

Shailendra Kumar (Ph.D., *SMIEEE*)

Assistant Professor,
Department of Electrical Engineering,
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EXPERIENCE AND KEY SKILLS

- **Assistant Professor** at Maulana Azad National Institute of Technology, Bhopal from 13 June 2020 to till date.
 - **Assistant Professor** at S V National Institute of Technology, Surat, from 2 December 2019 to 12 June, 2020.
 - **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.
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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.
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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 (2003).
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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.
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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**.
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PATENTS / PUBLICATIONS / TECHNICAL PRESENTATIONS

- **03 Patents** (List is enclosed within).
 - **136 papers** (published/accepted) in various **International Journals** and **Conference Proceedings**. (List is enclosed within).
 - International Journals: 56
 - National /International Conferences: 80
 - **More than 50 Technical presentations** at various international conferences and technical events.
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PERSONAL DETAILS

Father's Name:	Shri Rampal Dwivedi
Date of Birth:	April 20, 1988
Place of Birth:	Mahoba (U.P.), India
Nationality:	Indian
Language Known:	English, Hindi
Sex/Marital Status:	Male/ Single
Hobbies:	Badminton, Cricket and listening songs

PROFESSIONAL AFFILIATIONS

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

REFERENCES

Prof. (Dr.) Bhim Singh,
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I hereby, declare that the information furnished above is true to the best of my knowledge.

Dated: January 23, 2023

(Shailendra Kumar)

LIST OF PUBLICATIONS

• Patent (4)

- [1] 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. 201811041032**, Year, 2018.
- [2] Bhim Singh and **Shailendra Kumar**: *Intelligent Controller for Grid Synchronization of Three-phase Microgrid with PV and Battery Storage*, **Indian Patent Ref. No. 201711024261**, 2017.
- [3] Bhim Singh, Utkarsh Sharma and **Shailendra Kumar**: *A Grid Interfaced SPV Array Fed Water Pumping System*. **Indian Patent Ref. No: 201611043296**, Year: 12/2016.

• Published SCI Journals in 2022

- [1] Dulichand Jaraniya and **Shailendra Kumar**, "PV Charging Station with VSIMSAF and SOSMCC Disturbance Observer Controls to Enhance Grid Capability," *IETE Journal of Research*, 2022.
- [2] **Shailendra Kumar**, Dulichand Jaraniya, R. Chilipi and Ahmed Al-Durra, "Optimal Operation of RC-WL-QLMS and Luenberger Observer-Based Disturbance Rejection Controlled Grid Integrated PV-DSTATCOM System," *IEEE Transactions on Industry Applications*, vol. 58, no. 6, pp. 7870-7880, Nov.-Dec. 2022, doi: 10.1109/TIA.2022.3199401.
- [3] Badal Patnaik, **Shailendra Kumar** and Suresh Gawre "Recent Advances in Power Electronics and Storage Technologies for More Electric Aircrafts: A Review," accepted for publication in *IEEE Journal on Miniaturization for Air and Space Systems*, 2022.
- [4] Dulichand Jaraniya and **Shailendra Kumar**, "Integration of Multi Voltages, Multi EV Spots Based Three Phase PV Array Charging Station to the Modern Distribution Grid with Improved EV Charging Capability and Power Quality" accepted for publication in *International Journal of Energy Research*, 46(12): 16896- 16917, 2022. doi:10.1002/er.8356
- [5] Dulichand Jaraniya and **Shailendra Kumar**, "Integration of Charging Station to the Smart Grid Power Network by using Robust Immune Feedback Adaptive and Rao optimization Approaches" Accepted in *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, 2022.

- [6] Dulichand Jaraniya and **Shailendra Kumar**, “Renewable Energy Based Charging Station with Power Quality Features for Multi EV Spots using Maximum Correntropy Sub-band Adaptive Technique,” in *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, Early Access, 2022.
- [7] D. Jaraniya, Urvashi Gupta, **Shailendra Kumar** and Arvind Mittal, “Multifunctional Bidirectional Charging System for EVs and the Grid with Improved Power Quality Using Sparse Proportionate-NLMF Based Method” Early Access *IEEE CSEE Journal of Power and Energy Systems* 2022.
- [8] **S. Kumar**, B. Singh and D. Jaraniya, “Multimode Features of CIPNLMS-MFX Controlled Single-Phase PV System With Finite State Machine Based Islanding/Synchronization Under Grid Outage,” *IEEE Transactions on Industry Applications*, vol. 58, no. 2, pp. 1531-1542, March-April 2022.

- **Published SCI Journals in 2021**

- [9] S. K. Sahoo, **Shailendra Kumar**, and B. Singh, “Wiener Variable Step Size with Variance Smoothening Based Adaptive Neurons Technique for Utility Integrated PV-DSTATCOM System,” in *IEEE Transactions on Industrial Electronics*, Early Access, 2021. doi: 10.1109/TIE.2021.3134077.
- [10] S. Pranith, **Shailendra Kumar**, B. Singh and T. Bhatti, “MAF-DCGI Based Single-Phase Uninterrupted PV-Battery System under Unintentional Islanding,” *IEEE Trans. Energy Conversion*, doi: 10.1109/TEC.2021.3108180.
- [11] **Shailendra Kumar**, Bhim Singh and Ahmed Al Durra, “ ℓ_p -Norm Proportionate Based Approach with Mode Transition Between Grid Interactive and Standalone of Solar- BES Three Phase Four Wire Microgrid” in *IEEE Transactions on Industry Applications*, Early Access, 2021.
- [12] S. Praneeth, **Shailendra Kumar**, Bhim Singh and T.S. Bhatti “Improved Gaussian Filter based Solar PV-BES Microgrid with PLL based Islanding detection and Seamless Transfer Control” *IEEE Transactions on Industrial Electronics*, Early Access, 2021.
- [13] Kanwar Pal, **Shailendra Kumar**, Bhim Singh and Tara Kandpal “Implementation of Frequency Integrated Multi-order Generalized Integrator for Solar Energy Sourced Grid” Accepted for the publication *International Journal of Electrical Power and Energy Systems*, Feb. 2021.
- [14] **Shailendra Kumar**, Ahmed Al Durra, and Ehab Fahmy El-Sadaany “Norm Combination Constrained Set-Membership Function-Based Approach with LCO Control of Grid-Interactive PV System” in *IET Renewable Power Generation* on Jan. 2021.
- [15] **Shailendra Kumar**, Ahmed Al Durra, “Sparse Quaternion-Valued Minimization Based Technique with Pre-predictive PV Control Loop of Distributed PV Power Generation System' Accepted for the Publications in *IET Power Electronics* on Jan. 2021.
- [16] S. Naqvi, **Shailendra Kumar** and B. Singh, “Weak Grid Integration of Single Stage Solar Energy Conversion System with Power Quality Improvement Features under Varied Operating Conditions,” *IEEE Transactions on Industry Applications*, vol. 57, no. 2, pp. 1303-1313, March-April 2021.
- [17] V. L. Srinivas, **Shailendra Kumar**, B. Singh and S. Mishra, “A Normalized Adaptive Filter for Enhanced Optimal Operation of Grid Interfaced PV System,” *IEEE Transactions on Industry Applications*, vol. 57, no. 2, pp. 1715-1724, March-April 2021.

- **Published SCI Journals in 2020**

- [18] A. K. Singh, **Shailendra Kumar**, and B. Singh “A Robust CIM Based Control Approach for PVECS Interfaced to Local Distribution Network” *IEEE Trans. Industry Applications*, Early Access, 2020.

- [19] S. Pandey, **Shailendra Kumar** and Bhim Singh “Robust Frequency Cascaded Adaptive Complex Filter Control for Grid Interactive PV System,” *IEEE Trans. Industry Applications* Early Access, 2020.
- [20] Kanwar Pal, **Shailendra Kumar**, Bhim Singh and Tara Kandpal “Enhanced 2-DOF-PID Controller for Grid Supported PV Generating System” *IET Renewable Power Generation*, Early Access, 2020.
- [21] Kanwar Pal, **Shailendra Kumar**, Bhim Singh and Tara Kandpal “Sigmoidal and Gaussian functions based neural neuron technique for grid interactive solar energy system enabling power quality improvement” *IET Generation, Transmission & Distribution*, Early Access, 2020.
- [22] S. Naqvi, **Shailendra Kumar** and B. Singh, “Three-Phase Four-Wire PV System for Grid Interconnection at Weak Grid Conditions,” *IEEE Transactions on Industry Applications*, vol. 56, no. 6, pp. 7077-7087, Nov.-Dec. 2020.
- [23] Bhim Singh, and **Shailendra Kumar**, “Distributed Incremental Adaptive Filter Controlled Grid Interactive Residential Photovoltaic-Battery Based Microgrid for Rural Electrification” *IEEE Trans. Industry Applications*, Vol. 56, no. 4, pp. 4114-4123, July-Aug. 2020.
- [24] **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*, vol. 56, no. 3, pp. 2978-2987, May-June 2020.
- [25] 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.
- [26] S. Bhattacharyya, **Shailendra Kumar** and B. Singh, “Adaptive Damped Circular Current Limit Control for PV-Grid Tied System,” *IEEE Trans. Industry Applications*, vol. 56, no. 2, pp. 1197-1204, March-April 2020.
- [27] Gaurav Modi, **Shailendra Kumar** and Bhim Singh, “Improved Widrow-Hoff Based Adaptive Control of Multi-Objective PV-DSTATCOM System” *IEEE Trans. Industry Applications*, vol. 56, no. 2, pp. 1930-1939, March-April 2020.
- [28] 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.
- [29] 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.

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- [30] **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.
- [31] **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.
- [32] **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.

- [33] 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.
- [34] **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
- [35] **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.
- [36] 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.
- [37] S. Praneeth, **Shailendra Kumar**, Bhim Singh and T.S. Bhatti “Multimode Operation of PV-Battery System with Renewable Intermittency Smoothing and Enhanced Power Quality” *IET Renewable Power Generation*, vol. 13, no. 6, pp. 887-897, 29 4 2019.
- [38] 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.

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- [39] **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.
- [40] **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.
- [41] 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.
- [42] 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.
- [43] 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.
- [44] 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.
- [45] 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.
- [46] 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.

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- [47] **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.
- [48] **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.
- [49] 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.
- [50] 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.
- [51] **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.
- [52] 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.
- [53] 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 (3)**

- [54] Jaraniya, D., **Kumar, S.** "Grid Interactive Charging Station using ZAJONLMS Adaptive Filtering Technique with Improved Power Quality for EV Applications," *J. Inst. Eng. India Ser. B* 103, 845–857 (2022). <https://doi.org/10.1007/s40031-021-00689-0>.
- [55] 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.
- [56] 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 (77)**

- [1] **Shailendra Kumar**, A. Pandey, S. Singh and S. Gupta, "Driving Range Extension of a PV Array Fed Synchronous Reluctance Motor Drive for Electric Vehicle with Regeneration," *2022 IEEE 10th Power India International Conference (PIICON), New Delhi, India, 2022*, pp. 1-6, doi: 10.1109/PIICON56320.2022.10045151.
- [2] L. Malle, A. Mittal and **Shailendra Kumar**, "A Single Phase Grid-Integrated PV System Using Cascaded PI and PR Controller for Power Quality Improvement," *2022 IEEE 10th Power India International Conference (PIICON), New Delhi, India, 2022*, pp. 1-6, doi: 10.1109/PIICON56320.2022.10045224.
- [3] S. Mahobiya, **Shailendra Kumar**, and U. K. Kalla, "Small Hydro based Charging Infrastructure for Electric Vehicles in Hilly Areas," *2022 IEEE 10th Power India International Conference (PIICON), New Delhi, India, 2022*, pp. 1-6, doi: 10.1109/PIICON56320.2022.10045266.
- [4] A. Pandey, A. Mittal and **Shailendra Kumar**, "Bidirectional Power Control of Solar PV array and DABs Based Charger for Electric Vehicles," *IEEE 2nd International Conference on Sustainable Energy and Future Electric Transportation (SeFeT)*, 2022, pp. 1-6, doi: 10.1109/SeFeT55524.2022.9909374.
- [5] **Shailendra Kumar**, Dulichand Jaraniya, and Bhim Singh "Variable Sparsity Affine Combined Adaptive Filter for Grid Tied Three Phase Single Stage Charging Station" Accepted for the publications in *2021 IEEE 4th International Conference on Computing, Power and Communication Technologies (GUCON) Kuala Lumpur, Malaysia*.

- [6] **Shailendra Kumar**, Dulichand Jaraniya and Bhim Singh “Microgrid Integrated Charging Infrastructure with PV Array and Seamless Grid-Hydro Generator Synchronization for Rural and Hilly Areas,” Accepted for the publications in **IEEE IPRECON 2021**.
- [7] Dulichand Jaraniya, **Shailendra Kumar** and Bhim Singh, “Spearhead Three Phase Charging Station with Multi EV Spots Using Improved LP-PNLMS Based Adaptive Filter,” **IEEE IAS Annual Meeting 2021**.
- [8] **Shailendra Kumar**, Dulichand Jaraniya, Rajasekharareddy Chilpi and Ahmed Al-Durra, “Optimal Operation and RC-WL-QLMS Control of Grid Integrated PV-DSTATCOM System” **IEEE IAS Annual Meeting 2021**.
- [9] Shreyas Maitreya, Milind Shakya, Ishika Meena, Ayush Amarya and **Shailendra Kumar**, “Data-driven Prediction of State of Charge and Remaining Useful Life of Lithium-Ion Batteries Using Neural Networks” **2nd International Electric Power and Renewable Energy Conference (EPREC-2021)** at NIT Jamshedpur 2021.
- [10] Khushboo Verma, Suresh K. Gawre and **Shailendra Kumar** “Comparison between Novel Fault Detection Techniques in Solar PV Arrays: A Review” **2nd International Electric Power and Renewable Energy Conference (EPREC-2021)** at NIT Jamshedpur 2021.
- [11] Manisha Nayak Suresh K. Gawre and **Shailendra Kumar** “Improvement in Quality of Power of Grid Connected Wind Energy System through STATCOM -A Review” **2nd International Electric Power and Renewable Energy Conference (EPREC-2021)** at NIT Jamshedpur 2021.
- [12] Darshita Ahuja, Suresh Gawre and Shailendra Kumar, “Monitoring and Controlling of Smart Grid based on Cyber Physical System” accepted in the Springer Conference “**2nd International Electric Power and Renewable Energy Conference (EPREC-2021)**” at NIT Jamshedpur 2021.
- [13] Dulichand Jaraniya and **Shailendra Kumar**, “Grid Interactive PV System with Advanced Filtering Technique and PV Feed-forward Loop” Presented in International Springer Flex EV conference organized by MANIPAL University Jaipur, 2021.
- [14] **Shailendra Kumar**, Kalash Srivastava, Bhim Singh, Sabharaj Arya, and Ashish Kumar Singh “Solar Energy Conversion System Integrated to Utility Grid Using Modified LLMS Technique,” **IEEE UPCON 2020** at MNNIT Allahabad, 2020.
- [15] **Shailendra Kumar** and Bhim Singh, “Implementation of Grid Interactive and Islanded Controlled PV System for Residential Applications,” **IEEE Ind. Appli. Society Annual Meeting, USA, 2020**.
- [16] **Shailendra Kumar**, Bhim Singh and Ahmed Al-Durra, “ ℓ_p -Norm Proportionate Based Approach with Mode Transition Between Grid Interactive and Standalone of Solar- BES Three Phase Four Wire Microgrid” **IEEE Ind. Appli. Society Annual Meeting, USA, 2020**.
- [17] **Shailendra Kumar** and Bhim Singh “Observer-Based Disturbance Rejection Voltage Control of PV-Battery Based Microgrid” **IEEE INDICON2020** at NSUT, Delhi, 2020.
- [18] **Shailendra Kumar** and Bhim Singh “Multi-Mode Features of CIPNLMS-MFX Controlled Single-Phase PV System with Islanding Detection under Grid Outage” **IEEE PEDES 2020** at MNIT, Jaipur, Dec.2020.
- [19] **Shailendra Kumar** and Bhim Singh, Sanjeev Singh and U.K. Kalla “Multiple Sinusoidal Signal Integrators and Unintentional Islanding Controlled PV-BES System at Unbalanced Grid Conditions” **IEEE PEDES 2020** at MNIT, Jaipur, Dec.2020.
- [20] **Shailendra Kumar**, H. M. Suryawanshi, B. Singh, V. Verma and C. Chakraborty, “Synchronization and De-Synchronization of Single Stage PV- Battery based Microgrid for Enhancing Power Grid Resilience,” **2020 IEEE International Conference on Computing, Power and Communication Technologies (GUCON)**, Greater Noida, India, 2020.
- [21] **Shailendra Kumar**, Bhim Singh, Ujjwal Kalla, Sanjeev Singh, and Arvind Mittal, “Power Quality Control of Small Hydro-PV Array and Battery Storage Based Microgrid for Rural Areas” **Accepted for the Publications in IEEE SEFET, 2021**.
- [22] Sanjeev Singh, **Shailendra Kumar** and Ujjwal K Kalla “Optimization of Rooftop PV System Deployment for LV Distribution Network” **Accepted for the Publications in IEEE SEFET, 2021**.
- [23] Sanjeev Singh, Sachin Singh, **Shailendra Kumar** and Ujjwal Kalla “Reduced Sensor PMBLDC Motor Drive with Power Factor Correction and Speed Control” in **IEEE PEREA, 2020**.
- [24] Ujjwal Kalla, Kusum Agarwal, Sanjeev Singh and **Shailendra Kumar** , “State of Art and Comprehensive Study of Renewable Energy Sytems Based on Three-Phase Self Excited Induction Generator Feeding Single-Phase Loads, **Accepted for the Publications in IEEE SEFET, 2021**.
- [25] Ujjwal Kalla, Nikhil Bhati, Kusum Lata Agarwal, Sanjeev Singh, **Shailendra Kumar** and Bhim Singh “Battery Powered LSB Converter Fed BLDC Drive System for Electric Vehicle Applications” **IEEE INDICON2020** at NSUT, Delhi, 2020.
- [26] **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.
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