

Newsletter

THE INSTITUTION OF ENGINEERS
SRI LANKA

Western Australia Chapter

August 2022

VISION

IESL WA is the flagship and the voice of engineering professionals of Sri Lankan origin in Western Australia. IESL WA upholds the honour, integrity, and interests of the engineering profession by supporting knowledge sharing and networking forums for its membership to maintain highest professional standards.

MISSION

IESL WA is dedicated for the member technical and professional development to have confidence and trust in the engineering profession. IESL WA upholds high professional standards, encourage the growth of the profession and integration of the membership as role models in the WA engineering sector.

OUR CULTURE AND VALUES

Our culture is sharing knowledge and supporting the growth of our membership. IESL WA core values:

- We take leadership and promote all talents.
- We take pride in creating a culture of teamwork.
- Earn credibility through high-quality work.
- Transparent and accountable.
- Develop trusting relationships.

These values weave through all aspects of our work and workplace culture, creating a trusting, open place where each person can contribute and thrive with confidence.

The IESL WA ENGINEERS NIGHT will be held on 27 AUGUST 2022 at Serbian Community Centre Kenwick



ENGINEERS' NIGHT 2022

8th Anniversary of IESL WA Chapter and Dinner Dance

Date & Time : Saturday 27th August 2022,
7.00pm to 11.30 pm

Venue : Serbian Community Centre,
228 Kenwick Road,
Kenwick WA 6107

COST : \$60pp includes buffet dinner and entertainment.

DRESS : Smart casual

PSVP :

Eng. Senaka Welideniya | 0429 415 851

Eng. Mahesh Kariyawasam | 0452 435 814

Eng. Muditha De Silva | 0411 421 751



HIGHLIGHTS FOR THE EVENING...

- Amazing night of entertainment for Engineers from all disciplines & their spouses! But not limited to Engineers only. Other professions most welcome.
- Sumptuous buffet dinner of Sri Lankan & Indian flavours with wine. BYO Alcohol.
- Colourful Sri Lankan & Sumba dance performances.
- Music by **Swasthi** – Western Australia's very own Sri Lankan band! & an international DJ experience
- Chance at winning our Door Prizes!
- Don't miss out on the opportunities to network with key representatives from Engineers Australia and guests from Universities, Government Institutions and other Engineering organisations.
- Hear their stories of inspiration & motivation and challenges & successes!



The IESL WA ENGINEERS NIGHT PROGRAM

27th August 2022

Start at 7.00pm and End at 11.30pm

- Acknowledgement of the country
- National Anthems of Australia and Sri Lanka
- Traditional drumming and lighting of traditional oil lamp
- Welcome Address the President of IESL WA Chapter
- Dance performance 1
- Keynote Speaker's Address
- Dance performance 2
- Vote of Thanks by Secretary of IESL WA Chapter
- Dinner with Light Music
- Band Music and Dance Session 1
- Door prize draw
- Band Music and Dance Session 2
- End of Programme

DINNER BY AGNI FINE CUISINE

The Institution of Engineers Sri Lanka, Western Australia Chapter, 9th Annual General Meeting will be held in October 2022. ***The date/time and venue will be notified in due course.***

Editor's messages –Renewable Energy

Renewable Energy Power Stations:

Mining sector is moving forward with leaps and bounds to generate reliable renewable energy and reduce its dependence on the national grid.

One of Australia's largest hybrid renewable energy microgrids in the mining sector comprise a (LNG) gas-fired powerhouse integrated with a 60% renewables (solar / wind) microgrid. The microgrid will comprise four key components such as four wind turbines generating up to 18 MW, a 13.81 MW solar farm a 15 MWh battery system and an off-grid 21 MW gas engine power plant.

Power is supplied to site transformers and substations and high voltage 11 kV power lines will be installed to step down transformers at each operational area. The energy generated here will be sufficient to run the operation with required efficiency and productivity. This is a significant milestone in renewable power generation for large scale industries.

Electric Cars:

Consumers are demanding that their new electric vehicles have faster-charging speeds, longer range, and, most importantly, are more affordable. The industry believes that the incorporation of higher energy silicon in the graphite anode of the battery will achieve this breakthrough.

Western Australia Electric Vehicle Fast Charging Network

Eng. Nimal Gunatilaka (BSc in Electrical Engineering)

The State Government's Electric Vehicle (EV) Strategy was developed by the Department of Water and Environmental Regulation (DWER). One of the actions prioritised on this initiative is the investment on EV fast-charging infrastructure. WA State Government has announced Australia's longest EV Highway as part of the McGowan Government's \$21 million Electric Vehicle Fund.

The project aims to deliver a network of EV fast charging stations to facilitate travel north from Perth to Kununurra, along the south-west coast to Esperance and also to the East to Kalgoorlie. This network of charging stations include 45 locations across WA. The project will be progressively rolled out and plans to be fully operational by 2024.

Project Objectives

Deliver on the State Government's commitment to invest on EV fast charging infrastructure.

- Raise awareness and stimulate the uptake of EVs in Western Australia
- Stimulate business activity.
- Deliver a seamless and enjoyable customer experience by ensuring:
 - Reliability of charging facilities
 - User-friendly billing platform
 - Availability of real-time information

High Level Timeline

Project plans, processes and timelines are currently under development. A high-level timeline for key project milestones has been scheduled to be achieved fully by early 2024.

Locations

- The locations that have been identified for the installation of fast chargers are based on the findings of the Electric Vehicle Infrastructure Strategic Planning Report.
- The locations are approximately 200km or less apart to support regional travel (Figure 1).
- The Utilities will consider a range of sites as they undertake a thorough process of engagement and consultation.

Charging Sites

Site selection will aim to ensure users have a comfortable and enjoyable experience while charging their EV. It will consider:

- Setting up of EV Charging stations clear of traffic hazards and suitable parking arrangements
- Adequate security and lighting
- Proximity to amenities such as public restrooms, cafes/restaurants, retail businesses, information centres, areas of local or cultural significance and park/nature reserves

Charging Station

Key information on charging stations:

- A minimum of two chargers will be available at each site to provide redundancy and support the growing demand for EV charging.
- At least one unit will be a DC fast charger of 50kW or more.
- DC chargers will be equipped with two charging cables providing the ability to charge two cars at once; and
- There is a minimum of two parking bays dedicated to EV charging with additional parking bays available for spill over.

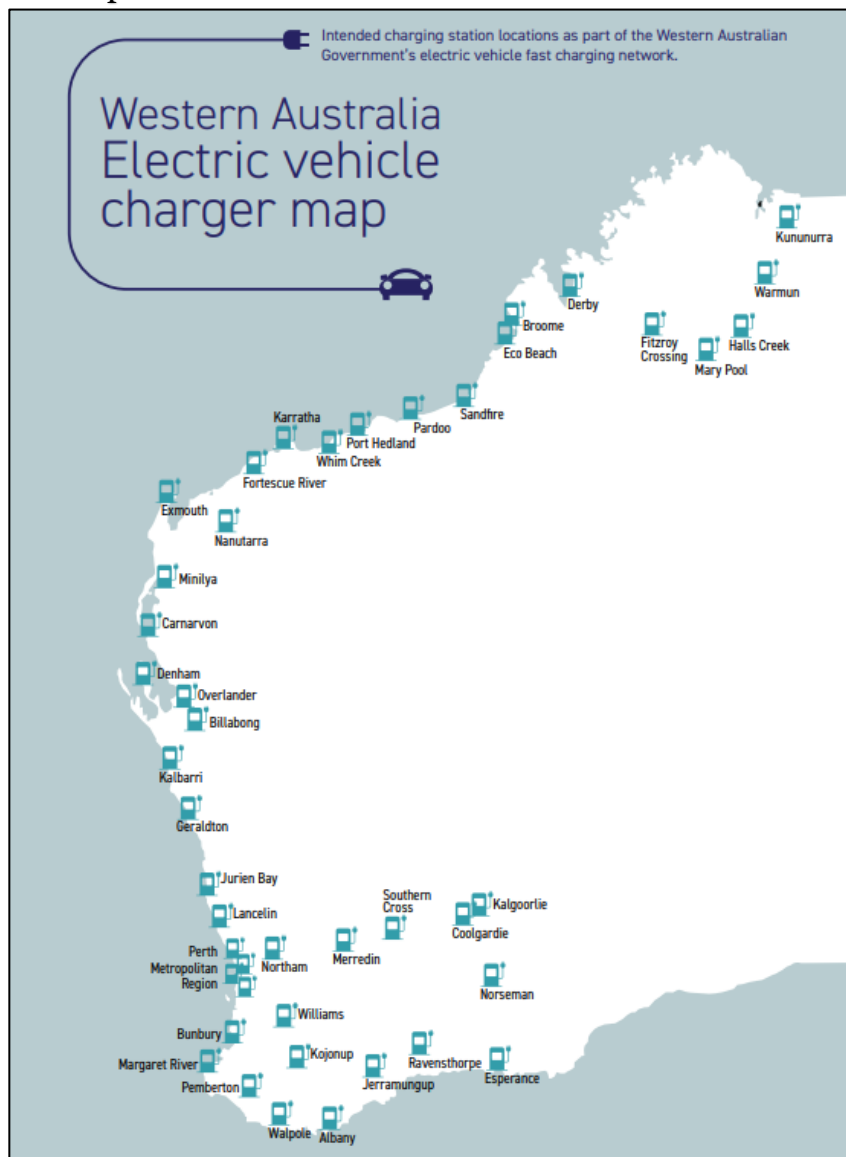


Figure 1 West Australia Electric Vehicle Fast Charging Stations

UPCOMING EVENTS/CONFERENCES

- **Lithium, Battery and Energy Metals Conference 2022/ 14-15 September 2022, Perth, WA and online**

Industry leaders views on the EV boom, Australia's progression in the green battery chemical industry, and the importance of moving out of your comfort zone.

- **Risk Engineering Conference 2022 / Thu 01 Sep 2022 - 9:00 am to Fri 02 Sep 2022 - 5:00 pm**
<https://portal.engineersaustralia.org.au/event/2022/03/risk-conference-41571>

Engineering for a Resilient 2030

This decade has come with risks and opportunities for the entire Australian engineering community. We have all been touched by risk engineering, whether it be from climate change and associated disasters; the uncertainty of wars and civil unrest; cybercrime and insecurity or infrastructure development.

- **How to become a Chartered Engineer information session/Fri 02 Sep 2022 - 12:30 pm to Fri 02 Sep 2022 - 1:30 pm / Engineers Australia**
<https://portal.engineersaustralia.org.au/event/2022/06/how-become-chartered-engineer-information-session-43551>

Global recognition as a competent and ethical engineer is critical to your professional standing and progression. With the Engineers Australia Chartered credential, you'll gain an industry-recognised mark of excellence. The presentation will explain:

What Chartered status means and why it matters/Which of the three Chartered categories is right for you (Chartered Professional Engineer (CPEng); Chartered Engineering Technologist (CEngT) and Chartered Engineering Associate (CEngA))/What competencies you'll need to demonstrate to get Chartered/Your continuing professional development (CPD) requirements to achieve and maintain Chartered status/Our simple six-step application process and evidence-based approach/How the Chartered credential aligns to state-based registration.

- **AS2067 Substation and HV Installation / Fri 04 Nov 2022 - 9:00 am to Fri 04 Nov 2022 - 2:30 pm**

<https://portal.engineersaustralia.org.au/event/2022/06/as2067-substation-and-hv-installation-43256>

This interactive virtual workshop will provide a thorough overview of AS2067, a mandatory standard for HV design. Delivered by John Giles, an electrical engineer and design manager with over 40 years of HV experience, you'll gain a deep understanding of the critical technical concepts, clauses and design requirements indicated by the standard. Following a detailed explanation of the sections of the standard, John will then expand on the major concepts including topics such as clearances, earthing, fire risk mitigation, equipment requirements.

Learning outcomes

- Understand what AS2067 contains
- Understand the fundamental technical concepts in the standards contract
- Understand how to apply clearances
- Understand earthing requirements and Understand fire risk management

WA is leading the nation with standalone power supply (SPS)

By D D Percy Yasarathna (BSc Electrical Engineering)

Western Power (WP) has one of the largest isolated electricity networks in the world. In Western Australia more than 50 per cent of the overhead distribution network is being dedicated to serve around 3% of the population. The distance and the size of the network makes it expensive to maintain where it requires high demand of resources and time too. WP who operates the transmission and the distribution network of Western Australia, is faced with the challenge of providing its customers with the supply of reliable and safe power at a reasonable cost.

In rural and remote areas, some customers, especially farmers are serviced with power lines that stretch over long distances. These long running power grids has a high maintenance cost compared to the unit power cost paid by the customer. Besides these lines are exposed to dust, debris, wind, rain, lightning, and other environmental factors which require regular maintenance and upkeep. Furthermore, under harsh weather conditions, power lines could also be the source of bush fires making it less reliable for rural and farming community. To overcome all these draw backs faced by the rural clientele in WA, WP has produced innovative localized renewable technology solutions such as stand-alone power systems (SPS).

The SPS is a self-sufficient power unit, designed with solar power and battery storage set up, inverter(s) and backed by a diesel generator providing greener energy source to power homes and businesses. SPS units, come in different sizes to match the individual customer's energy needs. It works independently from the main electricity grid and capable of storing and delivering power to households and small businesses. Energy is generated through solar panels and supplied via rechargeable solid state batteries which provides uninterrupted power supply throughout the day, even when the sun isn't shining. If the power flow from solar/battery becomes less than the demand, then the backup diesel generator units may kick in to provide consistent flow of electricity (**Figure 2**). SPS provides more reliable and higher quality renewable power supply to farming businesses and homesteads. As per records on last five years, SPS has reduced power outages by 90% and effectively sustained a reliable power supply to shearing sheds, homesteads and farming operations.

SPS serves significant benefits to customers, particularly across the vast regions in the Mid-West, Wheat belt, South-West and Great Southern. SPS unit footprint has a maximum area of 400sqm where WP covers all costs for SPS assets, installation and ongoing maintenance. Customers will continue to receive a bill for the electricity they use and the cost per unit of electricity will be the same as network-connected customers.

SPS are more cost-effective against network/grid as its will no longer require long running power lines saving WA taxpayers millions in infrastructure costs. Besides, the absence of long running power lines will also significantly reduce bushfire risk and also provide WA community with significant savings that could be invested into infrastructure upgrades and also invested in building smarter, reliable and greener energy for regional customers.

Many more SPS on the way for WA

WP recently has identified more than 15,000 potential sites for the next ten years. WP is investing on this innovative energy solution where more than 4000 SPS units are to be installed across WA over the coming decade and so far already more than 100 SPS units have been installed in regional WA, with strong customer satisfaction. With a \$37 million budget, WP plans more than 180 SPS to be installed by 2023 replacing around 762 kilometers of overhead power lines

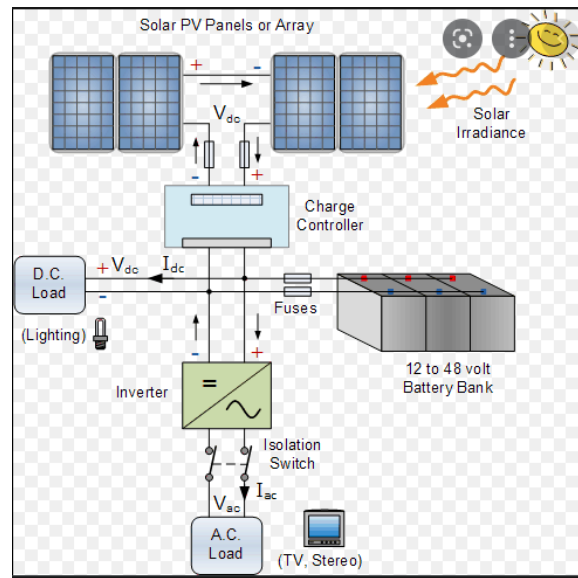
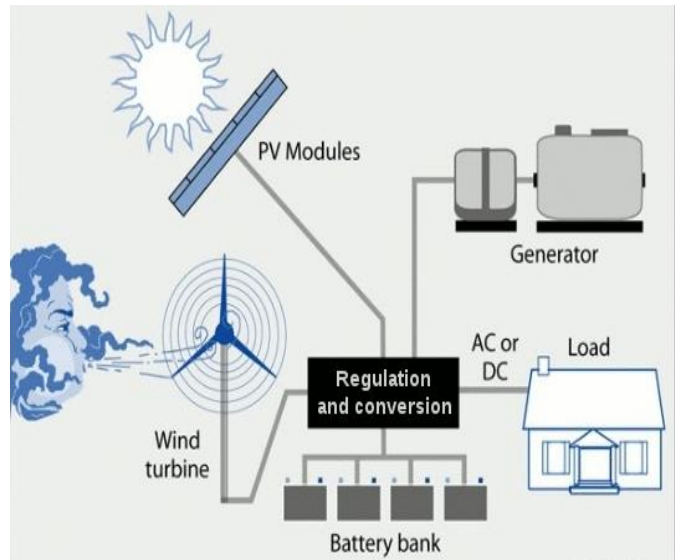


Figure 2 Stand Alone Power System (SPS) setup (**Reference: WP website**)

OCEANOGRAPHIC DATA COLLECTION AND MANAGEMENT PROGRAM IN WESTERN AUSTRALIA

By Eng. Dr. Darshani Thotagamuwage

With increasing population density in coastal areas, coastal activities such as swimming, fishing, surfing, recreational boating, navigation, etc. have also grown to a mega scale. In this perspective, collecting oceanographic data and disseminating it to coastal and ocean users in large is paramount to ensure safety of day-to-day users and as well as to contribute future research and development of coastal and ocean industry. Oceanographic Services of the Department of Transport (DoT) collects long term tide and wave data along Western Australian waters, from Wyndham up north to Esperance to cater this state-wide requirement. Wave data is collected through deep water directional wave-rider buoys located at different offshore sites between Esperance and Tantabiddi/Exmouth. Tide data is collected through radar gauges located along the coastline. A number of other instruments are also deployed to collect several site-specific oceanographic data for short term projects.

1. Tides and waves in Western Australia (WA)

WA has one of the complex tidal regimes in the world. Having located a tidal node or an amphidromic point off Fremantle, WA coastal waters experience the largest and the smallest tidal ranges (the height difference between the high-water level and the low-water level) in Australia. The tidal range is the lowest around the south-west coast (e.g.: in Fremantle), and it is only about 120 cm. The largest tidal range can be found in Collier Bay and it records 12m in spring tide (AUSSTATS). See Figure 3. WA tides are also characterized by different tidal types as below.

- South and south-west coastal region (Esperance to Shark Bay) tides are characterised by diurnal tides which has only one tidal cycle per day.
- North-west to north coastal region (Carnarvon to Wyndham) tides are characterised by semi-diurnal tides, which has two tidal cycles per day.
- West region (Shark Bay to Carnarvon) tides are characterised by mixed semi-diurnal tides, which has a mix of the above two, one primary cycle and another secondary cycle.

West Australian coast is fronted by the Indian Ocean and the Southern Ocean. Waves propagated across the oceans approach WA coastal region without encountering any obstructions. As a result, the WA coast, especially the south-west coastal region experiences the most energetic wave climate. The local mean significant wave height is greater than elsewhere on the Australian coast (Hermer et al, 2007).

Waves are generated by wind stress exerted over the open ocean waters. The waves that we see in the open ocean is usually a combination of two components called 'swell waves' and 'sea waves'.

- Sea waves are created by direct local action of wind on sea.
- Swell waves are generated by large meteorological disturbances operating at a distance. Swells can persist after the disturbance has disappeared and maintain a constant direction as long as it keeps in deep water (BoM).

On the south coast of WA, swells sometimes known as King Waves, can be significantly bigger (up to 10 times bigger) than the waves before them.

2. History of WA tide and wave data collection

The earliest tide records were noted from Fremantle and the date goes back to 1873. The records were based on visual observations on a tide staff (MHL, 2013). In 1900's tides at Bunbury harbour were measured by a 'pen and ink strip' tide recorder which was based on a float pulley mechanical system to measure tide. Later on, the same float and pulley system had been used with different recording methods; in 1960's punch tide recorders were used in several locations, and in 1980's digital recorders were used. At present, microwave radar gauges are used for all the tide stations.

The oldest wave data is again available from Fremantle since 1974. Only non-directional wave parameters, wave heights and periods, were available since 1974. Since 2004 directional wave parameters were possible to be measured with modern wave rider buoys.

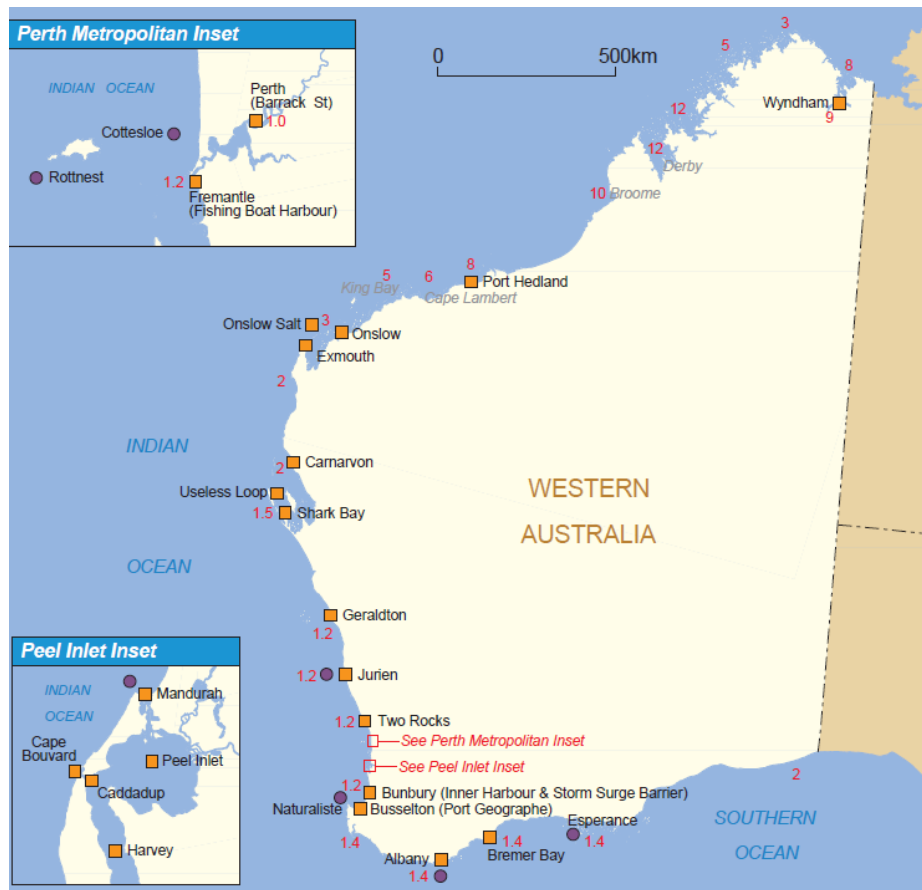


Figure 3: Tide and wave stations that are currently operational around the state. Numbers in red are the average tide range of the individual tide stations.

3. Data collection methods and data quality control measures

At present, there are 25 tide stations and 8 offshore wave stations operated by the DoT. Tide is measured by the tide gauges at 5 minutes' interval. The measured raw tide data is transmitted to the DoT server through NextG communication system. Wave parameters are calculated by the wave rider buoys at 30 minutes' interval. The buoy transmits the raw data to the shore station through HF radio link and from the shore station, the data is sent to the DoT server through Next G system.

The raw tide and wave data is subject to initial quality checks by tide and wave post processing programs. After that, the real-time tide and wave data are displayed on the DoT website as time series plots. General public extensively rely on 'online' tide and wave display on the web.

4. Data products and dissemination

The processed tide and wave data is further used to produce number of products.

- Tide products
 - Monthly and yearly tide data time series
 - Submergence curves

- Yearly tide predictions
- Tidal constituents and tidal planes
- Wave products
 - Monthly and yearly time series of wave height, period, and direction
 - Yearly exceedance curves
 - Wave roses of height- direction, and period-direction
 - Joint frequency tables

Both tide and wave yearly time series data is published on the DoT website and users can download historical tide and wave data. For any products other than the historical tide and wave time series, users can forward their data request online to the Oceanographic Services team. The form is available at the bottom of the above link. DoT is the sole state government agency in WA that collects state-wide tide and wave data and therefore, DoT is the custodian of the data in WA. A huge capital and recurrent budget are allocated by the state government for the DoT Oceanographic Services to establish, maintain, and research and development of the oceanographic data network. The state government funds are on the other hand, the general public's tax money. Therefore, the data dissemination is bound by the 'Open Data Policy' which is that people are provided with data for free of charge. Even though a small team of 7 members involves in this huge task, at the end it is our people who are greatly benefited from this service.

(The author of this paper works as the Program Leader Oceanographic Services at Department of Transport WA)

The IESL (WA) Webinars, Workshops and Newsletters

The charter of IESL is networking as well as professional development of IESL membership. IESL Committee with its members support has conducted many webinars to keep alive our mission. Webinars helped us to continue our member professional development in an environment where Covid pandemic significantly affected physically interactive seminars.

We were able to conduct the following webinars:

- **Information Technology - Cybersecurity**
- **Defence and Electronics – Multi-mission radio**
- **Mechanical - Machine Learning quantum algorithm and data science**
- **Civil (Roads and Infrastructure) – Light at the end of the tunnel for traffic congestion in Colombo**
- **Mining- Drilling and blasting in underground long hole stoping**
- **Geotechnical – Spontaneous combustion in Coal Mines and Challenges faced by all mine operators**

All feedbacks and comments please send to Dr. Senaka Welideniya – Editor IESL-WA at senaka7_w@hotmail.com

ISO 27001

Cybersecurity and the Journey to Certification

Presenters:

Craig Ireland (IT Lead)

&

Sameera Iddamalgodage (ICT Security Analyst)



DATE: 1st February 2022

TIME: 4.00pm Perth (7.00pm AEDT, 1.30pm Sri Lanka)

VENUE: Zoom

<https://us02web.zoom.us/j/85388706874?pwd=UmpvSjVxUjcyK29JNlhHWetoQXBndz09>

Meeting ID: 853 8870 6874 | Passcode: 705965

ENTRY: Free of charge and just log in

Presentation Highlights:

- Cybersecurity as a business strategy
- Balancing Confidentiality, Integrity and Availability
- Implementing an Information Security Management System
- The certification process
- Protecting your information at work and at home



About the speakers



Craig Ireland (BEng, BCom) has worked in IT Operations for 10 years, the past three at Nihar. He managed the rapid growth in Nihar's IT infrastructure and is responsible for its IT management systems and administrative controls. Notable achievements are Nihar's attainment of ISO 27001 certification within seven months and the company's transition to Work from Home during COVID-19.



Sameera Iddamalgodage (BSc, MSc) is a cybersecurity expert and ethical hacker who has worked in Software Development and Cybersecurity for 9 years, the past two at Nihar. He is responsible for Nihar's system administration and cybersecurity architecture, and implemented the suite of technical controls that form the core of Nihar's ISO 27001 compliance.

Nihar is an engineering consultancy providing full lifecycle expertise in plant asset management and reliability engineering. Nihar is partnered with some of the biggest names in the Australian oil and gas, mining, and process industries as well as recent expansions into other sectors. The key to its steady growth is a relentless focus on quality deliverables, staff development, and disciplined business processes.



Mining Engineering Subcommittee

The Institution of Engineers Sri Lanka-Western Australia Chapter

The Institution of Engineers Sri Lanka, Western Australia Chapter (IESL WA)



Welcome

Webinar for March 2022

Multi-mission radio

Lowering the cost of ownership for high end electromagnetic capabilities

Presenter

Jayasanka (Sanka) Piyaratna
Managing Director, Solinnov Pty Ltd



Solinnov Pty Ltd is an Australian small to medium enterprise that provides customised solutions in high-performance embedded signal processing systems. Services include Complex Algorithms, FPGA Design, Real-Time Software and Custom Embedded Hardware. <https://solinnov.com.au>

solinnov
MEMBERSHIPS



AUSCERT



Defence Industry Security Program



SMARTSAT
Cooperative Research Centre



Organised by the Electrical, Electronic and Instrumentation Engineering Subcommittee of IESL WA

The Institution of Engineers Sri Lanka, Western Australia Chapter (IESL WA)



Welcome

Webinar for April 2022



MACHINE LEARNING, QUANTUM ALGORITHMS AND DATA SCIENCE

Presenter

Dr. Sivaguru S. Sritharan,
Chief Technologist,
Go.AI, Inc., U.S.A.

Organised by the Mechanical Engineering Subcommittee of IESL WA

A Light at the End of the Tunnel for Traffic Congestion in Colombo

Presenter

Dr. Dimantha De Silva

BScEng (Hons), MSc, PhD (Uni of Calgary, Canada)

Senior Lecturer, University of Moratuwa



DATE: 16 June, 2022, Thursday

TIME: 4.00pm Perth (6.00 pm AEST, 1.30pm Sri Lanka)

Via Zoom

<https://us02web.zoom.us/j/82008243346?pwd=ZgWDDNp7tAG4h2LNRUUuk1TPwvgV1U.1>

Meeting ID: 820 0824 3346

Passcode: 535936

Presentation Highlights:

- Broader Higher Level Mobility Strategy
- Selecting the Suitable Public Transport Technology
- The prioritized Railway, LRT and Bus Modernizations
- The Required Transport Infrastructure
- Use of Modern Technology to support Transport Planning
- Short Term Strategies

About the speaker



Dr. Dimantha De Silva is a Senior Lecturer, Department of Civil Engineering at University of Moratuwa, Sri Lanka.

He received his M.Sc. in Transportation Engineering and B.Sc. in Civil Engineering from the University of Moratuwa, Sri Lanka. He completed his PhD in Transportation Engineering at University of Calgary, Canada.

He Possesses over 18 years of transportation engineering experience in Sri Lanka, Canada and in the USA. From 2006 to 2014, he worked as a Transportation Engineer in Canada, developing activity based transport demand models and spatial economic land use models for policy testing in macro and micro policy planning.

He returned to Sri Lanka in 2014 to join the University of Moratuwa. He was the team leader developing the Colombo Megapolis Transport Masterplan. Dr. De Silva has been instrumental in developing the Google Transit for Sri Lanka on Google maps Platform. He is also the Co-Developer of the M-TRADA, a software tool to use Google traffic data in transportation planning. He has been involved in all major suburban railway development project feasibilities, LRT feasibilities and all major road feasibility projects in Sri Lanka since 2014.

His research interests includes integrated land use transport modelling, transport planning and transport infrastructure management.

**Civil Engineering Subcommittee
The Institution of Engineers Sri Lanka, Western Australia Chapter**

Drilling & Blasting in Underground Long Hole Open Stope Mining

The basic introduction and understanding of underground drill & Blast activities within Australian Mining Industry

Presenter:

Asanka Rajapakshe

BSc Eng (Hons), B.IT, MIEAust, MAusIMM

Mining Engineer - Fortescue Metals Group



DATE: Saturday 25th June 2022

TIME: 9.00am to 12.30pm

VENUE: Centenary Pavilion, Centenary Av, Wilson
WA 6107

Presentation Highlights:

- Introduction to Australian underground mining
- Introduction to open stope mining
Stope design and economic analysis according to geological models
- Production drill designs
- Explosive loading and timing in stope blasts
- Continuous improvement of blast results
- Common problems encountered during drilling and blasting and solutions



About the speaker



Eng. Asanka Rajapakshe has been in open pit and underground mining industry during past 12 years, specialised in Australian underground mining for more than 5 years. He has worked as a ventilation engineer, backfill engineer, drill and blast engineer and planning engineer in several underground mines. Based on his Australian mining experience he holds Quarry Manager's Certificate of Competency (WA) and First Class mine Manager's Certificate of Competency (WA).

His expertise knowledge in stope design and drill & blast enabled him to achieve economical ore recoveries in underground narrow vein gold mining. His exceptional skills in underground paste filling improved the efficiency in out of sequence stope extractions in wide span stope designs. Asanka has demonstrated his specialist knowledge in mine ventilation by improving mine ventilation circuits in mines which runs below 1000m from MSL and in interconnected & widespread underground mines. As a planning engineer he Asanka has been successful to deliver efficient mining, drill and blast and services schedules while achieving yearly budgets. Apart from these he brings extensive open pit drill and blast and planning skills which helped him to sharpen his career in Australian and overseas mining career.

Mining Engineering Subcommittee
The Institution of Engineers Sri Lanka-Western Australia Chapter

SPONTANEOUS COMBUSTION IN COAL MINES, CHALLENGES FACED BY ALL MINE OPERATORS

Presenter

Dr. Sanjive Narendranathan

BEng, MEngSc, PhD, CPEng, FIEAust

Technical Director, Mining Geotechnical Engineering at GHD, Melbourne, Victoria, Australia



DATE: 20 July, 2022 (Wednesday)

TIME: 4.30pm Perth (6.30 pm AEST, 2.00 pm Sri Lanka)

Via Zoom

https://us02web.zoom.us/j/82593068901?pwd=d38HvIcUa8fdNRzILfu3NC2FceFu_7.1

Meeting ID: 825 9306 8901

Passcode: 927495

About the speaker



Sanjive is a Chartered Mining Professional and a Fellow of the Insti-

tute of Engineers Australia, he has 20 years' experience in the field of Mining Geomechanics.

His operational experience includes responsibility for ground control at KCGM's Super Pit and Mt Charlotte (underground) operations, where he undertook a number of applied research projects on topics such as final wall blasting techniques for open pit batters underlain by historic underground workings and underground support design requirements in 'high stress' conditions.

He spent 10 years as a consulting engineer with Coffey Mining (7 years) and the Infra Tech Group (3 years), where he undertook a number of geotechnical designs and feasibility studies for clients such as Rio Tinto, BHP, Barrick, Newmont, for projects across of

number of commodities in Australia, Asia and Africa.

He has also been called upon to provide expert technical and forensic advice on a number of sensitive cases involving geotechnical engineering issues and disputes for firms such as Clayton UTZ and Minter Ellison's.

He spent 1 year with the mining regulator in Victoria, as a Geotechnical Advisor, where he was responsible for providing advice to the office of State Resources Minister on Victorian mine and quarry stability requirements. In early 2018 he joined GHD as Technical Director (Mining) Geotechnical Engineering, and is focused on the closure related stability considerations for Brown Coal Mines in the Latrobe Valley Region of Victoria.

Mining Engineering Subcommittee

The Institution of Engineers Sri Lanka, Western Australia Chapter



SAVE THE DATE

YOU ALL WELCOME

ENGINEERS' NIGHT 2022

**8th Anniversary of
IESL WA Chapter and Dinner Dance**

27th August 2022- 7.00pm to 11.30 pm

@ Serbian Community Centre, 228 Kenwick Road, Kenwick WA 6107

Tickets: Mahesh **0452435814** / Muditha - **0411421751**