



## NEWSLETTER

# THE INSTITUTION OF ENGINEERS SRI LANKA

## *Western Australia Chapter*

Issue 1, February 2016

### Institute of Engineers Sri Lanka, Western Australia Chapter Annual General Meeting

IESL WA Chapter entered into its second year with much enthusiasm following the success of their Engineer's night held in August 2015. The AGM was held on the 20 September 2015 at the Willetton Pavilion.

#### Outcomes from the AGM

- (1) Minutes of the first AGM held on Sunday, 5<sup>th</sup> October 2014 was unanimously accepted by the membership.
- (2) The proposed amendment to the Clause 3.2.1 of the Constitution as "The committee shall consist of five office bearers and five **to nine** committee members" was adopted unanimously by the membership.
- (3) Outgoing President Remy Jayasekera made his presentation focusing on the activities of the first Committee (2014-15) and briefed on how the first year of operation has made a positive impact on the engineering community in Perth.
- (4) Treasurer Dumal Kannangara presented the audited financial statements for the period ended 30 June 2015 and was unanimously adopted.
- (5) Ajith Mathota was appointed as the Pro-Tem Chairman to enable the election of the President.
- (6) The following committee was elected uncontested for the year 2015-16, following the due process according to the Constitution:

	Position	Name
01	President	Nimal Jayaratne
02	Vice President	Chirantha Weerawardane
03	Secretary	Bandula Samarasinghe
04	Treasurer	Srinath Fernando
05	Editor	Anuradha Wijayasinghe
06	Committee member-1	Amila Basnayaka

	Position	Name
07	Committee member-2	Dumal Kannangara
08	Committee member-3	Sisira Kantha
09	Committee member-4	Manjula Abayawickrama
10	Committee member-5	Dilan Amarasinghe
11	Committee member-6	Kaushalya Bransby
12	Committee member-7	Mudiyanselage Mithrapala
13	Committee member-8	Ravi Samarasinghe
14	Committee member-9	Nalinda Gunawardena

(7) The following members were retained as the honorary auditor and the three appeal committee members as per the Constitution.

	Position	Name
01	Honorary Auditor	Soma Meegahage
02	Appeal Com. Member-1	Sanath Mapa
03	Appeal Com. Member-2	Laxman Jayasundara
04	Appeal Com. Member-3	Rohan Bandarage

(8) The newly elected President Nimal Jayaratne addressed the membership thanking the membership for the opportunity given to him to serve as the President of the Chapter for the year 2015-16.



**Back row from left:** Kaushalya Bransby, Dumal Kannangara, Sisira Kantha, Dilan Amarasinghe, Amila Basnayaka, Manjula Abayawickrama, Nalinda Gunawardena, Mudiyanselage Mithrapala.  
**Front row from left:** Anuradha Wijayasinghe, Bandula Samarasinghe, Nimal Jayaratne, Srinath Fernando, Chirantha Weerawardane

## Changes to the Committee

We have had a couple of changes to the elected committee where Dumal Kannangara, Kaushalya Bransby and Manjula Abayawickrama have since resigned due to other commitments. Changes to committee detailed below:

	Position	Name
01	Committee member - 2	Sumedha Rajakaruna
02	Committee member - 4	Kanishka Pathirana
03	Committee member - 6	Sachira Kularatna

We would like to welcome our newest member and sincerely thank Dumal, Kaushalya and Manjula for their time and effort thus far.

## President's Message

Newly elected President, Mr. Nimal Jayaratne, extended an open welcome to the Engineering community:

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*"This is my first message to the membership since been elected as the President of the Chapter. It is encouraging to see a few new faces in the committee and I extend a warm welcome to the new committee. I cordially invite the members to rally around the new committee to support Chapter activities, especially by joining many subcommittees to share the experience and help further the objectives of the Chapter."*

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He highlighted two key areas that requires attention, namely the need for more support for the IESL WA in terms volunteers to help promote and organise key chapter events and the challenges faced by the young engineers in this current economic climate.

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*"The Chapter Committee believe that more hands are required to strengthen the subcommittees so that the main committee members are not stretched while discharging their duties. This will also provide increased opportunities for the membership to participate in activities of the Chapter."*

*"Some of our younger members are faced with difficulties in finding undergraduate training placements in industry to obtain the industrial training compulsory for completing their University programmes. Senior engineers helping younger generation of engineers is a commendable act in a way and on the other it can be considered a duty of the senior engineers to ensure the continuity and progression of the profession."*

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## Presentations organised by the IESL WA in the First Four Months

We have had a number of exciting presentation organised by IESL WA subcommittees that created much interest in our members. All our presentations take place in the Central Institute of Technology at North Bridge. Due to the first quarter falling within our summer holiday period, we have held presentations for the months of October and November, leaving the months of December and January lecture free months.

### October Presentation

<b>Topic:</b>	<i>Open Pit Design in Complex Geotechnical Terrain</i>	<b>Organiser:</b>	<i>IESL WA Mining Engineering Subcommittee</i>
<b>Presenter:</b>	<b><i>Dr. Senaka Welideniya</i></b> <i>MSc (Mining)</i> <i>MSc (Engineering Geology)</i> <i>PhD (Rock Mechanics)</i> <i>Specialist Geotechnical Engineer</i>	<b>Date:</b>	<i>5-Oct-15</i>

### About the Presenter



- Senior Geotechnical Engineer
  - Rio Tinto Iron Ore
- Senior Consultant
  - SRK Consulting, Perth (Mining, Geotechnical and Water Resource Specialists)
- Senior Lecturer
  - Department of Earth Resources Engineering (ERE), Faculty of Engineering, University of Moratuwa, Sri Lanka
- Mining Engineer/Safety Officer
  - Bogala Graphite Mines, Sri Lanka
- Mining Engineer
  - Kahatagaha Kolongaha Mines, Sri Lanka

Dr. Welideniya is responsible for a number of publications including:

- Optimised Geotechnical Design of Iron Ore Slopes, Pilbara Region, Western Australia (2015)
- Challenges Faced by Narrow Vein Graphite Mining and Influence of Graphite Infill on Wall Stability (2012)

## About the presentation

Safe operation of open pits is a challenging task in complex geotechnical conditions. Cost effective mining depends on high ore recovery and minimum waste stripping. However, there is a delicate balance in pit designs where all these aspects need to be met while supporting higher slope stability for safe mine operations. Steep slopes will reduce cost of recovery while affecting stability. Flat slopes will provide higher stability while increasing mining cost. Therefore, it is essential to optimise geotechnical, hydrogeological, structural and all relevant data for the design of safe and economical slope angles for mine designs.

Dr. Welideniya discussed the following important aspects of Open Pit Design:

1. Collection of Geotechnical information
2. Hydrogeological data
3. Structural information
4. Erosion and drainage
5. Mine design challenges
6. Ore body modelling
7. Safety and monitoring



## November Presentation

<b>Topic:</b>	<i>Features of an Offshore Production &amp; Processing Platform</i>	<b>Organiser:</b>	<i>IESL WA Mechanical Engineering Subcommittee</i>
<b>Presenter:</b>	<b>Mr. Nimal Jayaratne</b> <i>BSc (Hons)</i> <i>MBA (Technology Management)</i> <i>CPEng, NER, FIE (Aust), CEng, FIMechE, MIE (SL)</i>	<b>Date:</b>	<i>16-Nov-15</i>

### About the Presenter



The presenter Mr. Nimal Jayaratne, has been involved in piping engineering for over 35 years and his geographical experience includes Sri Lanka, Kuwait, Malaysia, China and Australia.

Nimal is one of the pioneer figures, instrumental in building a piping engineering discipline in Western Australia. He completed the first full blown piping stress analysis for Worley Ltd., on a major offshore oil and gas project back in 1994.

Over the past 23 years in Western Australia Nimal has provided his services to many major EPCM consultants such as Kellogg Brown & Root, Kaiser Engineers, Worley Ltd, Worley-Parsons, Transfield-Worley, Lycopodium Ltd., and Hatch Associates.

Projects Nimal has serviced includes:

- Unocal's Thailand offshore platforms
- CSBP's Ammonium Nitrate plant
- BP Refinery expansions in Kwinana
- Many onshore and offshore expansion projects Woodside Energy
- Bayu Undan offshore platform for ConocoPhillips
- Ravensthorpe Nickel Processing plant for BHP Billiton
- Expansion projects of ALCOA (WA)
- Gas Cooler Overhead Piping Revamp for Queensland Nickel (QLD)
- High Pressure Steam System Upgrade for BlueScope Steel (NSW)

More recently Mr. Jayaratne served the Gorgon Downstream Project as the Quality Technical Support Manager of KJVG where he was responsible for the technical integrity and quality of construction.

## About the presentation



This lecture introduced the typical components of a modern offshore production and processing platform and discussed the following aspects of the facility:

- Location
- Size of the field
- Recoverable gas & condensate quantities
- Timeline, costs and benefits
- Major facilities
- The process conditions
- Pipelines
- Flare systems
- Design codes
- Engineering disciplines
- Role of the piping engineer
- Design challenges, how they were met, tools employed
- Commissioning problems
- A series of photo slides of various stages of build



## Upcoming Events in the Next Four Months

Date	Day	Sub Committee	Co-ordinator	Topic/Event	Presenter
1-Feb-16	Monday	Electrical	Anuradha	Maximizing the Economic Benefit of Solar PV Power Installations	Dr. Sumedha Rajakaruna
14-Mar-16	Monday	Civil	Srinath	Safe Working on Highways – A Service Provider’s Perspective	Mr. Stephen Zoreb
4-Apr-16	Monday	Mechanical	Sisira	Maintenance Strategies and Failure Data Analysis	Mr. Sisira Sanda
2-May-16	Monday	Mining	Mithra / Chirantha		
<b>28-May-16</b>	<b>Saturday</b>	<b>All</b>	<b>Full Committee</b>	<b>Engineers Night</b>	
June	Saturday	Electrical	Anuradha	Green Electric Energy Park (GEEP) site visit	Dr. Sumedha Rajakaruna

## Engineers Night 2016

Engineers Night 2016 will be held on the **28 May 2016** at the South Perth Community Centre.

### Chief Guest & Key Note Speaker:

**Professor Charitha Pattiaratchi, Winthrop Professor of Oceanography, University of Western Australia**

*Tickets will be on sale around SOON! Don't miss out!*

Highlights from last year's Engineers Night 2015.



## Other News

### Undergraduate Traineeships

Engineering students interested in traineeships (compulsory component of their Engineering degree) are most welcome to get in touch with us!

We would greatly appreciate and request employed Engineers to explore possible traineeship opportunities available in their companies.

### IESL WA Membership

The IESL became a full signatory to the Washington Accord back in 2014. Since then the process to gain IESL membership have significantly improved for Engineers with degrees obtained outside of Sri Lanka, if their Engineering Institutions are part of the Washington accord.

For further details please contact IESL WA secretary Bandula Samarasinghe at [secretary@ieslwa.org](mailto:secretary@ieslwa.org).

## Community News

### Passing of a Colleague and Mentor

On a more sombre note, we write that the Emeritus Professor Eng. Selvadurai Mahalingam, loved teacher from the Faculty of Engineering, Peradeniya passed away on 3 November 2015 and the funeral rights were completed in Jaffna on the 5 November 2015.

The Perth Community held a Pansakula ceremony on the 7 November at the Buddhist Vihara, Kenwick, to invoke blessings on the late Professor.



### Eng. Selvadurai Mahalingam

Professor Selvadurai Mahalingam was born on 16 January 1926. Early in his life he moved to Malaya along with his parents and had his primary and secondary education at Maxwell School and Victoria College in Kuala Lumpur. He returned to Ceylon aged 20 and joined Ceylon Technical College in 1946 and obtained his BSc Engineering degree with first class honours, from University

of London in 1950. He completed his post graduate studies at University of Sheffield, England, leading to his PhD in 1956, specializing in Torsional Vibrations.

Professor Mahalingam joined the Engineering Faculty of the University of Ceylon the same year and was promoted to a Lecturer's position. He continued his research work in Mechanical Vibrations at Peradeniya University and published extensively in highly acclaimed research journals on topics related to Vibration of Mechanical Systems. Professor Mahalingam was awarded the accolade DSc Eng by the University of London for his pioneering work on Mechanical Vibrations. Professor Mahalingam is the first Sri Lanka Engineer to be honoured with this prestigious award. Early 1970 he became the Professor of Mechanical Engineering, which he continued until his retirement in 1991. Professor Mahalingam is acclaimed as the person who built from grassroots an Applied Mechanics Laboratory at the Faculty of Engineering, Peradeniya. After retirement he served as an Emeritus Professor at the University of Peradeniya. Mahalingam received the Vidya Jyothi honour in 2005.