Shailendra Kumar Dwivedi (Ph.D., MIEEE)

Assistant Professor.

Department of Electrical Engineering,

S V National Institute of Technology, Surat, Gujarat, India.

https://scholar.google.com/citations?user=79dn960AAAJ&hl=e

Email Id: skdwivedi@eed.svnit.ac.in, er.dwivedi88@gmail.com

Tel: +91-9716379527 (M)

EXPERIENCE AND KEY SKILLS

- Assistant Professor at S V National Institute of Technology, Surat, from 2 December 2019 to till date.
- **Post-Doctoral Research Fellow** at Khalifa University (Petroleum Institute), Abu Dhabi from May 2019 to November 2019.
- Four years of experience in research and development, as a part of Ph.D. and M.Tech. Degree, at distinguished R&D laboratory, Indian Institute of Technology (IIT) Delhi, India.
- > Strong background in the field of renewable energy, microgrid, power converters, power quality, PV water Pumping and Electric Drives.
- Expertise in modelling, design and simulation of the various topology of PV based microgrid.
- Extensive hands-on experience in the **analysis**, **hardware development and testing** of the various topology of grid interfaced PV system, seamless microgrid and control algorithms.
- Exposure to various **digital signal** (TMS320F28377S, TMS320F2812, TMS320F28335, AT89C52) and other **real time processors controllers** (dSPACE DS-1104/1103).
- Involved in writing the research proposal, managing of projects at IIT Delhi.
- Three year's experience of teaching at Vidya college of Engineering, Meerut (UP) and conducting the laboratory experiments for B.Tech. & M.Tech. Scholars at IIT Delhi.

TECHNICAL SKILLS

- **Simulation:** MATLAB, PSpice, PSCAD.
- **▶ Programming:** C/C++.
- **Real-Time Controllers:** DSPs, dSPACE.
- Analog/digital circuit design: Signal conditioning board, Gate driver circuits.
- **PCB Designing:** Design Spark PCB Design.

EDUCATION

- 1) **Ph.D. in Electrical Engineering** with specialization in **Power Electronics, Electrical Machines and Drives** (**PEEMD**) from **Indian Institute of Technology (IIT) Delhi**. Duration: July, 2015 to May 2019.
- 2) M.Tech. in Electrical Engineering with specialization in Power Electronics, Electrical Machines and Drives (PEEMD) from Indian Institute of Technology (IIT) Delhi with CGPA of 8.64/10. Duration: 2013-2015 (2 years).
- 3) **B.Tech. in Electrical & Electronics Engineering** from **Bharat Institute of Technology (BIT) Meerut** (**U.P.**) with **76.06%** (Honors.) (Ranked Third in Class). Duration: 2006-2010 (4 years).
- 4) **Intermediate (Class-XII)** from J. L. N. Inter College Kanpur with **76.60%** marks (Ranked First in School) (2005).
- 5) **High School** (Class-X) from P. B. I. College Hamirpur (U.P.) with **64%** marks (Ranked Second in School) (2003).

HONORS AND AWARDS

- Received **Ministry of Electronics and Information Technology (MeitY) assistantship** from Government of India during Ph.D. programme.
- ▶ **Best paper Award** on paper titled "Multi-Objective Single Stage SPV System Integrated to 3P4W Distribution Network Using DMSI Based Control Technique" IEEE Uttar Pradesh Section Conference on Electrical, Computer and Electronics (UPCON-2016) at IIT BHU Varanasi (India), 09-11 Dec. 2016.
- Selected for **POSOCO Power System** Award (in Master Category) of Foundation of Innovation and Technology Transfer, Indian Institute of Technology Delhi and Power System Corporation, Govt. of India in the year of 2016.
- ➤ **Best paper Award** on paper titled "Distributed Incremental Adaptive Filter Controlled Residential Photovoltaic-Battery Microgrid for Rural Electrification" IEEE Uttar Pradesh Section Conference on Electrical, Computer and Electronics (UPCON-2018) at MMMUT Gorakhpur (India), 02-4 Nov. 2018.
- > Recipient of Prof. Som Nath Mahendra Student Travel Awards for the IEEE PEDES 2018.
- Selected for **POSOCO Power System** Award (in Doctoral Category) of Foundation of Innovation and Technology Transfer, Indian Institute of Technology Delhi and Power System Corporation, Govt. of India in the year of 2019.

INTERNATIONAL EXPOSURE

- ➤ Visited **Imperial College London, England,** for collaborative work related to "Reliable and Efficient System for Community Energy Solution" project.
- ➤ Visited **University of Strathclyde**, **Scotland**, for collaborative work (Optimal control for grid integrated solar PV energy conversion system).
- ➤ Visited **University of Nottingham**, **UK**, for collaborative work related to JUICE (Joint UK-India Clean Energy Centre) project.
- ➤ Presented research paper in 43rd Annual Conference of the IEEE Ind. Electron. Society (**IECON 2017**) held in **Beijing, China**.

PATENTS / PUBLICATIONS / TECHNICAL PRESENTATIONS

- **04 Patents** (List is enclosed within).
- 88 **papers** (published/accepted) in various **International Journals** and **Conference Proceedings.** (List is enclosed within).
 - ➤ International Journals (IEEE / IET): 31 and Springer Journal: 02
 - National /International Conferences: 55
- More than 20 Technical presentations at various international conferences and technical events.

PERSONAL DETAILS

Father's Name:Shri Rampal DwivediDate of Birth:April 20, 1988Place of Birth:Mahoba (U.P.), India

Nationality: Indian

Language Known:English, HindiSex/Marital Status:Male/ Single

Hobbies: Badminton, Cricket and listening songs

PROFESSIONAL AFFILIATIONS

- Professional Member of **IEEE** (Institute of Electrical and Electronics Engineers).
- Reviewer of various international journals such as IEEE and IET.

REFERENCES

1) Prof. (Dr.) Bhim Singh,

(FIEEE, FIE (E), FIET, FIETE, FINAE, FINSA, FNSc, FTWAS)
Dean Academics,
Department of Electrical Engineering,
Indian Institute of Technology Delhi,
Hauz Khas, New Delhi-110016 (India)

Tel: +91-11-2659-1045 (O) +91-9811502125 (M)

Emails: bsingh@ee.iitd.ac.in

2) Prof. (Dr.) G. Bhuvaneswari,

(FIEEE, FIE (I), FINAE, FIET, FIETE, LMISTE)

Department of Electrical Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi-110016 (India)

Tel: +91-11-2659-1092 (O) +91-9912299714(M)

Email: bhuvan@ee.iitd.ac.in

I hereby, declare that the information furnished above is true to the best of my knowledge.

Dated: April 13, 2020 (Shailendra Kumar)

LIST OF PUBLICATIONS

• <u>Patent (4)</u>

- [1] Bhim Singh and **Shailendra Kumar**: Intelligent Controller for Grid Synchronization of Three-phase Microgrid with PV and Battery Storage, **Indian Patent Ref. No. FT/IPR/BS/DEE/2017/0346**, 2017.
- [2] Bhim Singh and Shailendra Kumar: Low cost and effective line interactive solar-UPS system with power quality and seamless transfer capabilities, Indian Patent Ref. No. FT/IDF/10/2018/118, Year, 2018.
- [3] Bhim Singh, Utkarsh Sharma and **Shailendra Kumar**: A Grid Interfaced SPV Array Fed Water Pumping System. **Indian Patent Ref. No: FT/105/BS/DEE/2016/1199,** Year: 12/2016.
- [4] Bhim Singh, S. Praneeth and **Shailendra Kumar** Finite state machine based optimized control for the multifunctional battery energy storage system with peak power saving and improved power quality **Indian Patent Ref. No.** IDF/09/2018/105, Year: 2018.

Published SCI Journals in 2020

- [1] Bhim Singh, and **Shailendra Kumar**, "Distributed Incremental Adaptive Filter Controlled Grid Interactive Residential Photovoltaic-Battery Based Microgrid for Rural Electrification" *IEEE Trans. Industry Applications*, Early Access, 2020.
- [2] Shailendra Kumar, Laxmi Narayan Patel, Bhim Singh, and A. L. Vyas "Self-Adjustable Step Based Control Algorithm for Grid Interactive Multifunctional Single-Phase PV-Battery System under Abnormal Grid Conditions" *IEEE Trans. Industry Applications*, Early Access, 2020.
- [3] Sandeep Kumar Sahoo, **Shailendra Kumar** and Bhim Singh "VSSMLMS Based Control of Multifunctional PV-DSTATCOM System in Distribution Network" *IET Generation, Transmission & Distribution*, **Early Access, 2020.**
- [4] S. Bhattacharyya, **Shailendra Kumar** and B. Singh, "Adaptive Damped Circular Current Limit Control for PV-Grid Tied System," *IEEE Trans. Industry Applications*, Early Access, 2020.
- [5] Gaurav Modi, **Shailendra Kumar** and Bhim Singh, "Improved Widrow-Hoff Based Adaptive Control of Multi-Objective PV-DSTATCOM System" *IEEE Trans. Industry Applications*, Early Access, 2020.

- [6] A. K. Singh Shailendra Kumar, and B. Singh, "Solar PV Energy Generation System Interfaced to Three Phase Grid with Improved Power Quality, *IEEE Transactions on Industrial Electronics*. vol. 67, no. 5, pp. 3798-3808, May 2020.
- [7] U. K. Kalla, H. Kaushik, B. Singh and Shailendra Kumar, "Adaptive Control of Voltage Source Converter Based Scheme for Power Quality Improved Grid-Interactive Solar PV- Battery System," *IEEE Transactions on Industry Applications*, vol. 56, no. 1, pp. 787-799, Jan.-Feb. 2020.

Published SCI Journal in 2019

- [8] **Shailendra Kumar** and B. Singh, "Seamless Operation and Control of Single-Phase Hybrid PV-BES-Utility Synchronized System," *IEEE Trans. Industry Applications*, vol. 55, no. 2, pp. 1072-1082, March-April 2019.
- [9] **Shailendra Kumar** and B. Singh "Self-Normalized Estimator Based Control for Power Management in Residential Grid Synchronized PV-BES Microgrid" *IEEE Trans. Industrial Informatics*, vol. 15, no. 8, pp. 4764-4774, Aug. 2019.
- [10] **Shailendra Kumar**, B. Singh, B. C. Pal, L. Xu and A. Al-Durra, "Energy Efficient Three-Phase Utility Interactive Residential Microgrid With Mode Transfer Capabilities at Weak Grid Conditions," *IEEE Transactions on Industry Applications*, vol. 55, no. 6, pp. 7082-7091, Nov.-Dec. 2019.
- [11] J. Goud, R Kalpana, Bhim Singh and **Shailendra Kumar** "A Global Maximum Power Point Tracking Technique of Partially Shaded Photovoltaic Systems for Constant Voltage Applications" *IEEE Trans. Sustainable Energy*, vol. 10, no. 4, pp. 1950-1959, Oct. 2019.
- [12] **Shailendra Kumar** and B. Singh, "Dual Mode Control of Utility Interactive Microgrid," *IET Renewable Power Generation*, Early Access, 2019. DOI:10.1049/iet-rpg.2018.6087
- [13] **Shailendra Kumar,** C. Jain and B. Singh, "An Adaptive Pseudo-Linear Control for Grid Supportive PV System," *IET Generation, Transmission & Distribution*, vol. 13, no. 9, pp. 1653-1660, 7 5 2019.
- [14] S. Praneeth, **Shailendra Kumar**, Bhim Singh and T.S. Bhatti "Finite State Machine Control and Power Quality Enhancement using Goertzel filter for Multifunctional Battery Energy Storage System" *IET Generation*, *Transmission & Distribution*, vol. 13, no. 11, pp. 2145-2153, 2019.
- [15] S. Praneeth, Shailendra Kumar, Bhim Singh and T.S. Bhatti "Multimode Operation of PV-Battery System with Renewable Intermittency Smoothening and Enhanced Power Quality" *IET Renewable Power Generation*, vol. 13, no. 6, pp. 887-897, 29 4 2019.
- [16] Kanwar Pal, **Shailendra Kumar**, Bhim Singh and Tara Kandpal "Improved phase-locked loop-based control for grid-integrated PV system" *IET Renewable Power Generation*, **Early Access**, 2019. DOI:10.1049/iet-rpg.2019.036.

Published SCI Journal in 2018

- [17] **Shailendra Kumar** and B. Singh, "A Multipurpose PV System Integrated to a Three-Phase Distribution System Using an LWDF-Based Approach," *IEEE Trans. Power Electronics*, vol. 33, no. 1, pp. 739-748, Jan. 2018.
- [18] Shailendra Kumar and B. Singh, "Multi-Objective Single-Stage SPV System Integrated to 3P4W Distribution Network Using DMSI-Based Control Technique," *IEEE Trans. Industry Applications*, vol. 54, no. 3, pp. 2656-2664, May-June 2018.

- [19] V. Srinivas, Shailendra Kumar, B. Singh and S. Mishra, "A Multifunctional GPV System Using Adaptive Observer Based Harmonic Cancellation Technique," *IEEE Transactions Industrial Electronics*, vol. 65, no. 2, pp. 1347-1357, Feb. 2018.
- [20] V. Srinivas, **Shailendra Kumar**, B. Singh and S. Mishra, "Partially Decoupled Adaptive Filter Based Multifunctional Three-Phase GPV System," *IEEE Trans. Sustainable Energy*, vol. 9, no. 1, pp. 311-320, Jan. 2018.
- [21] B. Singh, U. Sharma and Shailendra Kumar, "Standalone Photovoltaic Water Pumping System Using Induction Motor Drive with Reduced Sensors," *IEEE Trans. Industry Applications*, vol. 54, no. 4, pp. 3645-3655, July-Aug. 2018.
- [22] S. Vedantham, Shailendra Kumar, B. Singh and S. Mishra, "Fuzzy logic gain-tuned adaptive second-order GI-based multi-objective control for reliable operation of grid-interfaced photovoltaic system," *IET Generation, Transmission & Distribution*, vol. 12, no. 5, pp. 1153-1163, 3 13 2018.
- [23] J. Goud, R Kalpana, Bhim Singh and Shailendra Kumar "A Maximum Power Point Tracking Technique using Artificial Bee Colony and Hill climbing Algorithms during Mismatch insolation Conditions on PV array" IET Renewable Power Generation, vol. 12, no. 16, pp. 1915-1922, 10 12 2018.
- [24] S. Pandey, Shailendra Kumar and Bhim Singh "Limit Cycle Oscillator-Frequency Locked Loop Control for Single Phase Utility Integrated Single Stage Solar Photovoltaic System" *IET Renewable Power Generation*, vol. 12, no. 16, pp. 1941-1948, 10 12 2018.

Published SCI Journal in 2017

- [25] **Shailendra Kumar** and B. Singh, "Implementation of High-Precision Quadrature Control for Single-Stage SECS," *IEEE Trans. Industrial Informatics*, vol. 13, no. 5, pp. 2726-2734, Oct. 2017.
- [26] Shailendra Kumar, I. Hussain, B. Singh, A. Chandra and K. Al-Haddad, "An Adaptive Control Scheme of SPV System Integrated to AC Distribution System," *IEEE Trans. Industry Applications*, vol. 53, no. 6, pp. 5173-5181, Nov.-Dec. 2017.
- [27] B. Singh, **Shailendra Kumar** and C. Jain, "Damped-SOGI-Based Control Algorithm for Solar PV Power Generating System," *IEEE Trans. Industry Applications*, vol. 53, no. 3, pp. 1780-1788, May-June 2017.
- [28] S. Shukla, S. Mishra, B. Singh and **Shailendra Kumar**, "Implementation of Empirical Mode Decomposition Based Algorithm for Shunt Active Filter," *IEEE Trans. Ind. Applications*, vol. 53, no. 3, pp. 2392-2400, May-June 2017.
- [29] **Shailendra Kumar** and B. Singh, "Linear coefficient function-based control approach for single stage SPV system integrated to three phase distribution system," *IET Generation, Transmission & Distribution*, vol. 11, no. 3, pp. 676-684, 2 16 2017.
- [30] Bhim Singh, and **Shailendra Kumar** "Grid Integration of 3P4W Solar PV System Using M-LWDF Based Control Technique" *IET Renewable Power Generation*, vol. 11, no. 8, pp. 1174-1181, 6 28 2017.
- [31] Utkarsh Sharma, Bhim Singh, and **Shailendra Kumar** "Intelligent grid interfaced solar water pumping system" *IET Renewable Power Generation*, vol. 11, no. 5, pp. 614-624, 4 12 2017.

• Published Springer Journal (2)

[32] S. Praneeth, **Shailendra Kumar**, Bhim Singh and T.S. Bhatti "Design and Control of a Multifunctional Grid Connected Battery Energy Storage with Enhanced Performance using SOGI" *Journal of The Institution of Engineers*, Early Access, 2018.

[33] Geeta Pathak, Debidasi Mohanty, **Shailendra Dwivedi**, Bhim Singh, BK Panigrahi "Implementation of MVF-Based Control Technique for 3-Φ Distribution Static Compensator" Journal of The Institution of Engineers (India): 2019.

• Published International Conferences (51)

- [1] **Shailendra Kumar** and B. Singh, "Seamless transition of three phase microgrid with load compensation capabilities," *IEEE Ind. Appli. Society Annual Meeting*, Cincinnati, OH, USA, 2017, pp. 1-9.
- [2] **Shailendra Kumar** and Bhim Singh, "Control of Autonomous Single-Phase Utility Interactive Reconfigurable Microgrid," *IEEE Energy Conversion Congress and Exposition (ECCE)*, **Portland, OR,** 2018, pp. 31-37.
- [3] **Shailendra Kumar** and B. Singh, "A Frequency Observer Based Control for Solar Energy Conversion System,"- *43rd Annual Conference of the IEEE Ind. Electron. Society (IECON 2017)*, Beijing, 2017, pp. 2321-2325.
- [4] B. Singh, K. Mathuria, I. Hussain and **Shailendra Kumar**, "Implementation of demodulation-SOGI control algorithm for improving the power quality," *43rd Annual Conference of the IEEE Ind. Electron. Society (IECON 2017)*, **Beijing, 2017**, pp. 2540-2545.
- [5] **Shailendra Kumar** and B. Singh, "Multi-objective single stage SPV system integrated to 3P4W distribution network using DMSI based control technique," *IEEE Uttar Pradesh Section International Conference on Electrical, Computer and Electronics Engineering (UPCON)*, IIT Varanasi, 2016, pp. 328-333.
- [6] **Shailendra Kumar**, I. Hussian, B. Singh, A. Chandra and K. Al-Haddad, "An adaptive novel control scheme of SPV system integrated to three phase AC distribution system," **2016 IEEE International Confere. on Power Electron.**, **Drives and Energy Systems (PEDES)**, Trivandrum, India, 2016, pp. 1-6.
- [7] Shailendra Kumar and Bhim Singh "An Adaptive Third Order Digital Filter Based Technique of Single Stage 3P4W SPV System" 2016 IEEE Seventh India International Conference on Power Electronics (IICPE-2016) Thaper University, Patiala.
- [8] **Shailendra Kumar** and Bhim Singh "Loop Transfer Recovery Based Control Technique for Grid Integrated SPV System" **2016** *IEEE Seventh Power India International Conference (PIICON-2016), Bikaner, Rajasthan.*
- [9] Shailendra Kumar and B. Singh, "Windowing factor-based control algorithm for grid integrated SPV system," 2016 IEEE 1st International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES), Delhi, 2016, pp. 1-6.
- [10] **Shailendra Kumar** and B. Singh, "Harmonics detection-based control of solar-BESS microgrid with grid synchronization," *7th International Conference on Power Systems (ICPS)*, Pune, 2017, pp. 684-690.
- [11] S. Vedantham, **Shailendra Kumar**, B. Singh and S. Mishra, "RLMMN adaptive filtering-based control scheme for multi-objective GPV system," *6th International Conference on Computer Applications In Electrical Engineering-Recent Advances (CERA)*, Roorkee, 2017, pp. 556-561.
- [12] U. Sharma, **Shailendra Kumar** and B. Singh, "Solar array fed water pumping system using induction motor drive," **2016 IEEE 1st International Conference on Power Electronics, Intelligent Control and Energy Systems** (ICPEICES), Delhi, 2016, pp. 1-6.
- [13] Utkarsh Sharma, Bhim Singh and **Shailendra Kumar**, "A Smart Solar Water Pumping System with Bidirectional Power Flow Capabilities" Accepted for Publication in **2016** *IEEE Seventh Power India International Conference* (*PIICON-2016*), *Bikaner*, *Rajasthan*.
- [14] B. Singh, **Shailendra Kumar**, U. Sharma and C. Jain, "Solar PV array fed direct torque-controlled induction motor drive for water pumping," **2015** *Annual IEEE International India Conf. (INDICON)*, New Delhi, 2015, pp. 1-6.
- [15] B. Singh, S. Kumar, **Shailendra Kumar**, I. Hussain and C. Jain, "A cross correlation control approach for multifunctional SPV system," 2016 **IEEE 6th International Conference on Power Systems (ICPS)**, New Delhi, 2016, pp. 1-6.
- [16] B. Singh, **Shailendra Kumar**, I. Hussain and A. K. Verma, "Grid integration of solar PV power generating system using QPLL based control algorithm," **2014 6th IEEE Power India International Conference (PIICON)**, **Delhi**, 2014, pp. 1-6.
- [17] Bhim Singh, **Shailendra Kumar** and Chinmay Jain "Damped-SOGI based control algorithm for solar PV power generating system" *Accepted for the in IEEE IAS Industrial and commercial Power Systems, petroleum, and chemical Industry Conference*, Hyderabad 19 Nov., 2015.
- [18] **Shailendra Kumar** and B. Singh, "Seamless operation and control of hybrid PV-BES-utility synchronized system," 2018 IEEMA Engineer Infinite Conference (eTechNxT), New Delhi, 2018, pp. 1-6.
- [19] S. Pandey, **Shailendra Kumar** and B. Singh, "Linear quadratic estimation control for single stage PV system integrated to single phase utility," *2018 IEEMA Engineer Infinite Conference (eTechNxT)*, New Delhi, 2018, pp. 1-7.
- [20] S. Naqvi, **Shailendra Kumar** and B. Singh, "Implementation of recurrent neurocontrol algorithm for two stage solar energy conversion system," *2018 IEEMA Engineer Infinite Conference (eTechNxT)*, New Delhi, 2018, pp. 1-6.
- [21] **Shailendra Kumar** and Bhim Singh, "Optimum Filtering Theory Based Control for Grid Tied PV-Battery Microgrid System," *IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2018)*, to be held at Indian Institute of Technology Madras in Chennai, Tamilnadu, India, 18-21 Dec. 2018.

- [22] Syed Bilal Qaiser Naqvi, **Shailendra Kumar** and Bhim Singh, "Amplitude Adaptive Filter Based Control for Grid Tied Multifunctional Solar Energy Conversion System," Accepted for presentation in *IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2018)*, to be held at Indian Institute of Technology Madras in Chennai, Tamilnadu, India, 18-21 Dec. 2018.
- [23] Sudip Bhattacharyya, **Shailendra Kumar** and Bhim Singh, "Improved Adaptive Feed-Forward Harmonic Cancellation Technique for Grid Connected Photovoltaic System," Accepted for presentation in *IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2018)*, to be held at Indian Institute of Technology Madras in Chennai, Tamilnadu, India, 18-21 Dec. 2018.
- [24] Laxmi Narayan Patel, **Shailendra Kumar**, Bhim Singh and A. L. Vyas, "Self-Adjustable Step Based Control Algorithm for Multifunctional PV System under Sag-Swell Conditions," Accepted for presentation in *IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2018)*, to be held at Indian Institute of Technology Madras in Chennai, Tamilnadu, India, 18-21 Dec. 2018.
- [25] Kanwar Pal, **Shailendra Kumar**, Bhim Singh and T.C. Kandpal "Pre-Filter Based Third Order Sinusoidal Signals Integrator Algorithm for Grid Tied PV System," Accepted for presentation in *IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2018)*, to be held at Indian Institute of Technology Madras in Chennai, Tamilnadu, India, 18-21 Dec. 2018.
- [26] Sai Pranith, Shailendra Kumar, Bhim Singh and T S Bhatti, "Improved Laplacian Kernel Filter based Control of Multifunctional PV System with Enhanced Power Quality," Accepted for presentation in 2018 2nd IEEE International confer. power Electronics, Intelligent Control and Energy systems (ICPEICES-2018) to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.
- [27] Kanwar Pal, **Shailendra Kumar**, Bhim Singh and Tara Kandpal, "Adaptive Neural Network Based Control of PV Connected Distribution System," Accepted for presentation in *2018 2nd IEEE International conference on power Electronics*, *Intelligent Control and Energy systems (ICPEICES-2018)* to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.
- [28] V L Srinivas, **Shailendra Kumar**, Bhim Singh and Sukumar Mishra, "A Normalized Adaptive Filter for Enhanced Optimal Operation of Grid Interfaced PV System," Accepted for presentation in **2018 2nd IEEE International conference on power Electronics, Intelligent Control and Energy systems (ICPEICES-2018) to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.**
- [29] Sunil Pandey, **Shailendra Kumar** and Bhim Singh, "A Robust Frequency Adjustable QSG with Cascaded Adaptive Complex Filter Based Control for Utility Interfaced PV System," Accepted for presentation in **2018 2nd IEEE Intern.** confer. power Electronics, Intelligent Control and Energy systems (ICPEICES-2018) to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.
- [30] Syed Bilal Qaiser Naqvi, Shailendra Kumar and Bhim Singh, "Implementation of a Modified Distributed Normalized Least Mean Square Control for a Multi-Objective Single Stage SECS," Accepted for presentation in 2018 2nd IEEE International conference on power Electronics, Intelligent Control and Energy systems (ICPEICES-2018) to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.
- [31] Gaurav Modi, **Shailendra Kumar** and Bhim Singh, "Acoustic Echo Cancellation Based Adaptive Control Algorithm for Grid Integrated SECS System," Accepted for presentation in **2018 2nd IEEE International conference on power Electronics, Intelligent Control and Energy systems (ICPEICES-2018)** to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.
- [32] Sandeep Kumar Sahoo, **Shailendra Kumar** and Bhim Singh" Modified Gradient Spectral Variance Smoothing Adaptive Filter Control for Grid Connected PV System" Accepted for presentation in **2018 2nd IEEE International confer. on power Electronics, Intelligent Control and Energy systems (ICPEICES-2018)** to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.
- [33] Sudip Bhattacharyya, **Shailendra Kumar** and Bhim Singh "Adaptive Frequency Estimation Technique for Grid Connected Photovoltaic System" Accepted for presentation in 2018 2nd IEEE International conference on power Electronics, Intelligent Control and Energy systems (ICPEICES-2018) to be held Delhi Technological University, Bawana Road, Delhi, India on Oct.22-24, 2018.
- [34] B. Singh and **Shailendra Kumar**, "Distributed Incremental Adaptive Filter Controlled Residential Photovoltaic-Battery Microgrid for Rural Electrification," *5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON)*, Gorakhpur, 2018, pp. 1-6.
- [35] Gaurav Modi, Shailendra Kumar and Bhim Singh "Improved Widrow-Hoff Based Adaptive Control of Multi-Objective PV-DSTATCOM System" 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2018) (Jointly Organized by Madan Mohan Malaviya University of Technology, Gorakpur-273010 (UP)-India & University of Ryukyus, Okinawa, Japan, on 2-4 Nov 2018.
- [36] Sai Pranith, **Shailendra Kumar**, Bhim Singh and T.S. Bhatti, "MAF-SOGI-PLL based Single-Phase Multimode PV-Battery System with Improved Power Quality" Accepted for presentation in 8th IEEE India Intern confer. power Elec. (IICPE 2018), to be held MNNIT Jaipur, India on Dec.13-15, 2018.

- [37] Gaurav Modi, **Shailendra Kumar**, Bhim Singh, "Generalized Normalized Gradient Descent Based Control Algorithm for Solar PV Integrated 3P4W Distribution System" Accepted for presentation in **2018** 8th **IEEE India International confer. on power Electronics (IICPE 2018)**, to be held MNNIT Jaipur, India on Dec.13-15, 2018.
- [38] Sudip Bhattacharyya, **Shailendra Kumar** and Bhim Singh, "PV Connected Grid-tied Discreet Current Controller for Distribution System" Accepted for presentation in **2018** 8th **IEEE India International confer. on power Electronics** (**IICPE 2018**), to be held MNNIT Jaipur, India on Dec.13-15, 2018.
- [39] Syed Bilal Qaiser Naqvi, **Shailendra Kumar** and Bhim Singh, "Grid Integration of Multi-Objective Two Stage 3P4W SPV System Using TLS Based Control Technique" Accepted for presentation in **2018** 8th **IEEE India International confer. on power Electronics (IICPE 2018)**, to be held MNNIT Jaipur, India on Dec.13-15, 2018.
- [40] Kanwar Pal, **Shailendra Kumar** and Bhim Singh, "State Feedback Generalized Integrator Based Controller for Utility Integrated PV System" Presented in **2018** 8th **IEEE India International confer. on power Electronics (IICPE 2018)**, to be held MNIT Jaipur, India on Dec.13-15, 2018.
- [41] Syed Bilal Qaiser Naqvi, **Shailendra Kumar** and Bhim Singh, "Grid Integration of a Multi-Objective Single Stage PV System Using Tapped Delay Continuous Time LMS-Based Control Technique" **8th IEEE Power India International Conference (PIICON)**, to be held at NIT Kurukshetra, on Dec. 10-12, 2018.
- [42] Amresh Singh, **Shailendra Kumar** and Bhim Singh, "A Robust CIM Based Control Approach for PVECS Interfaced To Local Distribution Network" *8th IEEE Power India International Conference (PIICON)*, to be held at NIT Kurukshetra, on December 10-12, 2018.
- [43] Gaurav Modi, **Shailendra Kumar** and Bhim Singh, "'A Maximum Correntropy Criteria Based Adaptive Algorithm for an Improved Power Quality SPV System" *8th IEEE Power India International Conference (PIICON)*, to be held at NIT Kurukshetra, on December 10-12, 2018.
- [44] Sunil Kumar Pandey, **Shailendra Kumar**, and Bhim Singh, "Discrete Linear Phase Based MAF Control for Grid Tied Solar PV System" *8th IEEE Power India International Conference (PIICON)*, to be held at NIT Kurukshetra, on December 10-12, 2018.
- [45] Sudip Bhattacharyya, **Shailendra Kumar** and Bhim Singh, "Adaptive Damped Circular Current Limit Control for PV-Grid Tied System," *Presented in 2019 IAS Annual Meeting to be held in Baltimore, Maryland, USA, 2019.*
- [46] Shalvi Tyagi, **Shailendra Kumar** and Bhim Singh, "Grid Interfaced PV System Using a Generalized Mixed p-Norm Adaptive Filtering Algorithm," *Presented in 2019 IEEE Energy Conversion Congress and Exposition* to be held in Baltimore, MD on September 29 -October 3, 2019.
- [47] Syed Bilal Qaiser Naqvi, **Shailendra Kumar** and Bhim Singh, "Grid Integration of a Three Phase Multifunctional SECS Using Lorentzian Adaptive Filter Based Control with Impulsive Disturbance Rejection Capability," Accepted for presentation in *The 2019 IEEE Energy Conversion Congress and Exposition* to be held in Baltimore, MD on September 29 -October 3, 2019.
- [48] S. Tyagi, **Shailendra Kumar** and B. Singh, "Grid Connected PV System with Filtered Input Signal Normalised Least Mean 'p' Adaptive Algorithm," **2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Comm. Power Systems Europe (EEEIC Europe), Genova, Italy, 2019, pp. 1-6.**
- [49] S. B. Qaiser Naqvi, **Shailendra Kumar** and B. Singh, "A Multifunctional PV-BES-Utility System with Seamless Islanding and Resynchronization Capability," **2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Commercial Power Systems Europe** (EEEIC / I&CPS Europe), Genova, Italy, 2019, pp. 1-6.
- [50] G. Modi, Shailendra Kumar and B. Singh, "NFLMS Algorithm for Solar PV-Battery Based Microgrid With Seamless Operation," 2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), Genova, Italy, 2019, pp. 1-6.
- [51] S. K. Pandey, Shailendra Kumar, and Bhim Singh, "Robust Frequency Cascaded Adaptive Complex Filter Control for Grid Interactive PV System" Presented in *IEEE International Conference UPCON-2019* At Z. H. College of Engineering and Technology, Aligarh Muslim University, Aligarh, 2019.

• Published National Conferences

- [52] B. Singh and **Shailendra Kumar**, "Resonant based control algorithm for grid supportive solar PV power generating system," **2015 39th National Systems Conference (NSC)**, Noida, 2015, pp. 1-6.
- [53] Utkarsh Sharma, **Shailendra Kumar**, Chinmay Jain and Bhim Singh, "Single Stage Solar PV Array Fed Field Oriented Controlled Induction Motor Drive for Water Pump" *National Power Electronics Conference 2015*, **Department of Electrical Engineering, IIT Bombay**; 12/2015.
- [54] Bhim Singh and **Shailendra Kumar**, "LTI-EPLL Based Control Algorithm For Solar PV Power Generating System" *National Power Electronics Conference 2015*, **Department of Electrical Engineering, IIT Bombay; 12/2015.**
- [55] B. Singh and **Shailendra Kumar**, "Harmonics mitigation and phase compensation technique for 3P4W SPV system," **2016 National Power Systems Conference (NPSC)**, **Bhubaneswar**, **2016**, **pp. 1-6**.