Institute of Electrical and Electronics Engineers
Queensland Section (ABN 67 431 648 974)
https://ieee-qld.org/

IEEE QUEENSLAND SECTION NEWSLETTER

July 2020 (Combined Q1 and Q2)

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Editor: David Spear

In this issue:

Section Chair's Report

Nilesh Modi
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Welcome to the first newsletter of the IEEE Queensland section in 2020. It has taken more then expected time to reach out to the section members via this newsletter.

This is my second year of being the chair of the IEEE Queensland section. My report includes highlights of the 2019 Annual General Meeting and Region 10 virtual annual meeting that held on 9 March 2020.

The Queensland section Annual General Meeting of 2019 was held on 6th December 2019 at Brisbane Exhibition and Convention Centre. This year we had approximately 100 person attended AGM and Awards Dinner. The AGM dinner was support by seven industries and two universities. They were Fugro, Simtars, Powerlink, DigSilent Pacific, Aurtra, Noja power, Blackbook.ai, The University of Queensland and Queensland University of technology. We were fortunate to have Prof. Michael Milford from QUT as a chief guest for the dinner. He gave a talk on "Robotics, Autonomous Vehicles and AI: Hype, Hope and Holy Grails".

During AGM and Awards dinner student thesis awards, outstanding volunteers award, outstanding young professional award, outstanding women in engineering award and outstanding student award were presented. A full list of award winners and report from each chapter and affinity group is available in the AGM report. I would like to thank BCEC, Prof. Michael Milford and all industries and universities for supporting the dinner. I would also like to thank attendees of the AGM and Awards Dinner.

IEEE Region 10 executive committee and section chairs get together once a year at R10 annual meeting to share experiences and discuss future direction face to face. In light of the existing COVID-19, Region 10 decided to

have its annual meeting via webex. Highlights of the R10 is outlined below.

- During the meeting R10 director, Akinori Nishihara gave a presentation on IEEE strategic initiative and reginal realignment.
- Two IEEE president elect candidates were present virtually to answer some of the question raised by R10 members. The questions were around role of R10 in shaping future of the IEEE, improvement in IEEE fellow process, initiative to promote Life-Long-Learning in the IEEE, efficient reporting of each chapter and student branches.
- Execom member from educational activities, professional activities, membership activities, technical activities presented their work in 2019 and plan for 2020.
- IEEE Queensland section received USD 3,000 grant for the activates carried out in 2019.
- Presentation material is available on R10 website. I like to encourage you to refer to the slides to gain better understanding of your chapter/affinity group activities.

Since last few months because of the COVID-19, all IEEE meetings and events have been held online instead of usual face-to-face. Along with other professional bodies the IEEE Queensland section is also acquainting itself to this ‘new norm’ of virtual meetings and events. This change has opened up new opportunities and may of the chapter chairs have approached overseas experts and organized virtual events which not only benefits the Queensland section members but also IEEE members from Australia and overseas.

I am looking forward to work with the Queensland section committee and IEEE volunteers for this year. Please feel free to contact me or any committee member if you have any suggestions or seeking any support.

Section Vice Chair

Dr Alexandra Posoldova

Last year was first time I served in role of Vice-Chair for QLD section. I am excited to continue in this role in 2020. I set the goal to understand what do our local members value and how can QLD section enhance their IEEE experience. I came to conclusion that having passionate volunteers is the best way to provide value to our IEEE members. Therefore, my primary focus has been to form a strong committee, where every technical chapter and interest group consist of passionate volunteers determined to provide our members with high quality events throughout 2020. I am very glad to see that the committee has mix of experienced and new members.

In 2020, I would also like to develop set of guidelines for section as well as chapters and interest groups. The intention is to make some of the decision making easier and to pass down knowledge from experienced volunteers to their successors. These guidelines are meant to be updated on continuous basis as section grows and evolves.

The start to 2020 has been difficult. While our section was exploring how to help victims of bush fires, world got affected by COVID-19. QLD section took measures to protect their volunteers as well as members and advised to postpone all face to face events. We invested in zoom meeting platform to deliver event virtually instead. Even though, we as humanity are facing some difficult time, every crisis creates opportunity. I believe there will be a great learning coming out of this situation and we will explore new ways how to utilise technology.

Section Treasurer's Report

Vaughan Clarkson
v.clarkson@ieee.org

The summary financials for this month's report. It's just about as simple as can be.Also is a revised version of the financials from last month. There had been some question marks over the sources of income, which I have since managed to resolve.

IEEE Queensland Section

Treasurer's Report:	July 2020 Meeting Report
Date prepared:	Monday, 6 July 2020
Treasurer:	Dr Vaughan Clarkson

	ANZ Brookside Shopping Centre (BSB 014-203)	Cheque Account 469430083
Date	**Item**	**Amount**
1/6/20	Starting balance	$56,459.52
Income		
10/6/20	TRANSFER FROM ATO ATO007000012141036 (combined GST refund for Q3/19 to Q1/20)	$933.00
Expenses		
15/6/20	ANZ INTERNET BANKING PAYMENT 879912 TO Alexandra Posoldova (reimbursement of Zoom Pro purchase)	($230.89)
Closing Balance		$57,161.63
Nett cash available		$57,161.63
Nett worth (nett cash available + assets - liabilities)		$132,161.63

Assets: Term Deposits	**Value**
ANZ 014203-911003931	$25,000.00
ANZ 014203-911003659	$25,000.00
ANZ 014203-914758977	$25,000.00

Newsletter Editor's report

David Spear
lyraview@gmail.com

The newsletter for 2020 Q1 was not published owning to insufficient content. It was expected that four newsletters would be issued in 2020 but Cov-19 has influenced content.

Covid-19 has also caused the committee to meet via Zoom. Meetings using Zoom are available to societies and Zoom Pro has been set up.

I am new to the committee, and I am looking forward to working with all of you to deliver our IEEE Queensland newsletters.

Newsletters from prior years are available on the Queensland Section's website at https://ieee-qld.org/archives/newsletters/

Thank you to all members who have contributed to this mid-year edition of the newsletter.

Events organised by Chapters and Societies can be advertised and reported on in the newsletter.
Members are reminded that in addition to the IEEE website IEEE has

- a Youtube channel
- Twitter account
- https://www.facebook.com/IEEEQLDSection
- https://www.linkedin.com/company/ieee-queensland-section

Webinars are easily set up and are encouraged. See your committee member for more information.

If you have any comments or changes you would like to see in the newsletter, please let me know. I welcome your feedback

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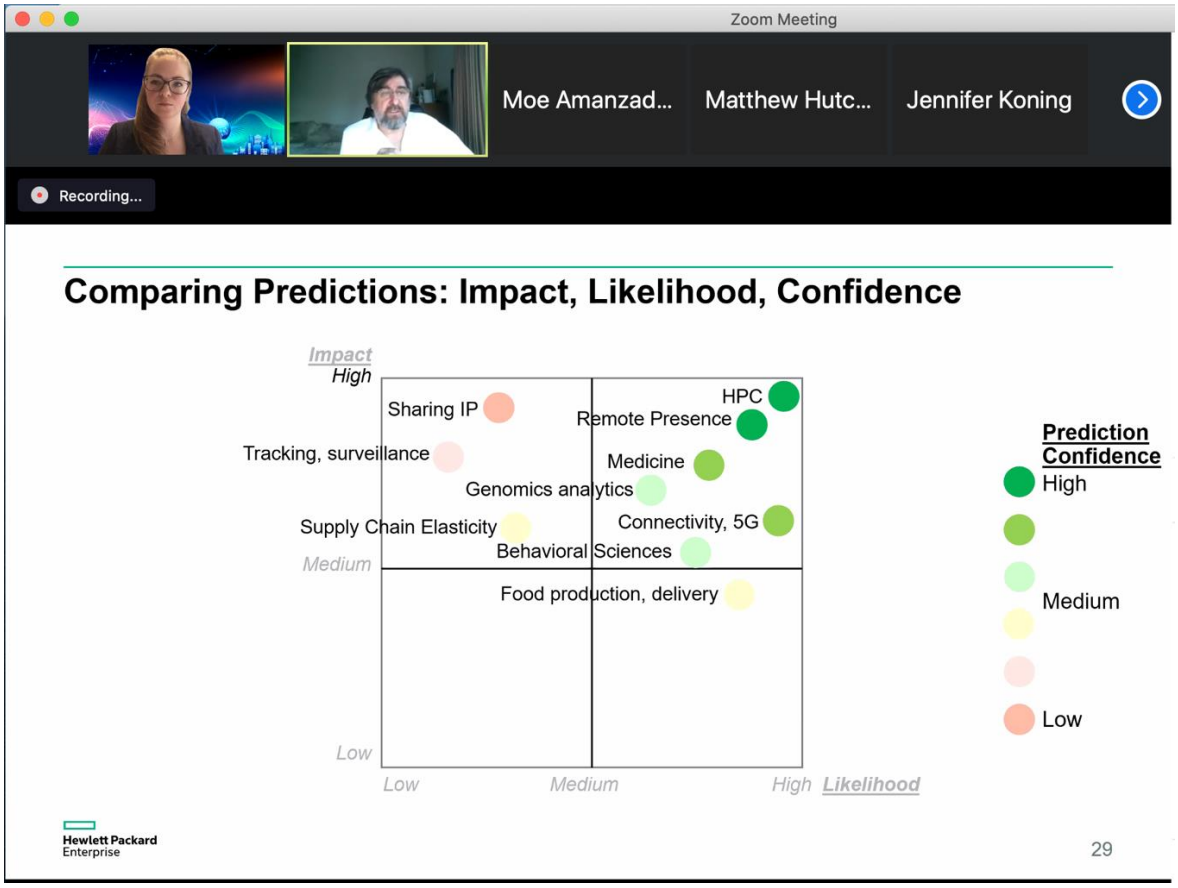
Computational Intelligence

Committee:
Chair: Alexandra Posoldova
Vice Chair: Andew Lewis
Secretary: vacant

Computational Intelligence Chapter welcomes new chair, Alexandra Posoldova with over 6 years of experience in volunteering for IEEE QLD. Alexandra's main area of interest is AI and data science and is looking forward to organising events on these topics and technologies that advance them. With Alexandra based in Brisbane and Andrew based in Gold Coast, together we are looking forward to organising events for members in both cities.

The secretary position remains open for now and we would love to hear from interested volunteers.

The first event of this was held over zoom discussing a burning topic: Technology Predictions for Pandemic. The event was delivered by director at Hewlett Packard Labs and IEEE Presidential candidate Dejan Milojicic.



For those who have missed this event, the recording is available at the section YouTube page.

www.youtube.com/channel/UC_CM8K7yEoy9lhiei4CLzlw

We look forward to hearing from our members suggestions for future events.

Connect with us: fb.me/IEEEComputationalIntelligenceQLD

Computer Society

Chair: Vladimir Estivill-Castro
Vice Chair:
Secretary:

Owing to the restrictions and conditions brought about by Covid-19 webinars are being encouraged. The IEEE Queensland Computer society invites its members to participate in a webinar.

Webinar IEEE Qld Computer Society
Wednesday 2nd of September, 5:50- 7pm Brisbane Time - 3:30pm - 5pm Singapore Time

Speaker Zhen Dong, Senior Research Fellow, National University of Singapore

Talk title: Time-travel Testing of Android Apps

Abstract: Today mobile apps are everywhere and used in almost every aspect of our daily lives. Mobile app testing is the key to ensure apps work reliably and securely, and has been attracting significant attention from both academia and industry. In this talk, I will give a brief introduction on mobile app testing and summarise mainstream mobile app testing techniques. In the end, I will present our recent work "Time-travel Testing of Android Apps" (published at ICSE'20). Unlike existing works that focus on input sequence generation, our work captures app states during testing and prioritises exploring states from which it is highly likely to trigger new program behaviour such that more program behaviour can be discovered in the given time.

Bio:
Zhen Dong is a Senior Research Fellow at the National University of Singapore. He serves as a senior researcher at the National Satellite of Excellence in Trustworthy Software Systems , Singapore. Zhen completed his PhD in computer science from Heidelberg University in 2017, advised by Prof. Artur Andrzejak . His research is focused on the development of techniques and tools for improving software reliability and security, particularly in the area of mobile computing. He is currently serving on the Board of Distinguished Reviewers of ACM Transactions on Software Engineering and Methodology. His research won the ACM Distinguished Paper Award at ICSE'20.

Associated paper Paper: https://www.comp.nus.edu.sg/~dongz/res/time-travel-testing-21-01-2020.pdf
Tool: https://github.com/DroidTest/TimeMachine

Women in Engineering

Negareh Ghasemi
n.ghasemi@uq.edu.au

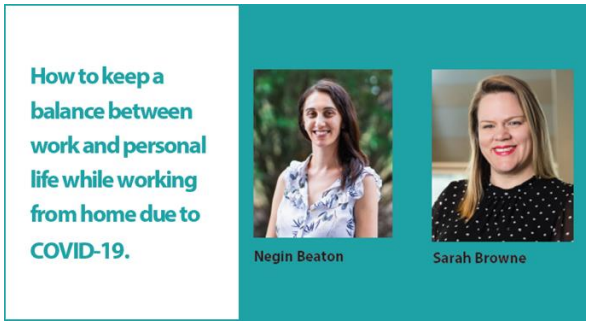
Committee:

Chair:	Negareh Ghasemi
Vice Chair:	Marie-Luise Wille
Secretary:	Tara Shabab

Follow us on:

IEEE WIE Event – 11 June 2020:

IEEE Women in Engineering QLD section hosted an online event "How to Keep a Balance between Work and Personal Life while Working from Home due to COVID-19" on June 11th.



IEEE Women in Engineering had an online panel discussion with female industry professionals about the challenges of working from home during COVID-19 pandemic.

The panel, Sarah Browne, Brighter program director, and Negin Beaton, the development and communications coordinator for the University of Queensland Women in Engineering, shared their experiences during the pandemic and work-from-home lifestyle.

The panel shared the challenges they faced and talked about their solutions to manage changes to their work and life routines.

Marie-Luise Wille
m.wille@qut.edu.au

Young Professionals QLD Section Committee:
Chair: vacant
Vice-Chair: Marie-Luise Wille
Secretary: Jenniffer Zapata

After a quiet 2019, YP Queensland section is redefining itself for 2020 and currently in the process for a fresh new start. We want to hear from our members now their expectations and how we can enhance the value of their IEEE YP membership as well as how we can improve their experience. So please keep an eye out on your inbox for the survey that we will send out in April 2020.

During these unprecedented times of Covid-19, networking and other social gatherings have to be postponed until further notice, but we are working very hard to deliver an alternative program for our future events.

This year's plan includes the collaboration with other committees, for example IEEE Women in Engineering, in order to strengthen the community spirit.

Future events will also include a professional development session on Entrepreneurship in collaboration with the Australian Centre for Entrepreneurship Research, a technology bootcamp and a student transition and elevation program (STEP).

If you want to make a difference and join the committee, please contact me!

Power and Energy - Dielectric Electrical Insulation

In 2020 so far PES has organised 9 technical programmes. Due to COVID 19 impact all seminars were organised as webinars. Speakers of our seminars were number of international and local expertise in power and energy stream. In 2020 we have offered 4 scholarships for RHD students to register for PES GM 2020 virtual conference. The PES/DEIS committee members for 2020 are:

Chair – Dr. Chandima Ekanayake
Vice Chair – Prof. Tapan Saha
Secretary – Mr. Amin Mokari
Treasurer – Mr. David Batterham

PES online seminars:

1. Title: " TRANSITION TO A HIGH DER FUTURE – A DISTRIBUTION NETWORK PERSPECTIVE"

Date: 20th May 2020.

Number of attendees – 15 IEEE members and 1 Non-IEEE members

Summary:

The energy sector is undergoing significant transformation, predominantly driven by a mass exit of centralised generation across the country over the next 10-30 years, and the significant growth of generation from Distributed Energy Resources (DER). Ultimately, this will transform the role that the distribution networks play in the overall system performance and security. Such network transformation requires a robust roadmap that enables a cost effective, safe and reliable journey while keeping customers' long term interest at the core of this transformation.

This presentation gives an overview of the no-regret investments that distribution network need to undertake to ensure a smooth and cost effective transition to a future that enables higher penetration of DER.

Speaker:

Dr. Daniel Eqhbal is Manager Future Network Strategy at Energy Queensland and Senior Adjunct Research Fellow at The University of Queensland. Daniel holds PhD in Electrical Engineering and 17 years of industry and academic experience in power system analysis, leading projects and supervising post students in Australia and overseas. Since 2012, Daniel has been working at Energex on distribution network planning with a focus on the impacts of emerging technologies on the network. In his current role, Daniel leads a team that sets the direction and priorities for Energy Queensland networks. This includes prioritising the key capabilities to operate the future grid with high penetration of Distributed Energy Resources (DER). Daniel has been heavily involved in scoping and managing number of projects with ARENA, Australian Research Council (ARC) and Queensland government.

Daniel is a Fellow Member of Engineers Australia, Senior member of IEEE and Chair of IEEE Australia Council.

2. Title: " A FULL-VIEW SYNCHRONIZED MEASUREMENT SYSTEM AND ITS APPLICATIONS IN POWER SYSTEMS"

Date : 22nd May 2020.

Number of attendees – 19 IEEE members and 20 Non-IEEE members

Summary:

With the rapid development of renewables, flexible transmissions and active loads, power systems are becoming increasingly complex due to the high penetration of power electronics. Measurement systems and methods for different scenarios and applications are needed. Consequently, a full-view synchronous measurement system (SYMS) for renewables, controls, and loads is proposed and built at North China Electric Power University. SYMS mainly includes synchronous measurement devices (SMDs) and data centre. A general design method for synchrophasor estimation of SMD in different scenarios is proposed, and different SMDs are developed. A calibration technology is studied to make sure the SMDs performs well. Then, the research on applications based on measurement data in the data centre is presented and discussed, including bad data detection and recovery, dynamic state estimation, disturbance classification and propagation.

Speaker:

Dr. Hao Liu is an associate professor at North China Electric Power University. Dr Liu got his PhD degree from the school of Electric and Electronic Engineering of North China Electric Power University and studied at the University of Tennessee at Knoxville, USA for one year. He got support from the Young Talents Enrollment Project of Chinese Society for Electrical Engineering (CSEE), is young editor of CSEE Journal of Power and Energy Systems and the member of CIGRE B5.62. His research area is wide-area synchronous measurement technologies. In this research area, he has published 45 peer-reviewed papers, granted 1 PCT patent and 7 Chinese patents. He is the PI of one NSFC project, one subproject of national major scientific equipment development project, and 10 industrial projects. He also participants one National Key R&D Program as a key researcher. He got the first prize for the technological invention of Ministry of Education, the first prize for the technical invention of China Electrical Technology Society, and a second and the third prize of provincial awards.

3. Title: " THE BUSINESS CASE FOR BEHIND-THE-METER ENERGY STORAGE - Q1 PERFORMANCE OF UQ'S 1.1MW TESLA BATTERY"

Date : 22nd May 2020.

Co-host – The University of Queensland

Number of attendees – 20 IEEE members and 50 Non-IEEE members

Summary:

The University of Queensland recently installed a 1.1MW / 2.15MWh Tesla Powerpack system - QLD's largest behind-the-meter battery. The battery is controlled autonomously by an in-house system in order to integrate the battery into UQ's overall 'Gensumer' energy strategy. Join the UQ Project team as we discuss the battery's first quarter of performance and key learnings we will be implementing going forward.

Full report is available to download through

https://bit.ly/uqbessq1re

Speaker:

Mr. Andrew Wilson heads corporate Energy & Sustainability at UQ and is Project Director of the 64 megawatt Warwick Solar Farm. He and his team are leading a world first initiative for UQ to become a 100% renewable 'Gensumer' – playing on both sides of the energy market as a large scale energy generator and large energy consumer, utilising energy storage and demand response to help deliver UQ's operational energy needs in a flexible, sustainable, and lowest cost manner.

Prof. Peta Ashworth is the Chair in Sustainable Energy Futures, Peta has responsibility for the Master of Sustainable Energy. Peta is well known for her expertise in the energy field, communication and stakeholder engagement and technology assessment. She is also tasked with the role of building energy literacy more broadly and continuing her research around public perceptions of climate and energy technologies. Peta was recently appointed as Director of the Andrew N Liveris Academy for Innovation and Leadership.

4. Title: " TOWARD A MORE RESILIENT CYBER-PHYSICAL POWER GRID WITH HIGH PENETRATION OF DERS"

Date : 29th May 2020.

Number of attendees – 20 IEEE members and 12 Non-IEEE members

Summary:

The increasing penetration of stochastic and uncertain inverter-based distributed energy resources (DERs), such as wind and solar PV, has a considerable influence on the power system dynamics, and the total inertia of the power grid is reduced significantly, causing reliability and resiliency concerns. Furthermore, the dependent of information and communication technology for smart grid development has increased the range of cyber vulnerabilities. To enable a safe cyber-physical power grid transition, tools and methods for enhanced modeling, situational awareness, uncertainty quantification and security assessment are in urgent demand. This talk will present a set of synchrophasor-based grid-eye developments for situational awareness, such as dynamic state and parameter estimation, frequency divider, cyber-attacks detection, etc., the probabilistic grid security assessment and uncertainty quantification tools to manage intermittence and risks caused by the high penetration of DERs.

Speaker:

A/Prof Junbo Zhao is currently an Assistant Professor at Mississippi State University, Starkville, MS, USA. He received the Ph.D. degree from the Department of Electrical and Computer Engineering, Virginia Tech, Blacksburg, VA, USA, in 2018. He was a Research Assistant Professor at Virginia Tech from May 2018 to August 2019. He did the summer internship at Pacific Northwest National

Laboratory from May to August 2017. He is currently the chair of IEEE Task Force on Power System Dynamic State and Parameter Estimation, the chair of Cyber-Physical Interdependency for Power System Operation and Control working group, and the Secretary of the IEEE Task Force on Synchrophasor Applications in Power System Operation and Control. His current research works are supported by NSF, DOE, PNNL, ANL and LLNL.

He has written three book chapters and published more than 70 peer-reviewed journal and conference papers. His research interests are cyber-physical power system modeling, estimation, security, dynamics and stability, uncertainty quantification, robust statistical signal processing and machine learning for smart grid. He serves as the editor of IEEE Transactions on Power Systems, IEEE Transactions on Smart Grid and IEEE Power and Engineering Letters, the Associate Editor of International Journal of Electrical Power & Energy Systems, and the subject editor of IET Generation, Transmission & Distribution. He is the receipt of best paper award of 2019 IEEE PES ISGT Asia.

5. Title: " PLANNING YOUR HOME SOLAR SYSTEM WITH A BATTERY"

Date : 11th June 2020.

Host by IEEE Northern Australia Section

Summary:

The falling cost of solar panels has resulted in more than one third of South Australian and Queensland Houses now having solar panels. The SA Government is providing a subsidy towards the cost of a Home Battery. Electricity retailers are encouraging homes with a battery to join a Virtual Power Plant (VPP) scheme, to increase their profit. Having a Home Battery can also provide backup power in case of a power failure. The big question is; "Is it economical to install a Home Battery?". The talk will compare the economics of installing Rooftop solar and / or Batteries in Qld and SA.

The talk will outline the different popular battery technologies, their round-trip efficiency, degradation over time and ways that a Home Battery can be incorporated, this includes "vehicle to home" technology where an electric car can be used as a Home Battery. Increasing rooftop solar penetration can cause grid instability and Home Batteries can be used to keep the power system stable. Data from the presenter's all electric home are used to show how the savings from a battery vary during the year. The additional requirements and limitations of having a backup power capability are discussed

Speaker:

Keith Kikkert received a BE(Hons) in 1968 and a PhD in 1972 from The University of Adelaide. For three years he was a lecturer at The University of Adelaide. For 37 years he was a lecturer at James Cook University and for seven of those he was Head of Electrical and Computer Engineering. He "retired" in 2010 and is now an Adjunct A/Prof at both The University of Adelaide and James Cook University.

He has extensive experience in SmartGrid, communication systems and RF electronics. His current research is on Phasor Measurement Units used in power system instrumentation. Keith has authored more than 100 refereed publications, 8 patents/applications, 4 book chapters and a book on RF Electronics, which is distributed by AWRCorp.

6. Title: IMPACT ON THE INCORPORATION OF RENEWABLE SOURCES OF VARIABLE GENERATION IN THE NATIONAL ELECTRIC SYSTEM IN MEXICO"

Date : 19th June 2020.

Number of attendees – 20 IEEE members and 11 Non-IEEE members

Summary:

This session will present the results of some electrical operational reliability studies to evaluate the impact of the incorporation of variable renewable generation on the National Electrical System of Mexico in terms of frequency stability. Some analyzes of the real performance of photovoltaic and wind power plants in the face of disturbances such as fault in the transmission network or load-generation imbalances will be presented. Likewise, some results of studies related to the justification of thresholds established in the Mexican Grid Code will be explained.

Speaker:

Christian Perez-is from Morelia, Michoacan, Mexico. Received the Bachelor Degree in Electrical Engineering and the MSc. Degree in Power Systems from the Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Mexico, in 2008 and 2011, respectively.

He has been in the National Energy Control Center (CENACE, for its acronym in Spanish) since 2011. From January 2011 to October 2014, he served as Real-time analyst in the Eastern Regional Control Management Area. From November 2014 to May 2017, he was an Operational Reliability Chief Engineer in the Eastern Regional Control Management Area where he had under his supervision 20 engineers. From June 2017 to present he is the Head of Special Studies Department in the Electrical Studies Unit.

7. Title: "COVID-19 IMPACTS ON POWER SYSTEM – AUSTRALIAN EXPERIENCE"

Date : 22nd June 2020.

Number of attendees – 30 IEEE members and 34 Non-IEEE members

Summary:

During this presentation Tjaart and Mike will share operational impact of COVID-19 on Australian power system. The presentation will provide useful insights into change in the demand profile across the NEM and WEM, system security and operational implications of change in demand, deferral of planned outages and system security assessment during COVID-19.

Speaker:

Tjaart Van Der Walt is currently the Group Manager Real Time Operations, with 26 years' experience in the power industry. He provides leadership and management to NEM Real Time Operations, ensuring the NEM is maintained secure and reliable in real time. Prior to that as the Manager Operational Planning, he lead the operations planning team. The team ensures the power system security and reliability of NEM are adequate over the coming two-year period. As Manager Operational forecasting he ensured that AEMO produced accurate short term, demand and wind and solar forecasts. He started with NEMMCO in 2007 as Principal engineer after leaving Eskom, South Africa as Chief Engineer, responsible for devising recovery plans for power system incidents, including blackouts and advising controller room during emergency conditions. He has a Master of Engineering Management degree and a bachelor's degree in Electrical and Electronic engineering.

Mike Davidson is the Manager of Operational Forecasting for AEMO. Operational Forecasting is responsible for the short term forecasting (5 minutes to 7 days ahead) of demand, roof-top solar PV and the out-put of every utility scale wind and solar farm in the NEM. The Operational Forecasting team is also responsible for providing situational awareness to the NEM control rooms; providing invaluable information on bushfires, storms and extreme weather events. Mike has worked in the electricity supply industry for 36 years in a number of roles in the UK and Australia.

8. Title: "ROLE OF THE SMART GRID IN FACILITATING THE INTEGRATION OF RENEWABLES"

Date : 9th July 2020.

Number of attendees – 108 IEEE members and 135 Non-IEEE members

Summary:

With the focus on environmental sustainability and energy security, power system planners are looking at renewable energy as supplements and alternatives. But such generation sources have their own challenges - primarily intermittency. It is expected that the smart grid – due to its inherent communication, sensing and control capabilities – will have the ability to manage the load, storage and generation assets (including renewables) in the power grid to enable a large-scale integration of distributed generation. In a smart grid, information about the state of the grid and its components can be exchanged quickly over long distances and complex networks. It will therefore be possible to have the integration of sustainable energy sources, such as wind, solar, off-shore electricity, etc. for smoother system operation. But in order for this to be possible, the electric utility will have to evolve, and change their ways of operation to become an intelligent provider of these services. This lecture introduces the operational characteristics of renewable energy sources, and various aspects of the smart grid - technology, standards and regulations. It also addresses the interplay among distributed generation, storage and conventional generation to provide an efficient operational strategy in the context of the smart grid.

Speaker:

Prof. Saifur Rahman is the founding director of the Advanced Research Institute (www.ari.vt.edu) at Virginia Tech, USA where he is the Joseph R. Loring professor of electrical and computer engineering. He also directs the Centre for Energy and the Global Environment (www.ceage.vt.edu). He is a Life Fellow of the IEEE and an IEEE Millennium Medal winner. He was the president of the IEEE Power and Energy Society (PES) for 2018 and 2019. He was the founding editor-in-chief of the IEEE Electrification Magazine and the IEEE Transactions on Sustainable Energy. He has published over 140 journal papers and has made over four hundred conference and invited presentations. In 2006 he served on the IEEE Board of Directors as the vice president for publications. He is a distinguished lecturer for the IEEE Power & Energy Society and has lectured on renewable energy, energy efficiency, smart grid, energy internet, blockchain, IoT sensor integration, etc. in over 30 countries. He is the founder of BEM Controls, LLC, a Virginia (USA)-based software company providing building energy management solutions. He served as the chair of the US National Science Foundation Advisory Committee for International Science and Engineering from 2010 to 2013. He has conducted several energy efficiency, blockchain and sensor integration projects for Duke Energy, Tokyo Electric Power Company, the US National Science Foundation, the US Department of Defence, the US Department of Energy and the State of Virginia.

9. Title: "IEEE 1547 DER INTERCONNECTION STANDARD-OVERVIEW" Date : 14th July 2020.

Number of attendees – 108 IEEE members and 135 Non-IEEE members

Summary:

This webinar will provide a high level overview of IEEE 1547, which will be followed by IEEE 1547-2018 Revision Overview, focusing on new requirements (General Requirements, Reactive Power (VAR) Capacity and Voltage Regulation Modes, Abnormal Condition Response, Interoperability Requirements and P1547.9 Future Guide for DER-ES Interconnection). Then Energy Storage (ES), and ES+PV Interconnection Considerations will be discussed. Final topic of the webinar will be IEEE 1547-2018 Adoption, and early movers, CA Rule 21, HA Rule 14, and UL-1741-SA.

Speaker:

Charlie Vartanian is a Sr. Technical Advisor in Storage Reliability and Integration, within PNNL's Electrochemical Materials and Systems Group. His focus is the advancement of reliability and integration of grid connected energy storage systems. Charlie has over 25 years of power industry experience deploying advanced grid technologies, performing electric system studies, and contributing to technical standards development. He has worked previously for Mitsubishi Electric, UET, DNV KEMA, A123 Systems, Enron, the California Energy Commission, and Southern California Edison. During his 15 years at Southern California Edison, Charlie's activities spanned traditional T&D planning through R&D. He is a currently Secretary of the IEEE 1547.9 Guide for DER Energy Storage Interconnection working group, and Co-Chair of the IEEE Energy Storage Task Force. Charlie received his BSEE from Cal Poly Pomona, and his MSEE from USC. Charlie is a licensed professional Electrical Engineer.

PES GM 2020 conference registration award recipients

Following are the students who has received USD 200 award towards conference registration. All these students will present their papers in the virtual conference.

Mr. Ruiyuan Zhang - On Sky Imaging Analysis and Deep Learning for Photovoltaic Output Nowcasting

Mr. Lei You - Optimal Co-Allocation Plan of Dynamic Line Rating and FACTS for Wind Integration Considering Forecast Uncertainties

Mr. Mohammad Imran - Regulated P2P Energy Trading: A Typical Australian Distribution Network Case Study

Mr. David Amoateng – A Deep Unsupervised Learning Approach to PMU Event Detection ina Active Distribution Network

Microwave Theory & Techniques - Antennas & Propagation

Committee:

Chair: Anthony Lui
Vice Chair: Hugo Espinosa
Secretary: Anthony Stancombe
Treasurer Ahmed Toaha Mobashsher

Over the years, the chapter has a strong tradition of holding numerous technical seminars from world leading researchers as well as IEEE Distinguished Lecturers (DLs) from the MTT and AP societies. Last year, we have hosted 11 technical events. These events received considerable amount of interest from both members and non-members.

Under the unforeseeable impact of COVID-19, networking and social gatherings have to be postponed. Inviting guests from other parts of the world coming to Brisbane physically to deliver talks and lectures becomes extremely challenging. IEEE Queensland has been working on moving our events online through webinars over the last few months. With the approval from AP-S, we are glad to tell you that we are expecting to host a number of webinars from our DL speakers, with topics ranging from electromagnetic education, radio astronomy, reflectarrays and computational electromagnetics. Details of these activities will be available on vtools once it is confirmed.

The chapter would like to take this opportunity to thank you for your continuous support over the years. Stay safe and we look forward to seeing you all in the upcoming events.

Blockchain & Internet of Things Special Interest group

Committee:
Chair: Matthew Hutchins
Vice Chair: Alexandra Posoldova
Secretary: Ali Dorri

The Blockchain & IoT special interest group has two continuing volunteers, Matthew and Alexandra and we are excited to have Ali on board to extend our reach in supporting and growing the group within IEEE QLD section and the greater technical community.

At the Blockchain & IoT special interest group we are interested in exploring emerging technologies and the impact they can have on our everyday lives. The here and now application of emerging technology, how it can help lives and drive positive change is a true passion for our members.

Last year, we received funding from R10 and organised 2 successful events debating emerging technologies in Blockchain, IoT and AI space. With some funding left, we intend to organise AI focused panel discussion that will examine opportunities as well as pitfalls in this high interest area. However, due to requirements to socially isolate, we postponed this event until further notice.

During the Covid 19 lockdown we successfully ran the event "How are industries responding to Covid-19 changing landscape? A Blockchain, Sustainability & Innovation session". We received 31 registrations and 13 attendees on the day, entertaining an informative deep dive with Queensland's Chief Entrepreneur Leanne Kemp who provided a window into the future and valuable perspective across a wide array of talking points.

Connect with us on facebook fb.me/IEEEQLDBlockchainIoT
Remember that to join the new Blockchain & IoT group is free of charge.