



US-INDIA COLLABORATIVE FOR SMART DISTRIBUTION SYSTEMS WITH STORAGE

Evolving Future Energy Distribution Grids

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Dr Chaitali Bhattacharya is a Principal Science Officer at Indo-US Science & Technology Forum (IUSSTF). Her role involves conceptualising, designing and administrating programs in the priority areas of Science, Technology, Innovation, Capacity building and Entrepreneurial. With a Master's Degree in Botany from Delhi University and Doctorate study on the role of fungal bio agents for the managements of disease complex. She has done her Post Doctorate in Plant signalling molecule: Strigolactone, from ARO, Volcani Centre, Israel. Her Professional Experience of over 17 years includes Research & Development in organisations like Indian Institute of Horticultural Research (IIHR), Bangalore, International Panaacea Ltd (IPL), New Delhi and The Energy Research Institute (TERI), New Delhi. This was followed by working as a Scientist at the Technology Development Board, GOI, with role of designing and implementing programs to help in development and commercial application of indigenous technology,



Dr. Nandini Kannan spent over 20 years in academia, first as a faculty member and then as Chair, Department of Management Science and Statistics at the University of Texas at San Antonio (UTSA). Since 2014, Dr. Kannan has served as a Program Director at the US National Science Foundation (NSF). She serves on the Board of Trustees of the International Indian Statistical Association (IISA) and is a former President of IISA. She brings leadership experience in academia and government, an understanding of the critical role that science and technology play in this global inter-connected society, and a deep commitment to education and workforce development. Dr. Kannan received her B. Sc. in Statistics from Presidency College, Chennai and an M. Sc. degree in Statistics from the University of Madras before joining the Indian Statistical Institute as a Junior Research Fellow. She received an M.S. in Mathematics from the University of Pittsburgh, and a Ph.D. in Statistics from The Pennsylvania State University. She is a Fellow of the American Statistical Association and an Elected Member of the International Statistical Institute.



Merrill Smith: Senior Advisor Advanced Grid Research and Development Office of Electricity U.S. Department of Energy. Merrill Smith has been managing various R&D activities in the Advanced Grid R&D Division of the Office of Electricity since 2006. Currently she is working on projects to advance grid resilience including managing the UI-ASSIST program. She has managed a range of projects and technologies including smart grid demonstrations, microgrids, distributed energy generation and combined heat and power, low emissions combustion technologies, advanced materials (ceramic composites), and various industrial energy efficiency technologies. Prior to DOE she worked as a civil design engineer and construction manager. Merrill is a civil engineer from Virginia Tech and George Washington University.



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Elena Thomas-Kerr is a Senior Advisor in the U.S. Department of Energy's (DOE) International Affairs Office where she is responsible for advancing DOE's bilateral engagement with India and coordinating broader U.S. interagency engagement under the U.S.-India Strategic Clean Energy Partnership (SCEP) aimed at advancing energy security and innovation to toward achieving common climate and clean energy goals.

Advisory Board Members



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the intergenerational common-pool resource game. Games 11(1); Bruderer Enzler, H., Diekmann, A., Liebe, U. 2019. Environmental Concern and Future Orientation as Determinants of Household Electricity Use. Journal of Environmental Psychology 62: 22-29; Bruderer Enzler, H., Diekmann, A. 2019. All Talk and No Action? Environmental Impact and Pro-Environmental Behavior: Correlations to Income and Environmental Concern, Energy Research and Social Science 51: 12-19. Diekmann, A.,Przepiorka, W., 2015. Punitive preferences, monetary incentives and tacit coordination in the punishment of defectors promote cooperation in humans. Scientific Reports (Nature Publishing Group). E-Mail: diekmann@soz.gess.ethz.ch



Arun Kumar Mishra, holds charge of Director, Project Management Unit (NPMU) of National Smart Grid Mission (NSGM) under Ministry of Power Government of India. The National Smart Grid Mission aims to accelerate Smart Grid deployment in India. NSGM is single point of contact to plan and monitor implementation of the policies and programs related to Smart Grid in India. Since March 2018 he is also acting as Vice Chair of ISGAN's (International Smart Grid Action Network) Executive Committee. A graduate in Electrical Engineering (REC/NIT Kurukshetra-1985), Mr. Mishra holds Post Graduate Diploma in Human Resources Management (IGNOU-1996). He has more than 34 years' experience with major focus on Selection of Information and Communication Technology (ICT) solutions in utilities for operational effectiveness and business transformation of power systems including planning, design and implementation and funding. He is a distinguished member of the CIGRE. He is member of India-National System Committee on Information Systems and Telecommunications (CIGRE D-2) and the BIS (Indian National Standards setting body) Sectional Committee of Power System Control and Associated Communications LITD-10



Ramamoorthy Mylavaeapu: Former Professor IIT Kanour Chief of Research ABB India Retd. Director-General CPRI Chancellor KL University Chairman PMC of DST I have authored 5 books and while working as R&D Advisor to Crompton Greeves Ltd. I took several Patents.Guided 25 Ph.D students while at IIT Kanpur, ABB Inidia ,CPRI ,ERDA and KLUniversity I did my BE at Andhra University Kakinada in 1957 ,Masrers at Indian Institute of Science Bangalorein 1959 ,MAsc and Ph.d at University of Toronto Canada.



Alex Papalexopoulos, an authority in energy market design and implementation, received the Electrical and Engineering Diploma from the National Technical University of Athens, Greece and the M.S. and Ph.D. degrees in Electrical Engineering from the Georgia Institute of Technology, Atlanta Georgia. He is President, CEO and Founder of ECCO International, a specialized Energy Consulting Company which provides consulting and software services on electricity market design and implementation, market and system operations and energy market analysis, within and outside the U.S. to a wide range of clients such as

Regulators, Governments, Utilities, Generators and ISOs/TSOs. He is also President, CEO and Chairman of the Board of ZOME Energy Networks, a cloud-based, IoT/DER communicating platform which deploys distributed stochastic control to aggregate, optimize and control DERs Behind the Meter, create VPPs and offer DR capacity in wholesale and retail markets to solve grid problems. He has designed organized energy markets in about 15 countries in North and South America, Europe and Asia. Prior to forming ECCO International he was a Director of the Electric Industry Restructuring Group at the Pacific Gas and Electric Company in San Francisco, California. He has published more than 150 scientific papers in IEEE and other Journals. Dr. Alex Papalexopoulos is a Fellow of IEEE, the 1992 recipient of PGE's Wall of Fame Award, the 1996 recipient of IEEE's PES Prize Paper Award. In 2016 he was bestowed the award of the honorary Professor at the University of Patras, Greece.



S.K. Soonee: Presently Advisor POSOCO ,Former and Founder Chief Executive Officer ,Power System Operation Corporation Ltd. Soonee has first hand four decades of experience of Power System Operation of various Regional Grids of India and has worked extensively towards Integration of Grids leading to the formation of the National Grid and now SAARC Grid. He specializes in Power System Operation, Planning, Commercial, Settlement, Restoration and entire gamut of Power Pooling and Governance. Other areas of interest include Electricity Markets, Open Access, Regulatory affairs besides expertise in Load Despatch Technology, integration of Renewable Energy including REC Mechanism, Transmission Pricing and development of Ancillary Services. S K Soonee is a Life Fellow of Institution of Engineers (India) , Fellow of IEEE, Distinguished Alumnus IIT Kharagpur, Distinguished Member CIGRE , Fellow INAE , International Member NAE , USA . He has represented India on the CIGRE Study Committee C2 on Power System Operation and the CIGRE Study Committee C5 on Electricity Markets and Regulation.



Ashok Tripathy: Former DG CPRI Former Director Research Silicon Inst Bhubaneswar Former Chief (T &D) BHEL Former Chief Technical advisor PRDC Present Board member TPSODL Present member State Advisory council OERC Distinguished visiting Professor INAE/AICTE Fellow Indian National Academy of Engineering Fellow Institution of Engineers Inndia Senior Member IEEE since 2001 For IEEE Bangalore section Chair Former Chair IEEE PES India Council FormerChair IEEE Bhubaneswar Subsection Present Chair PES IEEE Bhubaneswar Present member Review committee DST for UI-ASSIST project Present steering committee member NAMPET ministry of IT PM Ahluwalia award by CPRI in 2005 ial EnggrVisvesvaraya award by Engineers forum Odisha 2016 SP Hatte Gold medal for IIIE in Industrial Engg BHEL Anusandhan award in 2005

Project Leads



Santanu K. Mishra (S'00-M'04-SM'12) received a B.Tech. degree in Electrical Engineering from the College of Engineering and Technology, Bhubaneswar, India, in 1998, an M.Tech. degree in Energy Systems Engineering from Indian Institute of Technology, Chennai, India, in 2000, and the Ph.D. degree from the Department of Electrical and Computer Engineering, University of Florida, Gainesville, FL, USA, in 2006. He worked as a senior application engineer with the International Rectifier Corporation in Rhode Island, USA, from 2004 to 2008. Currently, he is the MoSDE Chair Professor at the Indian Institute of Technology, Kanpur, India. During Fall of 2017, he was a Visiting Professor with Center for Power Electronics Systems (CPES), Virginia Tech., Blacksburg, VA, USA. His research interests include power converter design, implementation, control, and applications in rural scenario. He serves as an associate editor of several journals including IEEE Transactions on Industry Applications, IEEE Transactions on Power Electronics, IEEE Consumer Electronics Magazine, and IET Power Electronics.



Dr. Noel N. Schulz is the Edmund O. Schweitzer III Chair in Power Apparatus and Systems at Washington State University. She has been a Chief Scientist at the Pacific Northwest National Laboratory (PNNL) since February 2020, serving in joint appointment as part of the PNNL/WSU Advanced Grid Institute (AGI). In July 2021, she became Co-Director of AGI. Dr. Schulz has been active for over 26 years in teaching, research and service at six U.S. universities. In research and graduate studies, she has graduated 45 MS and 13 PhD students; published over 175 papers; and brought in over \$40M in external research including a U.S. National Science Foundation CAREER award. She is the US administrative lead for the US DOE project, US-India collaborative for Smart distribution System with Storage (UI-ASSIST). She is a Fellow of IEEE and ASEE and served as IEEE PES President in 2012 and 2013.



Dr. Ankush Sharma, is currently working as associate professor in the department of electrical engineering at Indian Institute of Technology (IIT) Kanpur, India. Prior to that, he was working as Assistant Professor at IIT Bhubaneswar, India. In addition to academic experience of around 5 years, he also has close to 16 years of software industry experience, primarily in the Power system and smart grid domains. He holds Ph.D. and M. Tech. degrees in Electrical Engineering from IIT Kanpur and B. Tech. degree in Electrical Engineering from Harcourt Butler Technological Institute Kanpur. He has been Project Management professional (PMP®) certified in 2009 from Project Management Institute (PMI), USA and holds MBA degree in Finance. He has executed various research and consultancy projects as PI and Co-PI. He is a senior member of IEEE. His research interests include, State Estimation, IT application in power

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Anurag K. Srivastava is a Lane Professor and Chairperson of the Computer Science and Electrical Engineering department at the West Virginia University and an adjunct professor of electric power engineering at Washington State University. He also has a joint appointment as a Senior Scientist with the Pacific Northwest National Lab (PNNL). He received his Ph.D. degree in electrical engineering from the Illinois Institute of Technology in 2005. His research interest includes data-driven algorithms for power system operation and control including resiliency analysis. Dr. Srivastava is serving or served as an editor of the IEEE Transactions on Smart Grid, IEEE Transactions on Power Systems, and IEEE Transactions on Industry Applications. He is the author of more than 300 technical publications including a book on power system security and 4 patents.



Suresh Srivastava has more than 44 years of Professional experience, including initial 12 years in a consulting organization, Engineers India Limited, and remaining at Indian Institute of Technology Kanpur. He became Professor in 1995, and served as Head of Electrical Engineering Department, Dean of Research and development & Deputy Director. After his superannuation, he is serving as Director of IIT Kanpur-LaTrobe University Research Academy since January 2021. His research interests include Power System Stability & Security Analysis, Synchrophasor Applications, Electricity Market and Smart grid. He has supervised 31 Ph.D. and 65 Masters theses, published more than 300 papers in refereed journals & conference proceedings, and has been Lead PI/Co-PI to 22 different projects including UI-ASSIST project. He has served in the Governing Council and Expert Committees of several Government of India organizations, utilities, and industries. He is Fellow of the IEEE, Indian National Academy of Engineering, Institution of Engineers (India), IETE India, and Indian Academy of Mathematical Modelling and Simulation.

Theme Leads and Co-Leads



Dr. Abhijit R. Abhyankar is currently working as NTPC Chair Professor in Electrical Engineering Department of Indian Institute of Technology Delhi, New Delhi. He has acted as expert member of various committees established by the Central Electricity Regulatory Commission (CERC) to provide technical support to resolve regulatory issues. He is member of National Reliability Council for Electricity (NRCE), set-up by Ministry of Power, Government of India, through Central Electricity Authority (CEA). He is also a member of Taskforce on PoC Transmission Pricing Review, constituted by Central Electricity Regulatory Commission (CERC), New Delhi. He has handled important projects and done consultancies for various agencies like POWERGRID, Maharashtra Electricity Regulatory Commission, Department of Science & Technology, Indian Energy

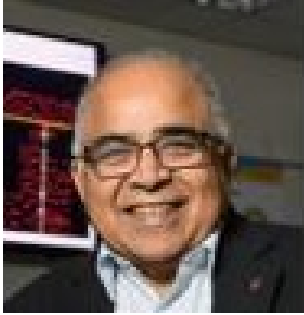
exchange, Mercaods EMI Pvt. Ltd. and State Electricity Utilities. He has developed one web-based course titled – “Restructured Power Systems” which is available on NPTEL website (<http://nptel.iitm.ac.in/courses/108101005/>). He is a member of Global Future Council on Clean Electrification of World Economic Forum. His current research interests: Power System Analysis and optimization, issues in restructured power systems, Distribution Systems, Policy and regulatory matters, Smart Grids, Transmission System Flexibility.



Dr. Anuradha Annaswamy is Founder and Director of the Active-Adaptive Control Laboratory in the Department of Mechanical Engineering at MIT. Her research interests span adaptive control theory and its applications to aerospace, automotive, propulsion, and energy systems as well as cyber physical systems such as Smart Grids, Smart Cities, and Smart Infrastructures. She has received best paper awards (Axelby; CSM), Distinguished Member, and Distinguished Lecturer awards from the IEEE Control Systems Society (CSS) and a Presidential Young Investigator award from NSF. She is the author of a graduate textbook on adaptive control, co-editor of two vision documents on smart grids as well as two editions of the Impact of Control Technology report, and a member of the National Academy of Sciences Committee study that published a report on the Future of Electric Power in the United States in 2021. She is a Fellow of IEEE and IFAC. She served as the President of CSS in 2020.



Miroslav M. Begovic (FIEEE'04) is Department Head of Electrical and Computer Engineering and Moore Professor at Texas A&M University. Prior to that, he was Professor and Chair of the Electric Energy Research Group in the School of Electrical and Computer Engineering, and an affiliated faculty member of the Brook Byers Institute for Sustainable Systems and University Center of Excellence in Photovoltaic Research at Georgia Tech. Dr. Begovic obtained his PhD from Virginia Tech University. His research interests are in monitoring, analysis, protection and control of power systems, as well as development and applications of renewable and sustainable energy systems. Prof. Begovic was Editor of the section on Transmission Systems and Smart Grids in Springer Encyclopedia on Sustainability (published in 2012), coordinated by an Editorial Board consisting of five Nobel Prize laureats, also served as guest editor of the IET Generation, Transmission & Distribution Special Issue on Wide Area Monitoring and Control in 2010. He authored invited papers in Special issues of IEEE Proceedings: on Future Energy Systems (2010), on Critical Infrastructures (2005) and on Renewable Energy (2001). Dr. Begovic is a recipient of IEEE PES Meritorious Service Award (2019), Fellow of IEEE and member of Sigma Xi, Tau Beta Pi, Phi Kappa Phi and Eta Kappa Nu. Dr. Begovic is a former Chair of the Emerging Technologies Coordinating Committee of IEEE PES, IEEE PES Treasurer (2010-2011), IEEE PES Distinguished Lecturer.



Anjan Bose is a Regents Professor and the Distinguished Professor of Electric Power Engineering at Washington State University in Pullman, Washington, where he also served as the Dean of the College of Engineering & Architecture from 1998 to 2005. He served the US Department of Energy as a Senior Advisor on the electric power grid in the Obama administration. He is a leading researcher on the operation and control of the electric power grid. He has worked in the electric power industry as well as academe for five decades. He received his BS, MS and PhD, all in Electrical Engineering, from the Indian Institute of Technology – Kharagpur, University of California – Berkeley and Iowa State University, respectively. Dr. Bose is a Member of the US National Academy of Engineering (NAE), a Foreign Member of both the Indian National Academy of Engineering (INAE) and the Chinese Academy of Engineering (CAE), and a Fellow of both the Institute of Electrical & Electronics Engineers (IEEE) and the Chinese Society of Electrical Engineers (CSEE). He has served on the governing boards of both the US NAE and the Washington State Academy of Sciences of which he was also the President. He was the recipient of the Outstanding Power Engineering Educator Award, the Third Millennium Medal, and the Herman Halperin Electric Transmission & Distribution Award from the IEEE. He has been recognized by both Iowa State University and the Indian Institute of Technology Kharagpur with their distinguished alumnus awards.



Dr. S. Chakrabarti completed his PhD in Electrical Engineering from Memorial University of Newfoundland, Canada in 2006. Before completing PhD, he worked in Asea Brown Boveri (ABB) Limited, India, and Bhabha Atomic Research Centre, India. After completing PhD, he worked as a Special Scientist in University of Cyprus, Cyprus, and first as a Research Associate and then as a Lecturer in Queensland University of Technology, Brisbane, Australia. Since 2009, he has been working in the Department of Electrical Engineering, Indian Institute of Technology, Kanpur, India, where he is currently a Chair Professor. His research interests are in the areas of power system state estimation, power system dynamics and stability, modelling of power system loads, smart grid, microgrid. He is an Editor of IEEE Transactions on Power Systems, Editor of IEEE Power Engineering Letters, Associate Editor of International Journal of Electrical Power & Energy Systems, and Associate Editor of IET Generation, Transmission & Distribution.



Kevin Davies is an Assistant Researcher in the Hawaii Natural Energy Institute at the University of Hawaii at Manoa. He received the B.S. degree in electrical and computer engineering in 2001 from Carnegie Mellon University, Pittsburgh, PA, USA and the Ph.D. degree in mechanical engineering in 2014 from the Georgia Institute of Technology, Atlanta, GA, USA. His research interests include power system dynamics, multi-domain physical modeling, real-time analysis, and hardware and software development.



Christine Horne is a professor of sociology at Washington State University. She studies the emergence, enforcement, and application of social norms. Recent research focuses on the energy transition and emerging smart grid. Her work has been published in the *American Sociological Review*, *Social Psychology Quarterly*, and *Energy Policy*.



Dr. Mladen Kezunovic received the Dipl. Ing. from University of Sarajevo, Sarajevo, Bosnia, and M.Sc. and Ph.D. degrees in electrical engineering from University of Kansas, Lawrence, KS, in 1974, 1977, and 1980, respectively. He has been with Texas A&M University, College Station, TX, USA, for 35 years, where he holds titles of Regents Professor, Eugene E. Webb Professor, and Site Director of "Power Engineering Research Center" consortium. He is also the Principal of XpertPower Associates, a consulting firm specializing in power systems data analytics for the last 25 years. His expertise is in protective relaying, automated power system disturbance analysis, computational intelligence, data analytics, and smart grids. He has authored over 650 papers, given over 120 seminars, invited lectures, and short courses, and consulted for over 50 companies worldwide. Dr. Kezunovic is a Life Fellow of IEEE, and a CIGRE Fellow, Honorary and Distinguished Member. He is a Registered Professional Engineer in Texas.



Mahesh K. Mishra (S'00–M'02–SM'10) received the B.Tech. degree from the College of Technology, Pantnagar, India, in 1991, the M.E. degree from the Indian Institute of Technology, Roorkee, India, in 1993, and the Ph.D. degree from the Indian Institute of Technology, Kanpur, India, in 2002, all in electrical engineering. He has about 28 years of teaching and research experience. For about ten years, he was with the Department of Electrical Engineering, Visvesvaraya National Institute of Technology, Nagpur, India. He is currently a Professor with the Department of Electrical Engineering, Indian Institute of Technology Madras Chennai, India. His research interests include the areas of power distribution systems, power electronics, microgrids, and renewable energy systems. Prof. Mahesh has completed a dozen of sponsored projects and consultancies. Under his research supervision, about 18 Ph.D., 12 MS and 50 M. Tech. students have been awarded. Prof. Mahesh and his scholars have been awarded many International, National and Institute level

awards. He has around 250 research publications in International and National peer reviewed journals and conferences. He has written NPTEL webbook on “Power Quality in Power Distribution Systems: Concepts and Applications”. He has about 50 video lectures on the subject of Power Quality. Prof. Mahesh is a Fellow INAE. He received the IETE Prof. Bimal Bose Award in 2015 for his outstanding contributions to Power Electronics Applications in Power System. He has served as an Editor for the IEEE Trans. on Sustainable Energy.



Abheejeet Mohapatra did B. Tech in Electrical Engineering from Biju Patnaik University of Technology (BPUT), Odisha in 2008. He got the POSCO Asia Fellowship during 2006-2007 and the University Gold Medal in 2008 on securing the highest CGPA among all graduates in BPUT. He received M. Tech and Ph.D degrees from Indian Institute of Technology, Delhi (IITD) in 2010 and 2014, respectively. He has also received the POSOCO Power System Awards in 2014 for his research work under Doctoral category. He is an Assistant Professor in Department of Electrical Engineering at Indian Institute of Technology Kanpur (IITK) since April 2015. His research interests include optimization for operation and planning of power networks, AC and DC microgrid protection, stability, security and control of power networks with renewable resources.



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N. P. Padhy. Area of Specialisation: Power System Engineering and AC-DC Smart Grid. Completed Ph.D from Anna University/College of Engineering Guindy (CEG), Chennai. Present Position: Working as a faculty over two decades in the Department of Electrical Engineering at IIT Roorkee from 1998 till date. Currently serving as Professor (HAG) and 1992 Batch Chair Professor, Electrical Engineering Department, IIT Roorkee with over 13 years of experience as Professor. Involved in academic affairs of IIT Roorkee as Dean of Academic Affairs during 2017-2021. Received many Honours/Awards Fellowships as a recognition to outstanding work in the field of power system and smart grid and Elected as Fellow Indian from Indian National Academy of Engineers in the year 2013.



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Dr.J.B.V.Reddy is a graduate in Electronics & Communication Engineering from Delhi College of Engineering and MS (Research) from IIT Delhi. He has done his doctoral thesis on “Advanced Signal Processing and Machine Intelligence Techniques for Power Quality Assessment” from SOA University, Bhubaneswar. He has a professional career of more than two decades in promotion of science & technology through policy framework as well as direct intervention through various national and international R&D promotional programmes. At present, he is implementing clean energy research scheme supporting projects in the area of Smart Grids, Building Energy Efficiency, Methanol & DME, Air Pollution and Clean Coal

Technologies involving academic institutions, national R&D labs and industry.



Ahmed Yousuf Saber received the B.Sc. and M.Sc. degrees from Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, and the Ph.D. degree from University of the Ryukyus, Japan, in 2007. Previously, he was a Postdoctoral Fellow with Missouri University of Science and Technology, Rolla and served as an Assistant Professor at The University of Asia Pacific, Dhaka, Bangladesh, and King Abdulaziz University, Jeddah, KSA. He is currently Vice President (R&D), ETAP, Irvine, USA. His research interests include smart-grid, power system optimization, predictive control, storage, intelligent systems, operations research, vehicle-to-grid, renewable energy, micro-grid, cyber-physical systems, and AI applications.



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Mr. A. K. Saxena heads the Electricity and Fuels Division in TERI. He has over 38 years of experience in the power sector in India post retirement from Government service in 2016. He has worked with the Central Electricity Authority (CEA), Ministry of Power (MoP) and Central Electricity Regulatory Commission (CERC). He possesses rich technical, policy and regulatory experience. At TERI, his responsibilities include managing the work on energy transitions in the power sector to foster adoption of low carbon pathways in India, power sector policy, reforms and regulations, demand side management action plans, smart grid, etc., which involves a strong interaction with power utilities in the country as well as leading organisations/institutes in other countries. At CERC, Mr Saxena headed the Engineering Division and worked on review/framing of regulations for determination of tariff for Inter State Generating stations and Inter-State Transmission Systems, transmission charges, Indian Electricity Grid Code, Open Access, Connectivity, Ancillary Services, etc. He was a member / convenor / Chair of Task Forces set up by the Commission. At CEA, he worked in grid management and load dispatch and communication domains. At MoP, he handled work related to operation monitoring at the national level, short-term fuel management for power plants, transmission, crisis and disaster management plan, etc., Mr. Saxena holds a Master's degree in Electrical Engineering and MBA. He is a Fellow of Institution of Engineers (India). He is widely travelled.



Chanan Singh is a University Distinguished Professor, Regents Professor and Irma Runyon Chair Professor in the Department of Electrical and Computer Engineering, Texas A&M University, College Station, Texas, USA. He served as the Department Head of Electrical and Computer Engineering Texas A&M from 1997 to 2005 and then as an Interim Head from 2012 to 2015. He also served as a Program Director at the National Science Foundation of USA. His research and consulting interests are in the foundational developments and applications of probabilistic methods for planning and operation of electric power grid. He has authored/co-authored more than 400 technical papers and four books and has contributed to several books. He has consulted with many major corporations and given short courses nationally and internationally. Dr. Singh is a Fellow of the IEEE, is the recipient of the 1998 Outstanding Power Engineering Educator Award given by the IEEE Power Engineering Society. He is also a Fellow of Chinese Society of Electrical Engineering. For his research contributions, he was awarded a D.Sc. degree by the University of Saskatchewan, Saskatoon, SK, Canada, in 1997. He was recognized with the Merit Award by the PMAIS International Society for life long achievements. He is the inaugural recipient of the IEEE-PES Roy Billinton Power System Reliability Award. He is a member of the US National Academy of Engineering and Fellow of Indian National Academy of Engineering.



Er. Navpreet Singh is Chief Engineer at IIT Kanpur. He is the Head of IT and Network Services of IIT Kanpur. He received Bachelor of Technology degree in Electrical Engineering from IIT Kanpur in 1990. After a brief stint in the Industry, he received Master of Technology degree in Telecom Networks from IIT Kanpur in 1995 and has been working in IIT Kanpur since then. He has vast experience in managing large campus networks and data centers. His areas of Interest are High Speed Networks, Network Security, Machine Learning and Artificial Intelligence. He has been involved in major government projects including setting up Games Time Network in 2010 Commonwealth Games and the country wide network for Goods and Service Tax implementation. He also advises many government and private organizations on efficient and cost effective IT setups.



Subrata Sarkerg graduated as Electrical Engineer from Jadavpur University in Kolkata. Studied M. Tech. in Machine Drives and Power Electronics from Indian Institute of Technology, Kharagpur. Joined in NTPC in 1989 as a design engineer and worked in the area of designing of DC system, batteries, Transformer, Cables, Switchgear and Power Plant layout. Subsequently joined the R&D Centre of NTPC, presently named NETRA and worked in the areas of Flexibilization of Power Plant, health assessment of electrical equipment, Renewables and Microgrids etc.

Other Participants



Arman Ahmed: Ph.D. Graduate student researching the intersection of machine learning and power grid focussed on power grid analytics in transmission and distribution systems for event detection, localization, and classification due to cyber-physical events in the power grid.



Rajarshi Basu received the B.Tech. degree in Electrical Engineering from Kalyani Government Engineering College affiliated to Maulana Abul Kalam Azad University of Technology, Kolkata, India in 2019. He is currently working towards the dual M.S.+Ph.D. degree in Electrical Engineering at the Indian Institute of Technology Madras, Chennai, India. His research interests include power electronic application in microgrid systems, development of power converters for grid integration of various distributed energy resources and loads, low voltage ride through problems faced in doubly fed induction generators.



Vince Battaglia received his BS in chemical engineering from Johns Hopkins University and a MS and PhD from UC Berkeley. He worked 11 years at Argonne National Lab, 4 years in the Chemical Engineering Division and 7 years as an appointee to the DOE VTO. He has worked at the LBNL since 2004 where he presently heads the Energy Storage Group. His expertise is in electrode fabrication, cell assembly, cell testing, and cell failure analysis. Vince has over 135 publications, 8 patents, and 3 text books to his name.



My name is Jorge Ignacio D. Cisneros-Saldana, I am a Phd Candidate in Electrical Engineering at TAMU. My current research focuses on inverter control and protections for AC/DC microgrids. I focus on modelling test systems as close as possible to real life, in order to understand their behavior and response under any circumstance. In addition, my personal interests include the interaction among power systems & power electronics, control & automation, renewable energy integration, data science and optimization for energy systems. I love playing basketball, swimming and hiking. I also enjoy spending time with my family, girlfriend, friends and my dog.



Soumyajit Das: Designation: Project Engineer Company/ Institute: Indian Institute of Technology Kanpur – IIT Kanpur Project: UI-ASSIST (US-India Collaborative for Smart Distribution system with storage) under IUSSTF (Indo-US Science and Technology Forum) in JCERDC (Joint Clean Energy Research and Development Center), Phase II Project Investigator: Prof. Santanu Mishra, Prof. Anoop Singh (Indian Institute of Technology Kanpur) Description of Work: Lab scale pilot program installation and implementation with studies of: - • 2 field Rural pilots • 1 field Semi - Urban pilot • 1 field Urban pilot In Kanpur, India, for demonstration of Smart Grid with Renewable Energy Integration. R&D Activities on Smart Grids, Micro Grids and Active Distribution Network Concepts, Storage Optimization and Management, Electric Vehicle and Renewable Energy Integration, Micro Grid and Advance Distribution Management Systems, Cyber-security Measures, Market and Policy Issues.



Nicholas DeForest (Sr. Scientific Engineering Associate, Grid Integration Group, Berkeley Lab) is a core developer for the planning and analysis tool DER-CAM. His work focuses on developing models and tools to guide the design and operation of distributed energy systems that integrate diverse DERs and leverage multiple value streams. He also works in the area of microgrid control algorithms, and advanced microgrid deployment and demonstration projects.



I am Leelavathi, pursuing MS under Prof. Mahesh Kumar in Electrical Engineering department at IIT Madras, Chennai, Tamil Nadu, India. I am also working as Project Associate in this UI ASSIST Project. My Research area is Design and control of Solar based DC Microgrid.



Thomas Familia: My research currently centers on residential behavioral energy consumption. Over the past eight years, I have applied my diverse training in economics, sociology, and public policy to both the private and public sectors of the energy industry. My work experience allowed me to see an opportune space for further research relating to navigating policy concerns surrounding the implementation of technology innovations in the energy sector under the umbrella of environmental sociology.



Assefaw Gebremedhin is an associate professor in the School of Electrical Engineering and Computer Science at Washington State University, where he leads the Scalable Algorithms for Data Science (SCADS) Lab. Prior to joining WSU in Fall 2014, he was a research faculty at Purdue University, Department of Computer Science, where he served as a founding member and investigator in the Combinatorial Scientific Computing and Petascale Simulations Institute (CSCAPES), a multi-institution project funded by the Department of Energy under its SciDAC program. His current research interests include: data science and AI, network science, high-performance computing, and applications in cyber security, energy systems, and biomedical informatics. Assefaw received a National Science Foundation CAREER Award in 2016 for work on fast and scalable combinatorial algorithms for data analytics. He is a recipient of the 2021 George Polya Prize in Applied Combinatorics. He earned his PhD and MS in Computer Science from the University of Bergen, Norway and his BS in Electrical Engineering from Addis Ababa University, Ethiopia.



Megha Gupta has received the M.Tech. degree in Integrated Power Systems from Visvesvaraya National Institute of Technology, Nagpur, India, in 2016. She is currently working towards the Ph.D. degree at the Department of Electrical Engineering, Indian Institute of Technology Delhi, India. Her research interests include Transmission/Distribution System Steady State Analysis, Operation and Planning; Power System optimization, Power System Security, and Energy Markets.



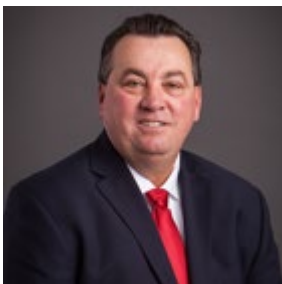
Rabab Haider is a PhD student at MIT, Department of Mechanical Engineering, working under Dr. Annaswamy. Her involvement with the UI-ASSIST team includes Themes 3, 6, and 7, with a focus on distributed optimization algorithms used within control frameworks for smart grids, and development of distribution-level retail markets for more efficient electricity pricing and resource utilization. She is a graduate from MIT and University of Toronto, and has experience working in academia and industry.



My name is James Halvorsen, and I am a Computer Science PhD student at Washington State University. Currently, my research interests are the synthetic generation of datasets, and in particular, of cyber security datasets. My current role within UI-Assist has been developing tools for graph/topology generation in the synthetic feeder models project, as well as developing the CP-SyNet web application for distributing synthetic feeder models.



John Hieb is a principal engineer for Snohomish County Public Utility District. He has experience with SCADA software systems, islanded power system analysis with renewables and storage, Distribution Management Systems, and Distribution Automation. He received his B.S. degree in electrical engineering from the University of Idaho in 2007. Hobbies include cycling, tennis, and wine/beer tasting.



Mr. Huffman has 30+ years of utility, electrical construction and consulting management experience and currently serves as a Senior Client Relationship Manager for Burns & McDonnell's Transmission & Distribution business line. He is the Vice Chair of the EEI Distribution Reliability Working Group, Vice Chair of the IEEE Distribution Resiliency Working Group and an active member of IEEE. Prior to joining Burns & McDonnell Mr. Huffman spent 23 years with Southern California Edison (SCE). During his tenure at SCE he successfully and safely managed utility operations, maintenance, and capital project teams in the Generation and T&D divisions. He has testified before the California Public Utilities Commission (CPUC), California Air Resources Board (CARB), and the South Coast Air Quality Management District (SCAQMD) as an expert witness and has managed many large Transmission, Distribution and Substation planning and construction projects and programs including construction and commissioning of the Devers – Palo Verde 500kV line in Southern California. Mr. Huffman served as Burns & McDonnell's Program Manager for FirstEnergy's \$600M annual "Energizing the Future" transmission

infrastructure program and has experience with T&D planning, design, construction, operations, regulatory policy and cost of service development and rate recovery initiatives.



Adaora Ifebigh is the Program Director, Energy Access at the National Rural Electric Cooperative Association (NRECA). At NRECA, her focus includes equal energy access for low and moderate-income communities and she leads the Advancing Energy Access for All initiative, focused on creating a sustainable practice around supporting member cooperatives as they holistically serve their members, especially those who struggle to pay their bills. She is also the project manager for the DOE SETO-funded project, Achieving Cooperative Community Equitable Solar Sources (ACCESS), the flagship project of the Advancing Energy Access for All initiative. She has previously worked at the Department of Energy's ARPA-E managing research and development projects.



Ashok Jadhav: I received a Ph.D. degree from the Visvesvaraya National Institute of Technology, Nagpur, India, in 2019. I am currently an Institute Postdoctoral Fellow with the Department of Electrical Engineering, Indian Institute of Technology Delhi (IIT Delhi), New Delhi, India. My research interests include power markets, power system analysis and optimization, power system flexibility, electricity regulatory, and policy matters.



I am Satabdy Jena and pursuing my PhD under the supervision of Dr. N P Padhy, IIT Roorkee. I am working on power electronic converters, control mechanisms, consensus operation and resiliency. I have done my bachelors in VSSUT, Odisha and my masters in NIT MEGHALAYA IN 2014 and 2016 respectively.



Linli Jia: I'm a third year PhD. student in WSU, and major in power system engineering. Currently I'm working on distribution power system restoration and automation. Before this, I got my M.S. in North China Electric Power University in China, and B.E. in Shanxi University, also in the major of Electrical engineering.



Rabia Khan is a Ph.D. graduate student at Washington State University, Pullman, USA. She is working under the supervision of Dr. Noel N. Schulz. Her area of interest is rural electrification with a focus on DC islanded microgrids. Her work is related to Theme 2 and Theme 4 for the UI-ASSIST project.



Mohammad Khoshjahan: I received the B.S. and M.S. degrees both in electrical engineering from Amirkabir University of Technology, Tehran, Iran, in 2015 and Sharif University of Technology, Tehran, Iran, in 2017. I am now pursuing the PhD degree at Texas A&M University, TX, USA. My research interests include optimization aspects of power systems, electricity market, power system flexibility, distributed resource management and smart grids.



Durga Malleswara Rao Korada received the B.Tech. degree in electrical and electronics engineering from the Jawaharlal Nehru Technological University, Hyderabad, India in 2004 and the M.Tech. degree in Power System Control and Automation from the Jawaharlal Nehru Technological University, Kakinada, India, in 2011. He is currently working toward the Ph.D. degree in Electrical Engineering at the Indian Institute of Technology Madras, Chennai, India. His research interests include power electronic converters design for renewable energy applications, development of non-linear controllers, and energy management algorithms in microgrids.



Ram Krishan works in the Electricity and Fuels Division of TERI as a Research Associate. He has 1 year of industry experience in operation and project management along-side 3 years of research experience in distributed energy system applications to smart grids. Prior to joining TERI in May, 2018 he worked in the position of graduate engineer trainee at Sentiss Pharma Pvt. Ltd. He presently handles research projects in the domain of distribution system. He has been involved as a team member in the MacArthur foundation funded project on impact analysis of rooftop solar PV integration with distribution feeders and the UI-ASSIST project on distribution level battery energy storage systems. He is also involved in analysing the impact of solar PV and EV charging on distribution asset by measuring power quality parameters. He has also undertaken a review study of distribution network planning. He holds Master of Technology in Energy Engineering from Indian Institute of Technology, Mandi.



Dhananjay Kumar received the B.E. degree from Rajiv Gandhi Pradyogiki Vishwavidyalay, Bhopal, India in 2009 and M.E. (Power Electronics) degree from Samrat Ashok Technological Institute (SATI), Vidisha (Government Institute autonomous under RGPV Bhopal) in 2013. He completed the Doctoral degree in 2020 from the department of Electrical and Electronics Engineering, Birla Institute of Technology and Science, Pilani (Rajasthan). Since, August 2020 he is working as a Power System Engineer with Synergy Systems and Solutions, Faridabad and deputed at IIT Kanpur campus (Smart Grid Control centre). He is working under UI-ASSIST project for development and deployment of Advanced Distribution Management System (ADMS) solution dedicated to power distribution network of IIT Kanpur campus. His specialization includes the power distribution management algorithms such as load flow, state estimation, volt-Var optimization, FLISR etc. His other research interests include small-signal modelling of micro-grid (MG) and its stability control design applicable in load frequency control (LFC), renewable energy integration to MGs, time series forecasting of renewable power, robust control design for LFC in MG. He has authored 4 research articles in peer-reviewed international journals of repute and his 7 papers have been published in IEEE sponsored international and top national conferences.



Mr Mukesh Kumar is a Project Associate at the Electricity and Fuels Division in TERI. At TERI, he is working on distribution level battery energy storage system, power sector policy, electric vehicles smart charging/discharging, V2G integration, EV charging infrastructure. Mr Kumar holds a Master's degree in Renewable energy from MNIT Jaipur and a bachelor degree in Electrical Engineering from RTU Kota.



Mr. Rajesh Kumar is currently working as General Manager at CTUIL, wholly owned subsidiary of POWERGRID, looking after power system network planning. He has around two decades of work experience in the power system. He is member of various national and international professional bodies such as IEEE, CIGRE and IEI. He has the firsthand experience of System Operation, SCADA/EMS, Dispatcher Simulator etc. He has published several technical papers in various international & national journals, conferences and co-authored a book on Smart grid. Mr. Rajesh has done his graduation in Electrical Engineering from NIT, Rourkela and Masters in Energy and Environment Management from I.I.T., Delhi.



Rohan Madnani received his B.Tech. degree in Electrical and Electronics Engineering from Visvesvaraya National Institute of Technology, Nagpur, India in 2019. He is currently working towards his Ph.D. in Electrical Engineering at Indian Institute of Technology Madras, Chennai, India. His research interests include Control of Power Electronic Devices for Power Quality Management of Microgrid Systems with Distributed Generation.



Subir Majumder received the Ph.D. degree under a Cotutelle/Joint Agreement between the Indian Institute of Technology Bombay, India, and the University of Wollongong, Australia in 2020. He is currently working as a post-doctoral research associate at the Washington State University, Pullman, USA. He was a recipient of the POSOCO Power System Awards (PPSA) under the Doctoral category, 2020. He was recommended for the Best Ph.D. Thesis award, IITB, 2020, and, also recommended for a special commendation for an Outstanding Ph.D. Thesis, UOW, 2020. His research interests include power systems modeling, operations (including operational resiliency) and planning, power system economics, distributed optimization, power quality, and the smart grid.



Dax Matthews is an Assistant Researcher at the Hawai'i Natural Energy Institute (HNEI), University of Hawai'i at Manoa. His work is centered around developing and integrating techniques to characterize and forecast geophysical dynamics using satellite remote sensing, data analysis, numerical modeling, and variational data assimilation. Current projects include developing statistical techniques to characterize irradiance variability from ground-based instruments, and developing an operational irradiance monitoring and forecasting system for predicting solar power production in Hawai'i. Dr. Matthews received his PhD in Aerospace Engineering Sciences from the University of Colorado Boulder in 2008. His graduate work focused on developing satellite remote sensing techniques to observe coastal ocean currents and wind-driven dynamics. Following this, Dr. Matthews investigated ocean dynamics around the Hawaiian archipelago using four-dimensional variational data assimilation within the Regional Ocean Modeling System (ROMS) as a postdoctoral fellow in University of Hawai'i at Manoa Department of Oceanography.



Mohit Murarka: I am a Research Scholar at the Department of Energy Science and Engineering, Indian Institute of Technology Delhi, working in the field of Optimum Scheduling Algorithm and Battery Thermal Management in Battery Energy Storage Systems. I have pursued M Tech in Energy Technology and BE in the field of Electrical Engineering.



Vineet Jagadeesan Nair: I am a 2nd year PhD candidate in the Computational Science & Engineering program at MIT. I conduct research in the Mechanical Engineering department, working with Dr. Anuradha Annaswamy in the Active Adaptive Control Lab. My research is focused on designing new market structures and developing optimization algorithms for local electricity markets in distribution networks, with a focus on cybersecurity and privacy.



Bhavani Nakka: I am a graduate in Electronics & Communication Engineering from Aditya Engineering College. At present, I am working with DST to implementing clean energy research scheme supporting projects in the area of Smart Grids, Building Energy Efficiency, Methanol & DME, Air Pollution and Clean Coal Technologies involving academic institutions, national R&D labs and industry.



Pruthvi Chaithanya Nakka received the Bachelor's degree in Electrical and Electronics Engineering from Jawaharlal Nehru Technological University, Hyderabad, India, in 2012 and the Master's degree in Power Electronics and Drives from the National Institute of Technology, Rourkela, India, in 2015 respectively. He is currently working towards the Ph.D. degree in Electrical Engineering at the Indian Institute of Technology Madras, India. His research interests include power electronic converter applications in ac/dc microgrid and energy storage systems.



Lokesh Nalla received the bachelor's degree in electrical and electronics from the Jawaharlal Nehru Technological University, Anantapur, India, in 2010, and the master's degree in power electronics from the National Institute of Technology, Calicut, India, in 2013. Currently, he is pursuing the Ph.D. degree in electrical engineering at the Indian Institute of Technology Madras, Chennai, India. His research interests include control of power converters for power conditioning, photo-voltaic energy system and hybrid energy storage system and signal processing in power system applications.



Vivek Narayanan was born in Kerala, India, in 1993. He received the B.Tech. degree in electrical and electronics engineering from the College of Engineering Thalassery, Thalassery, India, in 2015, and the M.Tech. degree in power electronics and drives from the Government College of Engineering Kannur, Dharmasala, India, in 2017. He is currently working toward the Ph.D. degree in electrical engineering from the Indian Institute of Technology Delhi (IIT Delhi), New Delhi, India. His research interests include power electronics, solar energy conversion systems, energy storage, and power quality improvement in microgrids.



Mr. Neto is an electrical engineer specializing in distribution feeder design and model analysis. His 8+ years of experience includes telecommunication network design and legacy equipment replacement, substation audits, meter data management, and a variety of distribution model studies (hosting capacity analysis, volt/VAR optimization, conservation voltage reduction, effects of smart inverter control and Python scripts for task automation).



Travis Olson: I am currently a Senior Project Manager working in our Work and Asset Management department within the Distribution and Engineering Services division here at Snohomish County PUD. I am currently assigned to our Connect Up program which is the District's implementation of Automated Metering Infrastructure (AMI).



I am Abhisek Panda. I am currently doing my MS degree in IIT Madras. I am working on the energy management and control aspects of the Electric Vehicle. My current interest areas are controller design for Electric Vehicle and DC microgrid applications.



Sanjeev Pannala is working as a Post-Doctoral Research Associate at Energy System Innovation Center, Washington State University Pullman. His research interests include distribution system resiliency, event detection algorithms, ADMS, and microgrids. He completed B.Tech and M.Tech from the Jawaharlal Nehru Technological University Hyderabad and National Institute of Technology in Bhopal, India, in 2011 and 2013, respectively. He worked as Assistant Professor at NMIMS University Mumbai from 2013 to 2014. He worked on the India-UK HEAPD project from October 2014-January 2018 to earn his Ph.D. degree at the Indian Institute of Technology Roorkee (IITR), India. Later, he joined as a research associate (RA) under the UIASSIST Project at the Indian Institute of Technology Roorkee (IITR), India, from Feb 2018-May2019. He received the best paper award at IEEE National Conference ICAER in October 2013. He received the Doctoral POSOCO Power System Award in 2020 for contributions during Ph.D.



Subho Paul (Member, IEEE) received the B.Tech. degree in electrical engineering from the West Bengal University of Technology, Kolkata, India, in 2013, and the M.E. degree in electrical engineering with power system specialization from Jadavpur University, Kolkata, India, in 2016. He is currently working toward the Ph.D. degree in electrical engineering at the Department of Electrical Engineering, Indian Institute of Technology Roorkee, Roorkee, India. His research interests include power system optimization, demand response analysis, power system analysis, storage applications in smart grids, and application of deep learning techniques in power systems. Mr. Paul was the recipient of the University Gold Medal for standing first in order of merit in the M.E. degree from Jadavpur University, Kolkata, India, in 2016. He was also the recipient of the Best Paper Award for the session Distribution System Analysis at International Conference on Power Systems, Jaipur, India, in 2019.



Brenna Peever is the UI-ASSIST Program Assistant at WSU. She graduated from University of Idaho in 2019 with a Bachelor's of Science in Mathematics and a Bachelor's of Arts in Physics. Her undergraduate research was in combinatorial geometry; specifically, a generalization of a problem introduced by Erdos and Szekeres.



David Pinney is an analytics program manager at NRECA. Worked previously in solar, storage, VVO, networked controls, cybersecurity. Currently interested in microgrids, low cost coordination of distribution resources. Degree in math from Cornell, before energy worked in the software industry.



Ashish Singh Rawat works in the Electricity and Fuels Division of TERI as a Project Associate. Prior to joining TERI in July 2019, he completed his B. Tech in Electrical and Electronics Engineering from Guru Gobind Singh Indraprastha University (GGSIPIU). He is presently working as a Junior Research Fellow in the Indo-US project on distribution level battery energy storage systems. His areas of research include battery energy storage modeling and charging discharging control development, electric vehicles charge scheduling.



Dr. Olive Ray received his BEE degree from Jadavpur University Kolkata in 2009, M.Tech. and PhD degrees from Indian Institute of Technology Kanpur in 2009 and 2016, respectively. He was working with GE Global Research Bangalore from 2016 to 2018 as Research Engineer. Since 2018, he is with IIT Bhubaneswar as an Assistant Professor. His research interests are power electronic converter modeling, digital control and renewable integration. He is associated with UI-ASSIST as a co-PI from IIT Bhubaneswar contributing to Theme 3 (storage).



Hongda Ren received the B.S. degree from the School of Electrical Engineering, North China Electric Power University, Baoding, China, in 2009, and the M.S. degree from the Electrical Engineering Department, Shanghai Jiaotong University, Shanghai, China, in 2012. He worked as an assistant researcher at China Southern Power Grid Electric Power Research Institute from 2012 to 2014. He is currently working towards a Ph.D. degree at the School of Electrical Engineering and Computer Science, Washington State University, Pullman, WA. His current research interests include DERs and microgrid planning, Volt-VAR control, grid-supporting VSC modeling, and reinforcement learning algorithms for distribution system restoration.



Smrutirekha Samal is pursuing PhD in IIT Bhubaneswar under UI-ASSIST project. Research interest includes Microgrid and Active distribution system along with AC/DC Microgrid protection mechanism. Publication: Smrutirekha Samal, S. R. Samantaray and M S Manikandan " A DNN based Intelligent Protective Relaying Scheme for Microgrids," 8th International Conference on Power Systems (ICPS-2019), MNIT, Jaipur, 2019.



Madhav Sharma is student at Department of Industrial and Management Engineering at Indian Institute of Technology, Kanpur, pursuing Ph.D. under the guidance of Prof. Anoop Singh, with area of research being Energy Management in Distribution Market with aspects like Distribution Market Modelling, Transactive Energy and Demand Response. He is also working as Student Research Associate in project UI-Assist

Anoop Singh has about 20 years' experience in academics and industry. He founded the Centre for Energy Regulation (CER) at IIT Kanpur through a seed funding support from the Government of UK. He also founded the Energy Analytics Lab (EAL) which has been seed-funded by Indian Energy Exchange Ltd. through CSR funding. He regularly contributes regulatory and policy submissions to Ministry of Power, Ministry of New and Renewable Energy, Central Electricity Regulatory Commission (CERC) and the State Electricity Regulatory Commissions (SERCs). His areas of interest



include power sector reforms and regulation, power market development, energy/electricity pricing, renewable energy, smart grid, energy analytics, climate change, project financing and cross-border energy cooperation. He has several research papers and four books to his credit. He also worked earlier with Haryana Electricity Regulatory Commission. He is editor of Regulatory Insights – a newsletter of CER, and Power Chronicle – a newsletter of EAL. He has been a member of numerous committees/working groups including those set up by the World Energy Council, CERC, Forum of Regulators (FOR), Planning Commission and UPERC. He is currently member of the State Advisory Committee for the Electricity Regulatory Commissions of Delhi (DERC) and Meghalaya (MSERC). He has undertaken project assignments for the ADB, the World Bank, Government of UK, the UNCTAD, the UNU/IAS, the AIT, University of Cambridge, the Planning Commission, Electricity Regulatory Commissions as well as the industry.



Myself Hemkesh Singh. I am from India. I did my B.Tech in Electrical Engineering from Madan Mohan Malaviya University of Technology. I am currently pursuing masters in Power System Engineering from IIT Bhubaneswar. I am working on protection of inverter interfaced microgrid.



Ms. Kamini Singh, is a research scholar in the Department of Industrial and Management Engineering (DIME), Indian Institute of Technology Kanpur, Uttar-Pradesh, India. She is working on Theme 7 of UI-ASSIST. Her major area of expertise lies in smart grid, energy market, energy efficiency, and energy optimization. She uses Game Theory, Numerical Optimization, Operation Research, and Microeconomics methodologies to model the consumer's role in the e-distributed electricity market (e-DEM). She is working meticulously on consumer's behavior which she believes is a core problem in the optimization of residential energy management in accelerating the adaptation of green and clean energy. She received her Bachelor of Technology in Mechanical Engineering from Kamla Nehru Institute of Technology, Sultanpur, Uttar-Pradesh (A state-government institute). Later on, she joined Master of technology in Manufacturing System and Engineering from Sant Longowal Institute of Technology, Sangrur, Panjab (Deemed University). Further, Ms. Singh is a recipient of the Indo-German DAAD fellowship in June 2019 for attending the IGCS summer school at TU-Dresden. Earlier this year (2021), she has been awarded for best research story writing under the AWSAR-2020 program by DST, Government of India. She has also received a Young research scientist award from the Institute of science-2021 for her outstanding research contribution. Recently, she is awarded for FNDR-fellowship (21-22).



My name is Aparna Sinha. I am a Master's graduate from the University of Southern California and currently work as the Senior Electrical Engineer at ETAP in the field of Electrical Design and AI research. With over 6 years of experience in the electrical industry, I have worked on distribution project design and analysis, network optimization, electric vehicles, railway infrastructure development and renewable technology including solar and wind. I am a curious learner and am passionate about EVs, aerospace engineering and artificial intelligence in power systems. I have worked on multiple IEEE papers (3002 series) focusing on the recommended practice of using software in the industrial and commercial power systems. You may contact me at aparna.sinha@etap.com or via phone at (949)600-7171.



Milad Soleimani received the B.Sc. degree from the Isfahan University of Technology, Isfahan, Iran, in 2014, and the M.Sc. degree from the University of Tehran, Tehran, Iran, in 2017, both in electrical engineering. He is currently a Research Assistant and Ph.D. Candidate with the Department of Electrical and Computer Engineering, Texas A&M University, College Station, TX, U.S.A. His research interests include distribution grid management and operation, smart grids, power system resilience, power transformers, and asset management.



Falti Teotia: Presently I am working as Research Associate in The Energy and Resource Institute (TERI), New Delhi. I am actively working on electricity markets, renewable energy, electricity consumption and optimization, cost minimization, peer-to-peer energy trading, prosumer management, distribution system operator, scheduling of household appliances, retail market design and functionality, power flow studies, demand response, and demand-side management.



S. S. (Mani) Venkata is President of Venkata Consulting Solutions Inc. He was with GE Power/Alstom Grid Inc. from January 2011 to September 2017. He continues his affiliation with the University of Washington (UW), Seattle, Washington where he has taught since 1979. Dr. Venkata is a Life Fellow of the IEEE. At the IEEE level, he served as a member of the IEEE Fellows Committee for five years. He also served on the PES Board as Vice-President, Publications PES during 2004-07. In 2016 he received the Robert M. Janowiak Outstanding Leadership and Service Award from ECEDHA. In 2015 he received the IEEE PES Douglas M. Staszkesy Distribution Automation Award. In 1996 he received the Outstanding Power Engineering Educator Award from the IEEE Power Engineering Society.



I'm Vice-President at Synergy Systems & Solutions, looking after the R&D area for our industrial automation solutions. Major areas of focus are SCADA/DMS, RTUs, Communication Gateways and Protocols, Substation asset management solutions, etc. I've experience of 20+ years in design, development of automation solutions, including C/C++ application programming, electronics circuit designing and embedded firmware development using RTOS.



Lusha Wang is a Ph.D student at Washington State University since September 2017. She received her Bachelor degree from Wuhan University, China in 2016. She is working with Dr. Schulz on UI-ASSIST on Theme 2 and Theme 6. Her research area is integration of EV in distribution system.