

PROFILE OF EXPERTS ADDRESSING PEREA 2020

At Government College of Engineering Kannur

27th November 2020, 9 AM to 10 AM, IST

Topic: Power Electronics for More Electric and Hybrid Electric Aircrafts

Dr. Kaushik Rajashekara



Distinguished Professor of Engineering, ECE Department at University of Houston, United States.

Dr. Rajashekara joined University of Houston as a Distinguished Professor in Electrical & Computer Engineering Department in September 2016. Prior to this, he was at the University of Texas at Dallas as a Distinguished Professor of Engineering.

From 2006-2012, he was a Chief Technologist in Rolls-Royce Corporation, Indianapolis working on More Electric/Hybrid Electric Aircraft architectures, VTOL vehicles, and power conversion/control technologies. From 1989-2006, he held various lead technical and managerial positions in Delphi and General Motors, and managed a team that was responsible for developing electric machines, controllers, and power electronics systems for electric, hybrid, and fuel cell vehicles. He was a Chief Scientist for Advanced Propulsion and Drive systems. He has published nearly 200 papers and has over 40 patents. He has given more than 150 invited presentations in international conferences and universities on electric, hybrid, fuel cell vehicles; More Electric and Hybrid Electric Aircrafts, VTOL vehicles and flying cars.

Dr. Rajashekara was elected as a Member of the U.S. National Academy of Engineering (2012), and as a Fellow of the US National Academy of Inventors (2015). He is a recipient of the IEEE Richard Harold Kaufmann award (2013); IEEE IAS Outstanding Achievement Award(2009), IEEE IAS Gerald Kliman award (2006), and IEEE PELS Vehicle and Transportation Systems Achievement Award (2019), for contributions to the advancement of power conversion and propulsion systems for electrification of land and air transportation. He is a Fellow of IEEE (1999) and a Fellow of SAE (2006). He was inducted into the Delphi Innovation Hall of Fame in 1999.

Specialties: Propulsion systems for electric and hybrid vehicles; Power electronics and variable speed motor drives; Renewable Energy based power generation Systems; Electric and Hybrid Aircraft; Flying cars

27th November 2020 10 AM to 11AM, IST

Topic: Wireless V2G-G2V Technologies

Dr. Udaya Kumara Madawala



Udaya K. Madawala graduated with a B.Sc. (Electrical Engineering) (Hons) degree from The University of Moratuwa, Sri Lanka in 1987, and received his PhD (Power Electronics) from The University of Auckland, New Zealand in 1993 as a Commonwealth Doctoral Scholar. At the completion of his PhD, he was employed by Fisher & Paykel Ltd, New Zealand, as a Research and Development Engineer to develop new technologies for motor drives. In 1997 he joined the Department of Electrical and Computer Engineering at The University of Auckland and, at present as a Full Professor, he focuses on a number of power electronics projects related to bi-directional wireless EV charging systems for V2G-G2V applications. Udaya is a Fellow of the IEEE and a Distinguished Lecturer of the IEEE Power Electronic Society (PELS), and has over 30 years of both industry and research experience in the fields of power electronics and energy. He has served both the IEEE Power Electronics and Industrial Electronics Societies in numerous roles, relating to editorial, conference, technical committee and chapter activities. Currently, Udaya is an Associate Editor for IEEE Transactions on Power Electronics, and a member of both the Administrative Committee and Membership Development Committee of the IEEE Power Electronics Society. He was the General Chair of the 2nd IEEE Southern Power Electronics Conference (SPEC)- 2016, held in New Zealand, and is also the Chair of SPEC Steering Committee. Udaya, who has over 300 IEEE and IET journal and conference publications, holds a number of patents related to wireless power transfer (WPT) and power converters, and is a consultant to industry.

28th November 2020, 9.00 AM to 10 AM, IST

Topic: Opportunity and challenges in DC grid application fields: An industrial point of view

Dr. Gopal Mondal



Gopal Mondal received his doctor degree in Power electronics from Indian Institute of Science Bangalore, India in 2008. He joined Nottingham university as postdoctoral researcher. In 2010 He joined Areva T&D (Alstom Grid) Stafford, UK as Research Technologist. During this time, he worked very closely with the business unit on new topologies of Modular Multilevel converters for HVDC. In 2012 he joined Siemens corporate Technology and moved to Germany. Currently he is Senior Key Expert in Siemens corporate Technology Erlangen working on.

OUR HONORABLE SESSION CHAIRS

27th November 2020, 1.30 p.m. to 3.15 p.m.

Track ID: 1.1 Power Converters 1

Dr. Rijil Ramchand

National Institute of Technology Calicut.



Dr. Rijil Ramchand received his B.Tech. degree in Electrical and Electronics Engineering from Calicut University, Calicut, India, in 1996. He pursued his M.E. and Ph.D. degrees from the Indian Institute of Science, Bangalore, India, in 2003 and 2010, respectively. He is presently working as a Professor in the Department of Electrical Engineering, National Institute of Technology Calicut, Calicut, India. His current research interests include power converters, pulse width modulation techniques, multilevel inverters, and current controlled ac drives.

27th November 2020, 3.15 p.m. to 5.00 p.m.

Track ID: 1.2 Power Converters 2

Dr. Biju K.

College of Engineering Munnar, Idukki



Dr. K. Biju is working as Head of the Department of Electrical & Electronics Engineering in College of Engineering Munnar. He has got more than 18 years of teaching experience in various Engineering colleges across Kerala. He took B.Tech from Rajiv Gandhi Institute of Technology (RIT) Kottayam, Kerala, in 1999, M.Tech in Power Electronics from National Institute of Technology, Calicut, Kerala in 2009, and Ph.D. from National Institute of Technology, Calicut, Kerala in 2020.

He is a senior member of IEEE and life member of Institution of Engineers India (IEI). He is the Vice-Chair of IEEE IA/IE/PELS Jt. Chapter Kerala. He is also a member of Conference Activity Board of IEEE Kerala section. He has served as technical programme committee member in many IEEE International conferences. He has chaired technical sessions in various international conferences. He has been a regular reviewer of many peer-reviewed journals such as IEEE Transactions on Industry Applications, IEEE Systems Journal, IEEE Access, Journal of Electrical Engineering by Springer, International transactions on Electrical Energy Systems by Wiley, International Journal of Electronics by Taylor & Francis etc. He is a

regular reviewer of many reputed IEEE international conferences. He has won several awards in IEEE.

Dr.Biju has delivered various technical talks in different engineering colleges across the state. He has guided a number of projects for UG& PG students. He has published a number of papers in various international journals and conferences. His research interests include multilevel converter topologies, PWM techniques for multilevel inverters, modelling and control techniques for multilevel inverters, etc.

28th November 2020, 10.00 a.m. to 11.45 a.m.

Track ID: 1.3 Renewable Energy

Dr. Kumaravel S.

National Institute of Technology, Calicut



Dr. Kumaravel Sundaramoorthy was born in Thanjavur, India. He received the B.E. degree in electrical and electronics engineering from Bharathidasan University, Tiruchirappalli, India, in 2002, the M.Tech. degree in power systems from the National Institute of Technology Tiruchirappalli, Tiruchirappalli, in 2007, and the Ph.D. degree in electrical engineering from the National Institute of Technology Calicut, Calicut, India, in 2012.,He has completed the Postdoctoral Fellowship in Power Systems from University College Dublin, Ireland. Since 2008, he has been with the Department of Electrical Engineering, National Institute of Technology Calicut. Dr. Kumaravel Sundaramoorthy was recipient of awards such as YRF, DeitY, Govt. of India, YSA of Kerala State Council for Science, Technology and Environment, Govt. of Kerala.

28th November 2020, 1.00 p.m. to 2.45 p.m.

Track ID: 1.4 Electric drives

Dr. Kalpana R.

National Institute of Technology Karnataka.



Dr. Kalpana R. received the bachelor's degree in electrical and electronics engineering from Madras University, Chennai, India, in 1998, the master's degree in power systems from Anna University, Chennai, India, in 2000, and the Ph.D. degree in electrical engineering from the Indian Institute of Technology Delhi, New Delhi, India, in 2012. She is currently an Assistant Professor with the Department of Electrical and Electronics Engineering, National Institute of Technology Karnataka, Surathkal, Mangalore, India. Her research interests include power conditioning, photovoltaic grid interface systems, and application of power electronics to power systems.

28th November 2020, 2.45 p.m. to 4.30 p.m.

Track ID: 1.5 Electric Vehicle

Dr. Ritesh Kumar Keshri

National Institute of Technology Nagpur



Dr. Ritesh Kumar Keshri received B.Sc (Engg.) and M.Tech from National Institute of Technology, Jamshedpur, India, in 2003 and 2007 respectively both in electrical engineering and PhD from Department of Industrial Engineering (DII) University of Padova (UniPD), Italy in March 2014. Since 2006 he is with Department of Electrical and Electronic Engineering, BIT Mesra, India as an Assistant Professor. Mr. Keshri received silver medal for being first in M. Tech (electrical) in 2007, Young researcher fellowship from Ministry of University of Italy in 2008, Erasmus Mundus Fellowship for 34 months, from European Union in 2010, and won first prize as a student team leader of the University of Padova in class-3 of Formula Electric and Hybrid in 2011. His research interests include power electronics and electric drives for electric vehicle propulsion.

27th November 2020, 1.30 p.m. to 3.15 p.m.

Track ID: 2.1 Power System

Dr. Umashankar Subramaniam

Prince Sultan University



Dr. Umashankar Subramaniam is with Renewable Energy Lab., College of Engineering, Prince Sultan University, Riyadh, Saudi Arabia. He has more than 15 years of teaching, research, and industrial R&D experience. He has worked as an Associate Professor and Head, VIT Vellore, as well as Senior R&D and Senior Application Engineer in the field of power electronics, renewable energy, and electrical drives. He has authored and coauthored more than 250 research papers in national and international journals and conferences. He has also authored/coauthored/contributed 12 books/chapters and 12 technical articles on power electronics applications in

renewable energy and allied areas. He is 719 also involved in collaborative research projects with various international and 720 national level organizations and research institutions. Dr. Subramaniam is a member of the IACSIT, IDES, and ISTE. He has taken charge as Vice-Chair—IEEE Madras Section and Chair—IEEE Student Activities from 2018 to 2019. He was an Executive Member from 2014 to 2016 and Vice-Chair of the IEEE MAS Young Professional from 2017 to 2019 under IEEE Madras Section. He is an Editor of Heliyon, an Elsevier journal. He was the recipient of Danfoss Innovator Award-Mentor during 2014–2015 and 2017–2018, and Research Award from VIT University during 2013–2018. He also received the INAE Summer Research Fellowship for the year 2014.

27th November 2020, 3.15 p.m. to 5.00 p.m.

Track ID: 2.2 Power Quality

Dr. R. M. Shereef

College of Engineering Trivandrum



Dr. R. M. Shereef is working as professor, Electrical Department, College of Engineering Thiruvananthapuram. He has got more than 18 years of teaching experience in various Government Engineering colleges across Kerala. He took B.Tech from T.K. M. College of Engineering, University of Kerala in 1996, M.Tech from Indian Institute of Science, Bangalore in 2006, and PhD from Indian Institute of Technology, Mumbai in 2015. He published papers in various reputed Journals and International conferences. His area of interest includes Power system operation and control, Issues related to Renewable energy integration into the grid and Protection and control of Micro Grid

related to Renewable energy integration into the grid and Protection and control of Micro Grid

28th November 2020, 10.00 a.m. to 11.45 a.m.

Track ID: 2.3 Electronics Engineering

Dr. A. R. Jayan



Dr. A.R. Jayan is working as Professor, ECE Dept., Government Engineering College Palakkad. He has got more than 20 years of teaching experience in various Government Engineering colleges across Kerala. He took B.Tech from University of Calicut, M.Tech in Digital Electronics from Cochin University of Science and Technology, and Ph.D. from IIT Bombay. He has one US patent in his name. He has written one book and several papers in reputed journals and international conferences.

Dr. Sandhya Dubey

Manipal Institute of Technology, Karnataka



Dr. Sandhya Dubey received the Ph.D. degree in applications of High-Performance Computing for Proteomics from the Manipal Academy of Higher Educations, Manipal, India, in 2018.

Currently, she is an Assistant Professor with the Department of Computer Applications at the Manipal Institute of Technology, Manipal, Karnataka, India. Her research interest lies in Bioinformatics, Cloud Computing, High Performance Computing, and Machine Learning.

She has published in 5 Scopus indexed international journals and 4 conferences. She has received the best paper award in ICASET-2017.