be representing Spaghetti Bridge Competition at IESL TECHNO 2018

Organized by

Civil Engineering Society
IESL Students Chapter
University of Peradeniya



CES ANNUAL FIELD VISIT 2018

- ❑ Annual field visit was organized on 25th November 2018 to visit central expressway construction.



SOFT SKILLS WORKSHOP 2018

- ❑ Organized on 8th of December 2018 at the faculty with the collaboration of INSEE Cement Company.
- ❑ Students participated in numbers and gathered knowledge on CV writing and interview facing.

Soft skills Workshop

2018

With
Eng. Bernadine Fernando

Interactive session conducted by senior engineer Bernadine Fernando who has well experiences in interview boards and executive grade positions in industry, currently working as HRM in INSEE cement company. This session will contain various activities that will be very useful in your career.

- CV writing
- How to face an interview

All Civil Engineering final year undergraduates are welcome.

8th | **08.00 a.m.** | **@ DO 2**
December 2018 | **12.30 p.m.** | **Faculty of Engineering**
University of Peradeniya



Organized by
Civil Engineering Society
Faculty of Engineering - University of Peradeniya

Sponsored By



ANNUAL SEMINAR 2018

- ❑ Organized on 12th of January 2019 at the faculty with the collaboration of CHEC Port City Colombo and Ministry of Megapolis & Western Development.
- ❑ Experts from different areas of civil engineering enriched the event with their valuable experiences under the topic of ‘Coastal land Reclamation and City Development’.



CIVIL ENGINEERING SOCIETY
FACULTY OF ENGINEERING
UNIVERSITY OF PERADENIYA



CES Annual Seminar
2018

CES ANNUAL SEMINAR ON

COASTAL LAND RECLAMATION & CITY DEVELOPMENT

January
12th
2019



All are welcome



From 8.00 AM to 4.00 PM

For more information

Contact : 081 239 3502 / 077 734 6619

E-mail : ces@eng.pdn.ac.lk



EOE PEREIRA THEATRE
FACULTY OF ENGINEERING
UNIVERSITY OF PERADENIYA



CHEC PORT CITY COLOMBO (PVT) LTD.



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Ministry of Megapolis & Western Development

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CIVIL ENGINEERING SOCIETY
FACULTY OF ENGINEERING
UNIVERSITY OF PERADENIYA



CES Annual Seminar
2018

CES ANNUAL SEMINAR ON

COASTAL LAND RECLAMATION & CITY DEVELOPMENT



Introduction to Coastal Land Reclamation and
Port City Development

Mr. Thulci Aluwihare

Head,
Strategy & Business Development,
CHEC Port City Colombo (Pvt) Ltd.



Geotechnical Consideration of Coastal Land
Reclamation Projects

Eng. (Mr.) Bimal Prabhath Gonaduwa

Deputy Project Director (Reclamation),
Port City Development Project,
Ministry of Megapolis and Western Development.



Hydrodynamic and Coastal Engineering
Considerations of Port City Development

Eng. (Ms.) Manori Fernando

Consultant - CPCC EIA Team (Civil & Coastal Engineer),
Coastal Engineer and Engineering Manager,
Lanka Hydraulic Institute.



Breakwater and Other Marine Structures
Construction of Coastal Land Reclamation
Projects

Eng. (Mr.) Lalith Wijeratne

Deputy Project Director (Structures),
Port City Development Project,
Ministry of Megapolis and Western Development.



Environmental and Social Impacts Assessment
of Coastal Land Reclamation Projects

Ms. Anoja Herath

Director (Environment),
Ministry of Megapolis and Western Development

January
12th
2019



All are welcome



From 8.00 AM to 4.00 PM

For more information

Contact : 081 239 3502 / 077 734 6619

E-mail : ces@eng.pdn.ac.lk



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FACULTY OF ENGINEERING
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Ministry of Megapolis & Western Development



Civil Engineering Society
University of Peradeniya

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LANWA SCHOLARSHIP PROGRAM 2018

- ❑ Program included competitions with 5 categories open for all the students of civil engineering department.
- ❑ Awards for the winners were given at 'Vortex 2018 and LANWA Awards' held on 24th January 2019.



VORTEX 2018

- ❑ Annual Get Together of Civil Engineering Society – ‘Vortex’ was held on 24th January 2019 at DO II.

Vortex 2018





The background is a deep blue with a complex pattern of overlapping circles and dots in various shades of blue, creating a bokeh or particle effect. The text "THANK YOU" is centered in a bold, white, sans-serif font.

THANK YOU