

*IESL—WA  
Chapter*



*IESL WA Chapter Committee requests your current residential address, contact telephone numbers and preferred email address, for the Chapter to be able to communicate with you regarding chapter activities.*

*Please write to the Secretary IESL WA  
jayaratne@iinet.net.au*

### **Birth of IESL—WA Chapter.**

A new IESL chapter was born mid 2014 in Western Australia, now known as IESL WA Chapter.

Tissa Wijesingha, a senior electrical engineer who had migrated to Western Australia from New South Wales few years ago felt the need to have a local chapter of the IESL in WA for the benefit of a considerable number of Sri Lankan engineers living in WA. Tissa who had major involvement with IESL NSW Chapter while he was living in Sydney, explored the possibility of setting up a local branch of the IESL.

To this end, he convened a meeting on 16th February 2014 in Perth, with a good cross section of the engineers in attendance. Upon receiving a very keen interest from a young, energetic and enthusiastic group of engineers, an interim committee consisting of president (Remy Jayasekara), secretary (Tissa Wijesingha), treasurer (Nimal Jayaratne) and 5 (five) committee members, was appointed paving the way for the formal setting up of the IESL WA Chapter in 2014.

The formal declaration of the IESL WA Chapter was made by the president of IESL on 6th June 2014.

Inaugural AGM of the IESL WA Chapter was held on 5th October 2014 at Amherst Village Community Centre, Canning Vale WA, and new committee was appointed for the current year (2014/2015). Details of the current committee can be found in page 2 of this newsletter.

*Take advantage of the Amnesty offered by IESL parent body to reinstate your elapsed membership.*

*Request through IESL WA Chapter.*

**IESL WA Chapter—Committee 2014/2015**

President	Remy Jayasekera
Vice President	Chirantha Weerawardane
Secretary	Tissa Wijayasinghe / Nimal Jayaratne
Treasurer	Dumal Kannangara
Editor	Gamini Wijeratne
Committee Member 1	Nimal Jayaratne/Vipula Ratnakele
Committee Member 2	Mithrapala Mudiyanse
Committee Member 3	Sisira kantha
Committee Member 4	Dilan Amarasinghe
Committee Member 5	Anuradha Wijayasinghe
Honorary Auditor	Soma Meegahage

**Appeal Committee**

Member-1	Sanath Mapa
Member-2	Laxman Jayasundara
Member-3	Rohan Bandarage

**Note:**

*IESL WA Secretary position fell vacant in January 2015 as a result of Tissa Wijayasinghe's departure from Australia. Nimal Jayaratne has now been appointed to fill this position with effect from February 2015.*

Seven subcommittees were formed focusing on IESL WA's multitude of tasks it needs to successfully execute and achieve its objectives while maintaining its mission and vision. These subcommittees will cover four speciality groups of engineering and three general groups.

Please contact Nimal Jayaratne, the secretary for a copy of the Subcommittee guidelines.

**Membership of IESL WA**

Main purpose of the IESL WA is to provide and facilitate professional / engineering activities for IESL members living in WA. Most IESL members living in WA maintain their IESL membership by paying their subscription fees direct to IESL. However, there is a significant number of past IESL members who have not been able to maintain their membership due mainly to being away from Sri Lanka, among various other reasons.

It has been quite evident that the limitations in on-line payment facilities and member information updating mechanism have been the main reasons for many past IESL members living outside Sri Lanka, to unintentionally lose their IESL membership. In order to reverse this unfortunate trend, IESL WA has launched an initiative to make a collective and concerted effort to help reinstate lapsed memberships through the amnesty currently available for past IESL members.

Under this scheme all affected past IESL members can request through the IESL WA Chapter to reinstate the membership by paying an amount equivalent to three (3) years member subscription fees. If you were an IESL member and would wish to renew the membership through the IESL WA, please contact the Secretary, Nimal Jayaratne by sending an email to

*jayaratne@iinet.net.au*

**Non- IESL Members**

IESL WA Chapter encourage the engineers who are eligible to receive full membership of the IESL to join IESL WA as provisional member as the first step, and then to submit a formal application to become an IESL Member. Such members will be able to receive full IESL membership.

**IESL WA Chapter— Sub Committees 2014/2015**

Mechanical Engineering SC

Civil Engineering SC

Electrical Engineering SC

Mining Engineering SC

Social SC

Membership SC

Mentoring SC

## IESL WA—PRESIDENT’S MESSAGE

Hi Fellow Engineers

Earlier this month I had the opportunity to listen to Mr Malcolm Mccusker, former Governor and former Chief Justice of WA when he received an honorary Doctorate from Curtin University. In his address he said that while one should strive to help others, one should also work towards the upliftment of one’s chosen career. We, as engineers are fortunate to have got the opportunity to engage in an interesting and fruitful profession and we should celebrate the fact that we are engineers and work towards the upliftment of our profession. This includes being good engineers as we possibly can be, being proud of our profession and associating with and helping other engineers. IESL WA Chapter could be one of the vehicles through which we achieve this.

Our Chapter has made tremendous progress since it was launched last June at the engineers’ night with 250 people in attendance. We have a mentoring program for newly arrived mining engineers, to be extended to other sectors shortly. We have started a series of monthly professional lectures and we have also started an assistance program for newly arriving engineers from Sri Lanka. This is just the tip of the iceberg and much more could be done with further participation of engineers in our activities.

Therefore I extend a cordial invitation to each and every engineer in WA, please join us to celebrate being engineers and to give a little to and receive a little from each other. Please consider joining our committee, subcommittees and other activities. Please attend our events. That is the only way we can progress.

Kind regards

Remy Jayasekera

## ASSISTANCE TO NEW MIGRANT ENGINEERS

Dear fellow engineers in Western Australia,

As you know, many engineers arrive on our shores every year, to make WA home for themselves and their families. Many of us have experienced the difficulties a new migrant is faced with. Therefore IESL WA has started a program to help new engineers settle down and it will be implemented through our Social Subcommittee. The assistance generally will consist of:

- Airport pick-up
- Assistance in finding accommodation
- General support to settling in

To do this, we plan to develop a database of volunteers in WA who could provide assistance to new migrant engineers, mainly in the above listed areas. It is unlikely, and not intended, to be a big load on the volunteers, but could turn out to be a great relief and support to the recipient. It may also provide a sense of satisfaction and pride to the volunteer, who will get this opportunity to help our fellow human beings.

We will give publicity to this program through IESL in Sri Lanka and the new migrants can contact our chapter. Then we will put them in contact with a volunteer engineer on the database and the assistance can commence from there.

If you are willing to become a volunteer on this program and wish to be included on the database, please contact the coordinators whose contact details given in the adjoining section.

Social Subcommittee—IESL WA

### **Mithrapala Bandara**

Coordinator  
Social Sub Committee of IESLWA  
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OR

### **Bandula Samarasinghe**

Member  
Social Sub Committee of IESLWA  
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E-Mail:  
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## Professional Presentations

IESL WA focuses intently on professional development of the members /fellow engineers. As a professional engineer, there is no doubt that you have made a significant contribution to the engineering profession through your dedicated years of service. IESL WA provides a forum for sharing your experience, knowledge and expertise.

To this end, IESL WA has embarked on a series of lectures delivered by engineering professionals. Speakers can either be outside of IESL WA or from within the general membership. If you would like to present and share your experience with your fellow engineers, or know someone who could deliver a quality presentation on a subject/theme which is beneficial for all, then we would like to hear from you.

Our very first professional presentation was held on 2nd February 2015, a brief write up of which is appended below. A list of planned lectures appears in this newsletter. Please cross your diary for these days so that you will not miss them.



Winthrop Professor of Coastal Oceanography at University of Western Australia, Professor Charitha Pattiaratchi delivered a lecture on

### **“Tsunami Science and Warning Systems: A Decade of Development”**

at the Central Institute of Technology auditorium in North Bridge, Western Australia on 2<sup>nd</sup> February 2015. The presentation was the first in a series of public lectures, organised by IESL WA Chapter.

## Tsunami Science and Warning Systems: A Decade of Development

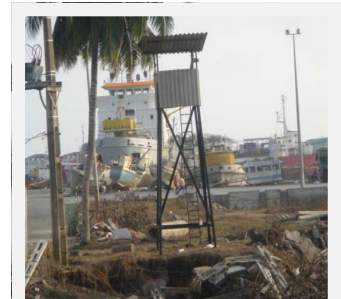
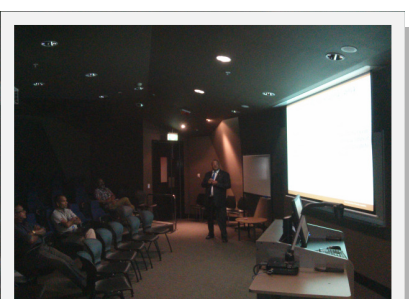
Prof. Charitha Pattiaratchi presented an overview of his first-hand experience on the effects of the tsunami on a beach in Sri Lanka, the most devastating natural disaster experienced by the Indian Ocean countries on 26 December 2004, that resulted from an earthquake off the coast of Sumatra. Since then mega-tsunamis have also occurred in Chile and Japan. Prof. Charitha informed the audience that the 10 year anniversary of the 2004 event has marked a decade of new understanding in tsunami science due to improved observations and computer modelling.

Professor Pattiaratchi also discussed how the Indian Ocean Tsunami Warning System has helped us to predict more accurately when a tsunami is likely to be generated and to provide an early warning to authorities to help mitigate the effects of the tsunami .

The presenter demonstrated examples from his examinations of Western Australia’s ocean topography and explained how deep water formations, such as the Venin Meinesz seamounts and the Wallaby and Cuvier Plateaus, can impact on the extent of tsunami’s calculation.

The last part of the presentation was on the presence of tsunami-like waves generated by meteorological effects (‘metro-tsunamis’) that have been a regular occurrence along the Western Australia coastline. Audience were surprised to hear that Metro-tsunamis are to blame for events such as flooding of Perth’s Riverside Drive in 2012, and the cargo ship ripped from its moorings that struck the Fremantle rail bridge in August 2014. The presentation clearly demonstrated that tsunami science and warning systems has had significant development since 2004, which will provide an accurate early warning of an impending tsunami.

Professor Pattiaratchi is the chair of the working group on Tsunami Modelling as part of the Indian Ocean Tsunami Warning System.



In the context of Professional Presentations, we were fortunate to have a visiting Sri Lankan professor from the UK with us in December 2014, who volunteered to deliver a lecture at very short notice.

Due to the short time frame for organising the event and most IESL WA members being away during the festive season, it was decided to involve IEAustralia who was willing to co-sponsor the event. The presentation was titled "Making and Breaking the Internet" and delivered by Professor Abhaya S Induruwa on 17th December 2014 at the IEAustralia auditorium.

The talk was a great success, given the timing of it, attracting well over 40 people. Prof. Induruwa outlined the history of the Internet from its beginning 45 years ago and touched upon the following.

- How, where and by whom the internet being used as a tool all over the world, to the betterment of the society at large, alluding to major contributors and development milestones.
- Vulnerability of the internet and together with its users, when computer hackers take control of it. This was ably demonstrated how an Internet enabled power socket is compromised, endangering even the life of a patient who has to depend on a life support system.
- Proper security measure that need to be in place when bringing services and devices on-line.
- Challengers for, the Internet Engineers who struggle to be a step ahead of the hackers, and Cybercrime Investigators who have to provide concrete digital forensic evidence to courts.



Professor Abhaya Induruwa is a product of University of Sri Lanka, Katubedda Campus who graduated with a First Class Honours in Electrical and Electronic Engineering and holds a PhD from Imperial College London. He is currently serving as the Director for PhD Research in the School of Law, Criminal Justice and Computing at Canterbury Christ Church University in UK. He has also been decorated with the following professional affiliations.

- Chartered Engineer and a Chartered Fellow of the Institution of Engineering and Technology, UK;
- Chartered Fellow of the Institution of Engineers, Sri Lanka;
- Chartered Fellow of the British Computer Society.
- A Founding Member and an Honorary Fellow of the Computer Society of Sri Lanka,
- He has published widely and his current research focuses on smart device forensics and security of the Internet of Things.
- In recognition of his life time achievement in pioneering Internet deployment in Sri Lanka, the Internet Society honoured Professor Induruwa by inducting him to the Internet Hall of Fame 2014.

## Professional Presentations Planned for the Current Year

### Tuesday 7th April 2015— Railway Engineering in the Mining Industry by Colm Kiely

Mining companies around the world use private railway systems to move their ore from the mines to ports. Recently, some companies have decided to explore automating parts of their business, including the trains that run on these private railways.

This presentation will introduce some railway concepts, with an eye to how they affect heavy-haulage mining companies, and explain why automation is desirable and some of the challenges that must be overcome for it to succeed.

The lecture will be centred around the following salient points relating to Railway transportation of Iron Ore.

- *Why use a railway to carry ore instead of trucks?*
- *The basics of train operation*
- *Why we need a signalling system, when cars don't*
- *The constraints of a fixed block signalling system and the advantages of moving block*
- *The purpose of level crossings and why they exist*
- *The need for constant monitoring*
- *The advantages of railway automation*
- *Introduction to radio-based communications*
- *Challenges of Radio Frequency (RF) design on a windy, hilly track in the middle of nowhere*

#### Little bit about the Speaker

Colm Kiely has graduated from UWA with a Bachelor's degree in Electronics and Communications Engineering in 2004. He has been working in the railway and mining industries for 11 years as a communications engineer. Colm has worked for the Public Transport Authority in Perth, including an involvement in the Perth to Mandurah rail line, and for Ansaldo STS, where he had been the lead communications engineer in three communications projects on mining railways in the Pilbara.

Colm is currently leading the communications design and commissioning team on the Rio Tinto AutoHaul® project. AutoHaul® is part of Rio Tinto's "Mine of the Future" initiative, and is the system that will provide autonomous operation of Rio Tinto's heavy-haul railway operations in the Pilbara.

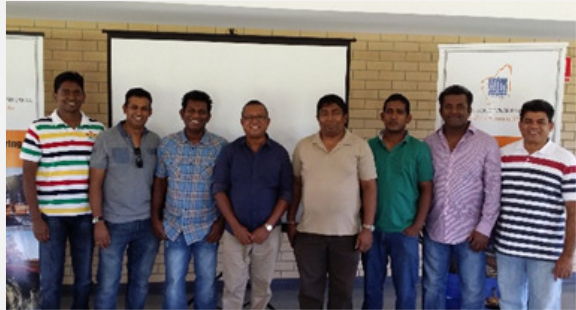
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# Mining Engineering Subcommittee of IESL WA Chapter

The Inaugural Event of the above was held on Sunday 30<sup>th</sup> Nov 2014

*Reported by Chirantha Weerawardena*



Mining Engineering Subcommittee members  
with President IESLWA



Families of the Mining Engineers at the BBQ

The inaugural mining engineering event coupled with a family BBQ, organised by mining engineering subcommittee of IESL WA was held on Sunday 30<sup>th</sup> of November 2014 at Centenary Park Pavilion in Wilson WA. Remy Jayasekera, President of the chapter participated and delivered the keynote address. The purpose of the event was to confirm subcommittee, agree on the future programme and kick off the mentoring programme. Most importantly, it offered newly migrated mining engineers an opportunity to know other mining engineers and their families living in Perth.



Mining Engineers who participated in the event

Mr Ananda Jayalath of Reliance Wealth mortgage brokers who sponsored the event gave brief introduction to mortgage services provided by them.

A personal mentor was randomly selected for each new mining engineer at the meeting. The following programme forwarded by the committee was confirmed by the attendees.

1. Introduction to Australian Mining ½ day course for all new mining engineers
2. SURPAC introductory mine design course for 4-5 participants
3. VULCAN introductory mine design course for 4-5 participants
4. Drill and Blast Engineering ½ day course

New date for the course No.1 above has now been confirmed - Sunday 5<sup>th</sup> April 2015.

Mining Engineering Subcommittee consists of seven members and main office bearers are as follows.

- Lal Jayaweera-Chairman
- Rajeewa Silva-Secretary
- Champika De Silva-Coordinator Professional events
- Manjula Abayawickrama- Coordinator Social events

Professional Presentations Planned for the Current Year

Date	Hosting Sub-Committee	Topic	Presenter
Monday 4 <sup>th</sup> May 2015	Mining Engineering	General Overview and New Advancements in Mine Planning Process	Professor Erkan Topal, Curtin University
Tuesday 2 <sup>nd</sup> June 2015	Civil Engineering	Developing Soft Ground-Case Histories	Mr. Nathan Narendranathan, Principal Engineer, InfraTech Pty Ltd.

Coming Up

Keep these days Free to attend

Institution of Engineers Sri Lanka—Western Australian Chapter

*ENGINEERS' NIGHT 2015*

*DINNER DANCE*

Saturday 1st August 2015

At South Perth Community Hall

Chief Guest—IESL President—Dr. S.B.Wijekoon