



USYD – Yonsei Virtual Research Roundtable on “Power Engineering”

Biography of Chairs and Participants

The University of Sydney

	<p><u>Professor Jian Guo (Joe) Zhu</u> Head of School, School of Electrical and Information Engineering, Faculty of Engineering</p> <p>Prof. J.G. Zhu received his BE in 1982 from Jiangsu Institute of Technology, ME in 1987 from Shanghai University of Technology, China, and PhD in 1995 from University of Technology, Sydney (UTS), Australia, all in electrical engineering. From 1982 to 1990, he was employed by Jiangsu Institute of Technology, China, as an associate lecturer and later on lecturer. In 1994, he was appointed a lecturer in School of Electrical Engineering at UTS. He was promoted to full professor of electrical engineering in 2004. Professor Zhu joined the University of Sydney in 2018.</p> <p><u>Research areas and interest</u> computational electromagnetics, measurement and modeling of magnetic properties of materials, electrical machines and drives, power electronics, renewable energy systems, and smart micro grids</p>
	<p><u>Associate Professor Gregor Verbic</u> Director, Centre for Future Energy Networks, School of Electrical and Information Engineering, Faculty of Engineering</p> <p>Gregor Verbic is an Associate Professor in the Centre for Future Energy Networks based in the School of Electrical and Information Engineering. Prior to this, he was an assistant professor in Laboratory of Power Systems at University of Ljubljana, where he is now an adjunct professor and where he received his PhD in electrical engineering. In 2005, he was a NATO-NSERC Postdoctoral Fellow at the University of Waterloo, Canada under supervision of Prof Claudio Cañizares. Between 2008 and 2010 he was head of the investment department in Interenergo, Ljubljana, Slovenia. The company invests in renewable energy in the Balkans region, with a particular focus on small hydro.</p> <p><u>Research areas and interest</u> power systems, sustainable energy systems and smart grids and include the following specific areas:</p> <ul style="list-style-type: none"> - Grid integration of renewable energies into power systems and markets - Optimisation and control of distributed energy resources - Demand response - Energy management in residential buildings

	<p><u>Associate Professor Ma Jin</u> School of Electrical and Information Engineering, Faculty of Engineering</p> <p>Jin Ma received the B.S. and M.S. degrees in electrical engineering from Zhejiang University, Hangzhou, China, in 1997 and 2000, respectively, and the Ph.D. degree in electrical engineering from Tsinghua University, Beijing, China, in 2004. He had been a Faculty Member with North China Electric Power University, China, from 2004 to 2013. He is currently an Associate Professor (Level D) with the School of Electrical and Information Engineering, University of Sydney, Australia.</p> <p><u>Research areas and interest</u> power system modeling, dynamic power system, power system economics, energy informatics, and data analytics on smart grid operation</p>
	<p><u>Associate Professor Weidong Xiao</u> School of Electrical and Information Engineering, Faculty of Engineering</p> <p>Weidong Xiao (received the master's and Ph.D. degrees in electrical engineering from the University of British Columbia, Vancouver, Canada, in 2003 and 2007, respectively. From 2010 to 2016, he has been working with the Masdar Institute of Science and Technology, United Arab Emirates. In 2010, he was a Visiting Scholar with the Massachusetts Institute of Technology (MIT), Cambridge, USA, where he worked on the power interfaces for PV power systems. Before the academic career, he worked as a R&D engineering manager with MSR Innovations Inc., Canada, focusing on integration, research, optimization, and design of photovoltaic power systems.</p> <p><u>Research areas and interest</u> modelling, design, simulation and control of power electronics, with a particular focus on photovoltaic power systems, DC microgrids, DC distribution systems and emerging industries</p>
	<p><u>Dr Jeremy Qiu</u> Senior Lecturer, School of Electrical and Information Engineering, Faculty of Engineering</p> <p>Dr Qiu joined the University of Sydney in November 2017, he is currently a Senior Lecturer in Electrical Engineering. Dr Qiu obtained his B.Eng. degree from Shandong University, China, M.Sc. degree in Environmental Policy and Management from The University of Manchester, UK, and PhD in Electrical Engineering from The University of Newcastle, Australia, in 2008, 2010 and 2014 respectively. After submitting his PhD thesis, Dr Qiu worked as a full-time Research Associate between June 2014 and May 2016 at the Centre for Intelligent Electricity Networks (CIEN), The University of Newcastle. Afterwards, Dr Qiu was appointed as an Energy Economics Scientist at the Commonwealth Scientific and Industrial Research Organization (CSIRO) between May 2016 and November 2017. Whilst at CSIRO, Dr Qiu was a project leader for several research initiatives, mainly in charge of modelling electricity, natural gas and transportation systems.</p> <p><u>Research areas and interest</u> Energy planning, electricity markets, climate change policy, energy economics</p>



Dr Sinan Li

Lecturer, ARC DECRA Fellow, School of Electrical and Information Engineering, Faculty of Engineering

Dr. Li received the Ph.D. degree in electrical and electronic engineering from The University of Hong Kong, HK, in 2014. He has been with The University of Hong Kong and The University of Bath, U.K., as a Post-Doctoral Research Fellow and an Assistant Professor, respectively, in 2014-2019. He joined The University of Sydney in late 2019. He is the recipient of the 2021 Australian Research Council (ARC) Discovery Early Career Researcher Award (DECRA), the 2019 Best Paper Award (Second Place) of the IEEE TRANSACTIONS ON POWER ELECTRONICS, and two world-renowned invention awards, including the prestigious Gold Medal with Special Recognition by the International Jury of Experts in The INTERNATIONAL EXHIBITION OF INVENTIONS OF GENEVA, 2018. He is an inventor/co-inventor of 5 worldwide patents; 3 of these technologies have been commercialised. He serves as a Guest Associate Editor for IEEE JOURNAL OF EMERGING AND SELECTED TOPICS OF CIRCUITS AND SYSTEMS and several other journals. He was a Founding Member of the IEEE-Eta Kappa Nu (HKN) at The University of Hong Kong. His research interests include all areas of power electronics.

Research areas and interest

consumer electronics, renewable energies, sustainable lighting, and wireless power transfer

Yonsei University



Professor Seong-Lyun Kim

Head, School of Electrical & Electronic Engineering, Yonsei University

Seong-Lyun Kim is a Professor and Head of the School of Electrical & Electronic Engineering, Yonsei University, Seoul, Korea, heading the Robotic & Mobile Networks Laboratory (RAMO) and the Center for Flexible Radio (CFR+). He is co-directing H2020 EUK PriMO-5G project, and leading Smart Factory Committee of 5G Forum, Korea. He was an Assistant Professor of Radio Communication Systems at the Department of Signals, Sensors & Systems, Royal Institute of Technology (KTH), Stockholm, Sweden. He was a Visiting Professor at the Control Engineering Group, Helsinki University of Technology (now Aalto), Finland, the KTH Center for Wireless Systems, and the Graduate School of Informatics, Kyoto University, Japan. He served as a technical committee member or a chair for various conferences, and an editorial board member of IEEE Transactions on Vehicular Technology, IEEE Communications Letters, Elsevier Control Engineering Practice, Elsevier ICT Express, and Journal of Communications and Network. He served as the leading guest editor of IEEE Wireless Communications and IEEE Network for wireless communications in networked robotics, and IEEE Journal on Selected Areas in Communications. He also consulted various companies in the area of wireless systems both in Korea and abroad. His research interest includes radio resource management, information theory in wireless networks, collective intelligence, and robotic networks. He published numerous papers, including the co-authored book (with Prof. Jens Zander), Radio Resource Management for Wireless Networks. His degrees include BS in economics (Seoul National University), and MS & PhD in operations research (with application to wireless networks, Korea Advanced Institute of Science & Technology).



Professor Jung-Wook Park

**Director, Yonsei-Power system research center for great energy transition (Yonsei-PREFER)
School of Electrical & Electronic Engineering**

Prof. Jung-Wook Park received the B.S. degree (summa cum laude) from the Department of Electrical Engineering, Yonsei University, Seoul, Korea, in 1999, and the M.S.E.C.E. and Ph.D. degrees from the School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, USA in 2000 and 2003, respectively. He was a post-doctoral research associate under supervision of Prof. Ian A. Hiskens in the Department of Electrical and Computer Engineering, University of Wisconsin, Madison, USA during 2003–2004. Since 2005, he has been with the School of Electrical and Electronic Engineering, Yonsei University, Seoul, Korea, where he is currently a professor. Prof. Park was the recipient of Young Scientist Presidential Award in 2013 from the Korean Academy of Science and Technology (KAST), Korea. He is also director of Yonsei-Power system research center for great energy transition (Yonsei-PREFER) supported by the leading research program (with the \$7.2M USD grant for 9 years from 2020 to 2029) of National Research Foundation (NRF), Korea.

Research areas and interest

Power system dynamics, grid integration of renewable energies into power systems, optimization, and hardware implementation of power-electronic based inverters, etc.



Professor Kyeon Hur

**Director, Human Resource Development Program for AC-DC Hybrid Power System, Korea Energy Technology Evaluation and Planning (KETEP)
School of Electrical & Electronic Engineering**

Kyeon Hur received the B.S. and M.S. degrees in electrical engineering from Yonsei University, Seoul, South Korea, in 1996 and 1998, respectively, and the Ph.D. degree in electrical and computer engineering from the University of Texas at Austin, Austin, TX, USA, in 2007. He was a R&D Engineer with Samsung Electronics, Suwon, South Korea, from 1998 to 2003, where he developed AC drives for various industry applications. His industrial experience includes grid operations studies using EMS/MMS applications such as SE, CA, DSA and SCED at the Electric Reliability Council of Texas (ERCOT), Taylor, TX, USA, from 2007 to 2008. He was also with the Electric Power Research Institute (EPRI), Palo Alto, CA, USA, and conducted and managed research projects including reactive power management, FACTS/HVDC, PMU-based monitoring and analysis in grid operations and planning program from 2008 to 2010. He rejoined Yonsei University in 2010 and since then, has led a Smart-Grid Research Group.

Research areas and interest

Advanced modelling, analysis and control of inverter-based resources and dynamic load, HVDC/MVDC/FACTS, Machine learning applications for smart power grid, grid planning and operations



Professor Yong June Shin

**Associate Dean for Academic Affairs, Yonsei University
School of Electrical & Electronic Engineering**

Yong-June Shin received the B.S. degree in electrical engineering from Yonsei University, Seoul, South Korea, in 1996, the M.S. degree in electrical engineering and computer science from the University of Michigan, Ann Arbor, MI, USA, in 1997, and the Ph.D. degree in electrical and computer engineering from the University of Texas at Austin, TX, USA, in 2004. He joined the Department of Electrical Engineering, University of South Carolina, Columbia, SC, USA, as an Assistant Professor in 2004 and he was promoted to an Associate Professor with tenure in 2011.

He joined the School of Electrical and Electronic Engineering, Yonsei University in 2012 and promoted to a Professor in 2017. He has served university leadership administration: Vice-President of the University-Industry Research Foundation (2018 ~ 2020) and Associate Dean for Academic Affairs (2020 ~ Present). He was the recipient of the United States National Science Foundation CAREER award in 2008 and Research & Development Recognition Award by Korea Electric Power Corporation in 2016.

Research areas and interest

PMU based monitoring of power grids, big data analysis & AI applications in smart grid, cable diagnostics and prognostics, condition-based maintenance of electric power cable and energy storage systems



Professor Jang-Won Lee

School of Electrical & Electronic Engineering

Jang-Won Lee received the B.S. degree in electronic engineering from Yonsei University, Seoul, South Korea, in 1994, the M.S. degree in electrical engineering from Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea, in 1996, and the Ph.D. degree in electrical and computer engineering from Purdue University, West Lafayette, IN, USA, in 2004. He is a Professor with the School of Electrical and Electronic Engineering, Yonsei University. From 2004 to 2005, he was a Postdoctoral Research Associate with the Department of Electrical Engineering, Princeton University, Princeton, NJ, USA. Since September 2005, he has been with the School of Electrical and Electronic Engineering, Yonsei University. His research interests include communication networks, smart grid, and machine learning for systems. He is an Editor of IEEE/ACM Transactions on Networking, Journal of Communications and Networks, and ICT Express.

Research areas and interest

Communication networks, Smart grid (demand response, pricing), Machine learning for systems



Assistant Professor Jae Woong Shim

Assistant Professor, Department of Electrical Engineering, Sangmyung University

Jae Woong Shim received a Ph.D. in electrical engineering jointly from Yonsei University, Seoul, Korea, and the University of Sydney, Sydney, NSW, Australia, in 2016. He was a Senior Researcher at HVDC Research Center, LS Electric from 2016 to 2017. He had been a Faculty Member with Department of Energy Engineering, Inje University, South Korea from 2017 to 2021. Since 2021, He has been with the Department of Electrical Engineering, Sangmyung University, Seoul, South Korea, where he is currently leading Power System Control & Stability Lab.

Research areas and interest

Power system dynamics and control, HVDC/FACTS/ESS operation and control, wide-area control with renewable energy sources, power system stability issues with power electronics devices.



Professor Yong-Sun Bahn

Vice President of University-Industry Foundation, Vice President of Yonsei University Technology Holdings

Biographical details

B.S. Yonsei University, 1995

M.S. Yonsei University, 1997

Ph.D. The Ohio State University, 1997-2003

Postdoctoral fellow, Duke University, 2003-2006

Full-time lecturer, Soongsil University, 2006-2008

Professor, Yonsei University (2008 to present)

Fellow, American Academy of Microbiology (2019 to present)

Research interests

Fungal genetics and pathogenesis

Medical mycology

Antifungal drug development

Host-Microbiome interaction