

Curriculum Vitae

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Education

Ph.D., Electrical and Electronic Engineering, University of Auckland, 2012.

B.E. (1st Hons.), Electrical and Electronic Engineering, University of Auckland, 2008.

Appointments

Assistant Professor, Department of Electrical and Computer Engineering, National University of Singapore (2016–present)

Assistant Professor, Department of Electrical Engineering and Computer Science, Masdar Institute - now part of Khalifa University (2012–2016)

Visiting Faculty, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology (2014)

Visiting Scientist, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology (2013)

Honours and Awards

Runner Up, Grand Prize, International Genetically Engineered Machine (iGEM) Competition (2021)¹

Recipient, Best Manufacturing Project, iGEM Competition (2021)

Recipient, 40 under 40: Disruptors and Innovators, University of Auckland (2020)

Recipient, Best Paper Award, IEEE International Future Energy Electronics Conference (2019)

Recipient, Best Reviewer, IEEE Transactions on Smart Grid (2019)

Recipient, Best Foundational Advance Project, iGEM Competition (2019)

Recipient, Faculty Teaching Award—Commendation List, Faculty of Engineering, National University of Singapore (2017)

¹Co-PI leading NUS_Singapore iGEM undergraduate team.

Recipient, Best Paper Award, International Conference on Control, Robotics and Cybernetics (2013)

Recipient, Doctoral Scholarship, University of Auckland (2008–2012)

New Zealand Representative, IEC Young Professional Program (2011)

University of Auckland Representative, Asia-Oceania Top University League Conference (2009)

Recipient, Transpower New Zealand Scholarship² (2005–2008)

Grants

PI, Data networks in cyber-physical systems, Future Resilient Systems Program, National Research Foundation, SGD 1,500,000 (2020–2025)

PI, Grid-customer integrated resilience assessment and enhancement for modern power systems, Systemic Risk and Resilience Planning Grant, National Research Foundation, SGD 150,000 (2018–2019)

PI, Design and stability analysis for community microgrid implementations, Academic Research Fund Tier 1, Ministry of Education, SGD 150,000 (2018–2021)

PI, Event-driven methods for demand response in electrical grids, National University of Singapore and Humboldt University Berlin Joint Research Program, SGD 22,000 (2017–2018)

PI, Design of future residential apartment, Academic Research Fund Tier 1, Ministry of Education, SGD 180,000 (2016–2019)

Co-PI, Design of MYSAT-1 CubeSat, Yahsat and Orbital ATK, USD 5,000,000 (2015–2019)³

PI, Mitigating inter-area oscillations in power systems, Massachusetts Institute of Technology and Masdar Institute Cooperative Program, USD 470,000 (2014–2016)

Co-PI, Sustainability as a service, Masdar, USD 197,000 (2013–2014)

Affiliations and Services

Member, College of Assessor, Ministry of Business, Innovation & Employment, New Zealand (2021–present)

Member, Electrical and Electronic Standards Committee, Singapore Standards Council, Singapore (2020–present)

Secretary, IEEE PES Working Group on High Performance Computing for Grid Analysis and Operation (2014–present)

Senior Member, Institute of Electrical and Electronic Engineers (IEEE) (2005–present)

²Employed by Transpower as part of the scholarship program from 2005–2012.

³No longer involved in the CubeSat project after relocating to NUS in July 2016.

Member, Working Group on Singapore Standards 535:2010 (2017–2018)

Member, International Electrotechnical Commission (IEC) National Committee New Zealand (2011–2012)

Research Supervision

Aditya Mehta, Ph.D. candidate, Ancillary services for grid resilience using electric vehicle batteries, Co-supervised with Dr. Rachid Yazami (2022–present)

Yang Yang, Ph.D. candidate, Market clearing mechanisms of flexible demand resources for frequency response (2020–present)

Jingqiu Zhang, Ph.D. candidate, Cyber security of inverter-based power systems (2019–present)

Andrey Gobornov, Ph.D. candidate, Stability of inverter-based renewables (2018–present)

Graduated Ph.D. and Master Students

Gurupraanesh Raman, Ph.D., Stability analysis of droop-controlled inverter-based power systems, 2021.

Winner of Tan Ean Kiam Arts Award in 2018.

Currently Postdoctoral Researcher at Singapore-ETH Centre

Gururaghav Raman, Ph.D., Weaponizing disinformation to attack critical infrastructure, 2021.

Winner of Tan Ean Kiam Arts Award in 2018.

Currently Postdoctoral Researcher at Singapore-ETH Centre

Salish Maharjan, Ph.D., Co-advisor with Prof. Ashwin Khambadkone at National University of Singapore, Analysis and predictive control of power distribution systems with high penetration of PV resources, 2020.

Currently Postdoctoral Researcher at National University of Singapore

Colm O'Rourke, Ph.D. from Massachusetts Institute of Technology, Thesis Committee (Co-advisor) with Prof. James L. Kirtley, Decentralized power systems: reference-frame theory and stability region generation, 2020.

Currently Senior Data Analyst at Poloniex

Kawsar Ali, Ph.D., Co-advisor with Prof. Pritam Das at National University of Singapore, High performance three-phase AC/DC converters for data centres, 2018.

Currently Postdoctoral Researcher at Oxford University

Xilei Cao, M.Sc., Implementing generative adversarial networks for linear systems, 2018.

Currently Software Engineer at Huawei - Beijing

Qun Zhang, M.Sc., Optimal scheduling of electric vehicles in the presence of customer mobility, 2018.

Currently Software Engineer at Huawei - Singapore

Adedayo Aderibole, M.Sc., Domain of stability characterization for hybrid microgrids considering different power sharing conditions, 2017.

Currently Ph.D. Candidate at Massachusetts Institute of Technology

Maksymilian Klimontowicz, M.Sc., Optimal sliding-mode load frequency control with high penetration of variable distributed energy resources, 2015.

Currently Protection Engineer at General Electric

Abdulla Al Shammari, M.Sc., Damping control loops for mitigating power oscillation using wind farms, 2015.

Currently Project Manager of Strategy & Organizational Development at Abu Dhabi Police

Past Researchers

John Soon, Research Fellow, Fault-tolerant power converters for distributed energy resources, 2019–2020.

Currently Senior Analog Design Engineer at Zerro Power Systems

Subham Sahoo, Research Fellow, Detection and mitigation of malicious attacks in microgrids, 2018–2019.

Currently Assistant Professor at Aalborg University

Yaonan Kong, Research Fellow, Estimation of baseline load profiles of residential households, 2016.

Currently Quantitative Analyst at Investment Company of the People's Republic of China

Haris Khalid, Research Fellow, Real-time monitoring of power oscillations using synchrophasor measurements, 2014–2016.

Currently Assistant Professor at Higher College of Technology Sharjah

Chih-Lun Chang, Research Engineer, Security of demand response services, 2014–2015.

Currently Software Engineer at Verily

Publications

— Underlined names are graduate students and postdoctoral researchers supervised by me. The corresponding author of each journal article is denoted by * symbol.

Journal Articles

1. A. Gorbunov, J. C. -H. Peng*, J. Bialek, and P. Vorobev, Identification of Stability Regions in Inverter-Based Microgrids, IEEE Transactions on Power Systems, Early Access.
2. Y. Yang, J. C. -H. Peng*, and Z. Ye, A Market Clearing Mechanism Considering Primary Frequency Response Rate, IEEE Transactions on Power Systems, Vol. 36, No. 6, pp. 5952-5955, 2021.
3. J. C. -H. Peng*, G. P. Raman, J. Soon, and N. Hatziargyriou, Droop-Controlled Inverters as Educational Control Design Project, IEEE Transactions on Power Systems, Early Access.
4. G. R. Raman, and J. C. -H. Peng*, Electricity Consumption of Singaporean Households Reveals Proactive Community Response to COVID-19 Progression, Proceedings of the National Academy of Sciences, vol. 118, no. 34, pp. e2026596118, 2021.

5. Y. Yang, **J. C. -H. Peng**, C. Ye*, Z. Ye, and Y. Ding, A Criterion and Stochastic Unit Commitment towards Frequency Resilience of Power Systems, IEEE Transactions on Power Systems, Early Access.
6. G. P. Raman, and **J. C. -H. Peng***, Filter Debussing Control of Droop-controlled Inverters, IEEE Transactions on Power Electronics, vol. 37, no. 11, pp. 13107-13117, 2021.
7. M. Waniek, G. R. Raman, B. AlShebli, **J. C. -H. Peng***, and T. Rahwan*, Traffic Networks are Vulnerable to Disinformation Attacks, Scientific Reports, vol. 11, no. 5329, 2021.
8. J. Zhang, S. Sahoo, **J. C. -H. Peng***, and F. Blaabjerg, Mitigating Concurrent False Data Injection Attacks in Cooperative DC Microgrids, IEEE Transactions on Power Electronics, Early Access.
9. J. Soon, G. P. Raman, **J. C. -H. Peng***, and D. D. C. Lu, Current Ripple Reduction Using AC Core Biasing in DC-DC Converters, IEEE Transactions on Industrial Electronics, vol. 68 no. 10, pp. 10058-10067, 2021.
10. Z. Qiu, **J. C. -H. Peng**, H. Yang*, and D. Srinivasan, Modeling and Analysis of Inner controls Effects on Damping and Synchronizing Torque Components in VSG-controlled Converter, IEEE Transactions on Energy Conversion, vol. 36, no. 1, pp. 488-499, 2021.
11. S. Sahoo, and **J. C. -H. Peng***, A Localized Event Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks, IEEE Transactions on Cybernetics, vol. 51, no. 7, pp. 3687-3698, 2021.
12. G. R. Raman, B. AlShebli, M. Waniek, T. Rahwan*, and **J. C. -H. Peng***, How Weaponizing Disinformation Can Bring Down a City's Power Grid, PLOS ONE, vol. 15, no. 8, 2020.
13. S. Maharjan*, A. Khambadkone, and **J. C. -H. Peng**, Robust Constrained Model Predictive Voltage Control in Active Distribution Networks, IEEE Transactions on Sustainable Energy, vol. 12, no. 1, pp. 400-411, 2020.
14. A. Gorbunov, **J. C. -H. Peng***, and P. Vorobev, Identification of Critical Clusters in Inverter-based Microgrids, Electric Power Systems Research, vol. 189, 2020.
15. S. Maharjan*, A. Khambadkone, and **J. C. -H. Peng**, Enhanced Z-bus Method for Analytical Computation of Voltage Sensitivities in Distribution Networks, IET Generation, Transmission & Distribution, vol. 14, no. 16, pp. 3187-3197, 2020.
16. J. Soon, D. D. C. Lu, **J. C. -H. Peng***, and W. Xiao, Reconfigurable Non-Isolated DC-DC Converter with Fault-Tolerant Capability for High Reliability, IEEE Transactions on Power Electronics, vol. 35, no. 9, pp. 8934-8943, 2020.
17. G. P. Raman, **J. C. -H. Peng***, and H. Zeineldin, Enhancing Situational Awareness in Electrical Power Infrastructures, IEEE Transactions on Smart Grid, vol. 11, no. 4, pp. 2805-2815, 2020.
18. S. Sahoo, **J. C. -H. Peng***, S. Mishra, and T. Dragicevic, Distributed Screening of Hijacking Attacks in DC Microgrids, IEEE Transactions on Power Electronics, vol. 35, no. 7, pp. 7574-7582, 2020.
19. G. P. Raman, and **J. C. -H. Peng***, Mitigating Stability Issues due to Line Dynamics in Droop-Controlled multi-Inverter Systems, IEEE Transactions on Power Systems, vol. 35, no. 3, pp. 2082-2092, 2020.

20. K. Ali*, S. Dube, P. Das, **J. C. -H. Peng**, and D. Rogers, Improvement of ZVS Range and Current Quality of the Nine-Switch Single-Stage AC-DC Converter, *IEEE Transactions on Power Electronics*, vol.5, no.35, pp. 4658-4668, 2020.
21. H. M. Khalid*, and **J. C. -H. Peng**, Bi-directional Charging in V2G Systems: An In-Cell Variation Analysis of Vehicle Batteries, *IEEE Systems Journal*, vol. 14, no. 3, pp. 3665 - 3675, 2020.
22. S. Sahoo, **J. C. -H. Peng***, D. Annavaram, S. Mishra, and T. Dragicevic, On Detection of False Data in Cooperative DC Microgrids-A Discordant Element Approach, *IEEE Transactions on Industrial Electronics*, vol. 67, no. 8, pp. 6562-6571, 2020.
23. H. M. Khalid*, S. Muyeen, and **J. C. -H. Peng**, Cyber-attacks in a Looped Energy-Water Nexus: An Inoculated Sub-observer-Based Approach, *IEEE Systems Journal*, vol.14, no. 2, pp. 2054 - 2065, 2020.
24. G. R. Raman, **J. C. -H. Peng***, and T. Rahwan, Manipulating Residents' Behavior to Attack the Urban Power Distribution System, *IEEE Transactions on Industrial Informatics*, vol.15, no.10, pp. 5575 - 5587, 2019.
25. S. Sahoo, S. Mishra, **J. C. -H. Peng***, and T. Dragicevic, A Stealth Cyber Attack Detection Strategy for DC Microgrids, *IEEE Transactions on Power Electronics*, vol.34, no.8, pp. 8162 - 8174, 2019.
26. G. R. Raman, Y. Kong, **J. C. -H. Peng***, and Z. Ye, Demand Baseline Estimation using Similarity-based technique for Tropical and Wet Climates, *IET Generation, Transmission & Distribution journal*, vol.12, no.13, pp. 3296-3304, 2018.
27. C. L. Chang, and **J. C. -H. Peng***, A Decision-Making Auction Algorithm for Demand Response in Microgrids, *IEEE Transactions on Smart Grid*, vol.9, no.4, pp. 3553-3562, 2018.
28. A. Adedayo, H. Zeineldin, M. El Moursi, **J. C. -H. Peng**, and M. Al Hosani*, Domain of Stability Characterization for Hybrid Microgrids Considering Different Power Sharing Conditions, *IEEE Transactions on Energy Conversion*, vol.33, no.1, pp. 312-323, 2018.
29. S. Mahajan, **J. C. -H. Peng***, J. Elizondo Martinez, W. Xiao, P. H. Huang, and J. L. Kirtley, Improved Sample Value Adjustment for Synchrophasor Estimation at Off-Nominal Power System Conditions, *IEEE Transactions on Power Delivery*, vol.32, no.1, pp.33-44, 2017.
30. H. M. Khalid, and **J. C. -H. Peng***, Immunity Toward Data-Injection Attacks Using Multisensor Track Fusion-Based Model Prediction, *IEEE Transactions on Smart Grid*, vol.8, no.2, pp.697-707, 2017.
31. H. R. Chamorro*, C. A. Ordonez, **J. C. -H. Peng**, and M. Ghandhari, Non-Synchronous Generation Impact on Power System Coherency, *IET Generation, Transmission & Distribution*, vol.10, no. 10, pp. 2443-2453, 2016.
32. H. M. Khalid, and **J. C. -H. Peng***, A Bayesian Algorithm to Enhance the Resilience of WAMS Applications Against Cyber Attacks, *IEEE Transactions on Smart Grid*, vol.7, no.4, pp. 2026-2037, 2016.
33. H. M. Khalid, and **J. C. -H. Peng***, Tracking Electromechanical Oscillations: An Enhanced Maximum-Likelihood Based Approach, *IEEE Transactions on Power Systems*, vol. 31, no.3, 1799-1808, 2016.

34. P. H. Huang*, W. Xiao, **J. C. -H. Peng**, and J. L. Kirtley, Comprehensive Parameterization of Solar Cell: Improved Accuracy with Simulation Efficiency, *IEEE Transactions on Industrial Electronics*, vol. 63, no. 3, pp. 1549-1560, 2016.
35. M. Klimontowicz, A. Al-Hinai*, and **J. C. -H. Peng**, Optimal LFC SMC for three–Area power system with high penetration of PV, *Journal of Electric Systems*, vol. 12, no. 1, pp. 68-84, 2016.
36. H. M. Khalid, Q. Ahmed, **J. C. -H. Peng***, and G. Rizzoni, Current-Split Estimation in Li-Ion Battery Pack: An Enhanced Weighted Recursive Filter Method, *IEEE Transactions on Transportation Electrification*, vol. 1, no. 4, pp. 402-412, 2015.
37. H. M. Khalid, Q. Ahmed, and **J. C. -H. Peng***, Health Monitoring of Li-Ion Battery Systems: A Median Expectation-based Diagnosis Approach (MEDA), *IEEE Transactions on Transportation Electrification*, vol. 1, no. 1, pp. 94-105, 2015.
38. H. M. Khalid, and **J. C. -H. Peng***, Improved Recursive Electromechanical Oscillations Monitoring Scheme: A Novel Distributed Approach, *IEEE Transactions on Power Systems*, vol. 30, no. 2, pp. 680-688, 2015.
39. H. M. Khalid*, **J. C. -H. Peng**, and M. Mahmoud, An Enhanced Distributed Estimation Based on Prior Information, *IET Signal Processing*, vol. 9, no. 1, pp. 60-72, 2015.
40. **J. C. -H. Peng**, and N. -K. C. Nair*, Enhancing Kalman Filter for Tracking Ringdown Electromechanical Oscillations, *IEEE Transactions on Power Systems*, vol. 27, no.2, pp. 1042-1050, 2012.
41. **J. C. -H. Peng**, and N. -K. C. Nair*, Adaptive Sampling Scheme for Monitoring Oscillations using Prony Analysis, *IET Generation, Transmission & Distribution*, vol. 3, no. 12, pp. 1052-1060, 2009.

Media Coverage

— Hyperlinks are underlined.

1. N. Meah, Exit of cheaper retailers a fresh blow for some households already using more electricity while working, studying at home, *TODAY*, 19 October 2021. URL: <https://www.todayonline.com>.
2. H. X. Yuen, Electricity consumption reveals proactive community response to COVID-19 progression, *NUS Press Releases Insights Research COVID-19*, 4 October 2021. URL: <https://news.nus.edu.sg>.
3. Y. A. Tan, Study: Household electricity consumption is related to the number of new cases of COVID-19, showing that people proactively prevent pandemic at home (in Mandarin Chinese), *Zhaobao*, 4 October 2021. URL: <https://www.zaobao.com.sg>.
4. **J. C. -H. Peng**, Prepare Singapore’s electricity grid for new era, *The Strait Times*, 28 October 2020. URL: <https://www.straitstimes.com>.
5. A. Peters, Hackers Could Take Down the Power Grid by Telling Everyone It was a Good Time to Turn Things On, *Fast Company*, 21 August 2020, URL: <https://www.fastcompany.com>.
6. P. Dockrill, Weaponised Disinformation Could Unleash City-Wide Blackouts, Researchers Warn, *Science Alert*, 22 August 2020, URL: <https://www.sciencealert.com>.

7. J. C. -H. Peng, In the Fight against Fake News, Dont Let Emotions Take Hold, Today, 6 May 2020. URL: <https://www.todayonline.com>.
8. J. C. -H. Peng, Debate on Cutting Carbon Emissions Will Define Our Future, The Strait Times, 7 March 2020. URL: <https://www.straitstimes.com>.
9. J. C. -H. Peng, Consumers Should Switch Retailers when Price Plan Goes Sour, The Strait Times, 22 February 2019. URL: <https://www.straitstimes.com>.

Invited Talks

— Hyperlinks are underlined.

1. **J. C. -H. Peng**, Assessing COVID-19 response using household electricity data, ETH Risk Center, ETH Zurich, Switzerland, November 2021.
2. **J. C. -H. Peng**, Building Grid Resilience with Inverter-based Resources and Prosumer Behavior, National Taiwan University, November 2021.
3. **J. C. -H. Peng**, W. Xiao, and Q. Han, A MATLAB/Simulink Approach of Photovoltaic Power Systems: Designing, Modeling, Simulation, and Control, Tutorial Session, IEEE Energy Conversion Congress and Exposition (ECCE), Vancouver, British Columbia, Canada, October 2021.
4. **J. C. -H. Peng**, Resilience in Cyber-Physical Systems, APRU Multi-Hazards Summer Lecture Series: Creating a Resilient Society Against Multiple Hazards, Tohoku University, Japan, August 2021.
5. **J. C. -H. Peng**, Weaponizing Disinformation to Attack Critical Infrastructure, IEEE Young Professional Affinity Group, Denmark, March 2021.
6. **J. C. -H. Peng** Global Renewable Power Generation Scenario and Challenges in Microgrids, National Institute of Technology Silchar, Assam, India, September 2020.
7. **J. C. -H. Peng**, From Engineering to Synthetic Biology, iGEM LifeHack Workshop, Singapore, February 2019.
8. **J. C. -H. Peng**, Facilitating Reliable Future Energy Trading for United Arab Emirates, National University of Singapore, Singapore, November 2015.
9. **J. C. -H. Peng**, Enhancing Situational Awareness in Electrical Power Infrastructures, Center for Automotive Research, Ohio State University, Columbus, Ohio, August 2015.
10. **J. C. -H. Peng**, Applications using Phasor Measurement Units, ABB Middle East User Group Meeting, Abu Dhabi, United Arab Emirates (UAE), May 2015.
11. **J. C. -H. Peng**, Moving Forward: Integration of Wide-Area Monitoring Systems, ABB Corporate Research Center, Vasteras, Sweden, March 2015.
12. **J. C. -H. Peng**, Interconnecting our World: Monitoring Inter-Area Oscillations in GCC Interconnection, KTH Royal Institute of Technology, Stockholm, Sweden, March 2015.
13. **J. C. -H. Peng**, Smarter Grid: Enhancing Power System Security, Ventyx, Abu Dhabi, UAE, November 2014.
14. **J. C. -H. Peng**, Renewable Integration: Challenges and Projections, Harvard Project for Asian and International Relations Conference, Dubai, UAE, November 2013.

15. **J. C. -H. Peng**, Monitoring System Dynamics in the Middle Eastern Power Grids, Center for Ultra-Wide-Area Resilient Electric Energy Transmission Networks (CURENT), Rensselaer Polytechnic Institute, Troy, New York, July 2013.
16. **J. C. -H. Peng**, Transmission Tomorrow: New Zealand Synchrophasor Development, University of Canterbury, Christchurch, New Zealand, May 2012.

Conference Papers

1. J. Zhang, G. P. Raman, G. R. Raman, **J. C. -H. Peng**, and W. Xiao, A Resilient Scheme for Mitigating False Data Injection Attacks in Distributed DC Microgrids, IEEE Energy Conversion Congress and Exposition (ECCE), 2021.
2. H. Li, W. Xiao, S. Li, and **J. C. -H. Peng**, Enhanced Modulation Technique for Power Quality Improvement of LED Drivers, IEEE Energy Conversion Congress and Exposition (ECCE), 2021.
3. Q. Zhang, G. R. Raman, and **J. C. -H. Peng**, EV Charging Optimization based on Day-ahead Pricing Incorporating Consumer Behavior, IEEE Region 10 Conference, 2020.
4. J. Zhang, and **J. C. -H. Peng**, and J. Y. Siu, A Novel Design of Concurrent Cyber Attacks in Cooperative DC Microgrids, IEEE Power and Energy Society Transmission & Distribution Exposition, 2020.
5. G. P. Raman, X. Cao, A. Li, J. Lu, G. R. Raman, and **J. C. -H. Peng**, cGANs-based Real-time Stability Region Determination for Inverter-based Systems, IEEE Power and Energy Society General Meeting, 2020.
6. K. Ali, G. P. Raman, **J. C. -H. Peng**, and W. Xiao, A GaN-based High Step-Up Half-Bridge Resonant Converter for Interfacing PV modules to DC Data Centers, IEEE International Future Energy Electronics Conference, 2019.
7. G. P. Raman, and **J. C. -H. Peng**, and S. Venkatachari, On the Effect of Line Dynamics in Multi-inverter Systems with Generalized Droop Control, IEEE Energy Conversion Congress and Exposition (ECCE), 2019.
8. G. R. Raman, B. Zhao, **J. C. -H. Peng**, and M. Weidlich, Dynamic Decision Making for Demand Response through Adaptive Event Stream Monitoring, IEEE Power and Energy Society General Meeting, 2019.
9. R. Rana, S. Sahoo, S. Mishra, and **J. C. -H. Peng**, Performance Validation of Cooperative Secondary Controllers in Autonomous AC Microgrids under Communication Delays, IEEE Power and Energy Society General Meeting, 2019.
10. S. Maharjan, A. M. Khambadkone, and **J. C. -H. Peng**, Integration of Centralized and Local Voltage Control Scheme in Distribution Network to Reduce the Operation of Mechanically Switched Devices, IEEE PowerTech Conference, 2018.
11. S. Sahoo, **J. C. -H. Peng**, S. Mishra, T. Dragicevic, A Local Voting Protocol Based Cooperative DC Community Microgrids, IEEE 3rd International Conference on DC Microgrids (ICDCM) 2019.
12. G. R. Raman, and **J. C. -H. Peng**, A Hybrid Customer Baseline Load Estimator for Small and Medium Enterprises, 44th Annual Conference of the IEEE Industrial Electronics Society (IECON), 59-64, 2018.

13. G. P. Raman, H. X. Chiang, K. Ali, and **J. C. -H. Peng**, Impact of Supervisory Control Inputs in Multi-Inverter Distribution Systems, 44th Annual Conference of the IEEE Industrial Electronics Society (IECON), 188-193, 2018.
14. G. R. Raman, and **J. C. -H. Peng**, Residential Microgrids for Increasing Community Acceptance of Smart Grid Services, IEEE/PES Transmission and Distribution Conference and Exposition (T&D), 2018.
15. G. P. Raman, G. R. Raman, **J. C. -H. Peng**, and W. Xiao, Bridging the transition to DC distribution: A hybrid microgrid for residential apartments, IEEE Innovative Smart Grid Technologies-Asia, 2017.
16. H. R. Chamorro, C. A. Ordonez, **J. C. -H. Peng**, F. Gonzalez-Longatt, V. K. Sood, and A. M. Sharaf, Impact of Non-synchronous Generation on Transmission Oscillations Paths, IEEE Texas Power and Energy Conference (TPEC), 2018.
17. C. A. Ordonez, H. R. Chamorro, J. Quintero, R. Leelaruji, **J. C. -H. Peng**, and L. Nordström, Prony-based On-line Oscillation Detection with Real PMU Information, IEEE Colombian Conference on Robotics and Automation (CCRA), 2016.
18. H. M. Khalid, Q. Ahmed, **J. C. -H. Peng**, and G. Rizzoni, Pack-Level Current-Split Estimation for Health Monitoring in Li-Ion Batteries, American Control Conference (ACC), 2016.
19. H. R. Chamorro, C. A. Ordonez, **J. C. -H. Peng**, and M. Ghandhari, On-line Oscillations Monitoring Under High Penetration of Non-Synchronous Generation, IEEE International Conference on Smart Grid Communications (SmartGridComm), 2016.
20. A. Alamin, H. M. Khalid, and **J. C. -H. Peng**, Power System State Estimation Based on Iterative Extended Kalman Filtering and Bad Data Detection using Normalized Residual Test, IEEE Power and Energy Conference, 2015.
21. S. Maharjan, **J. C. -H. Peng**, and J. Elizondo Martinez, Improved Off-Nominal Operation of Phasor Measurement Units using Discrete Fourier Transformation, IEEE Power and Energy Conference, 2015.
22. A. Alamin, and **J. C. -H. Peng**, A Detailed Tuning Evaluation of Sensitivity Threshold using LNRT for Bad Data Detection in State Estimation, IEEE 8th GCC Conference and Exhibition, 2015.
23. M. L. Klimontowicz, A. Al-Hinai, and **J. C. -H. Peng**, Decentralized Sliding Mode Control for Load Frequency Problem in Three-Area Power Systems, IEEE 8th GCC Conference and Exhibition, 2015.
24. **J. C. -H. Peng**, A. Al-Hinai, A. Al-Busaidi, H. Al-Riyami, A. Al-Nadabi, O. H. Abdalla, R. Fronius, and P. Miksa, A Review of Reactive Compensation in the Main Interconnected Systems of Oman, IEEE 8th GCC Conference and Exhibition, 2015.
25. S. Maharjan, **J. C. -H. Peng**, W. Xiao, Improved Deterministic Real-time Estimation of Maximum Power Point in Photovoltaic Power Systems, IEEE 8th GCC Conference and Exhibition, 2015.
26. **J. C. -H. Peng**, and J. L. Kirtley, An Improved Empirical Mode Decomposition Method for Monitoring Electromechanical Oscillations, IEEE Innovative Smart Grid Technologies (ISGT) Conference, 2014.

27. **J. C. -H. Peng**, and N. K. C. Nair, Phasor Measurement Network and its Applications in the New Zealand Grid: Overview and Experiences, IEEE Power and Energy Society General Meeting, 2011.
28. **J. C. -H. Peng**, A. Meads, N. K. C. Nair, Exploring Parallel Processing for Wide Area Measurement Data Applications, IEEE Power and Energy Society General Meeting, 2011.
29. N. K. C. Nair, **J. C. -H. Peng**, R. Sherry, Synchrophasors and Supporting Infrastructure in New Zealand Transmission Grid, IEEE Power and Energy Society General Meeting, 2011.
30. Q. Ao, **J. C. -H. Peng**, and N. K. C. Nair, Assessing Sampling for Prony Analysis and Kalman Filtering in Monitoring Electromechanical Oscillations, Australasian Universities Power Engineering Conference, 2011.
31. **J. C. -H. Peng**, N. K. C. Nair, A. L. Maryani and A. Ahmad, Adaptive Power System Stabilizer Tuning Technique for Damping Inter-Area Oscillations, IEEE Power and Energy Society General Meeting, 2010.
32. F. Wu, **J. C. -H. Peng**, N. K. C. Nair, D. Goodwin, Incorporating Instrument Transformer Errors to Voltage Stability Assessment, Australasian Universities Power Engineering Conference, 2010.
33. **J. C. -H. Peng**, A. Meads, and N. K. C. Nair, Parallel Computing for Smart Power Oscillation Monitoring using Synchrophasor Measurements, IEEE Region 10 Conference, 2010.
34. **J. C. -H. Peng**, and N. K. C. Nair, Comparative Assessment of Kalman Filter and Prony Methods for Power System Oscillation Monitoring, IEEE Power and Energy Society General Meeting, 2009.
35. **J. C. -H. Peng**, N. K. C. Nair, J. Zhang, and A. K. Swain, Detection of Lightly Damped Inter-area Power Oscillations using Extended Complex Kalman Filter, IEEE Region 10 Conference, 2009.
36. **J. C. -H. Peng**, and N. K. C. Nair, Effects of Load Characteristics on the Damping Performance of Power System Stabilizers for Inter-Area Oscillations, Australasian Universities Power Engineering Conference, 2009.
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