

## CURRICULUM VITAE

DR. SHOEB HUSSAIN, PH.D. ELECTRICAL ENGINEERING

DOB: 10<sup>TH</sup> MARCH 1989

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### Education

- Oct 2013 – Oct 2016* **Doctor of Philosophy (Ph.D.), Electrical Engineering**  
National Institute of Technology, Srinagar  
Srinagar, Jammu and Kashmir, India
- Aug 2011 – Jul 2013* **Master of Technology (M.Tech.), Control and Instrumentation (CGPA = 8.85)**  
Delhi Technological University  
Delhi, Delhi, India
- Aug 2007 – Jul 2011* **Bachelor of Technology (B.Tech.), Electrical Engineering (CGPA = 8.73)**  
National Institute of Technology, Srinagar  
Srinagar, Jammu and Kashmir, India

### Thesis

- Oct 2013 – Oct 2016* **Ph. D.**  
Sensorless Control of AC Drives using Advanced Estimation  
Techniques and Modulation Strategies
- August 2011 – July 2013* **M. Tech.**  
Implementation of Intelligent Controller for three phase vector-  
controlled Induction Motor in Real time using D-space DS-1104

### Job Experience

- April 2021 – till date* **Assistant Professor**  
Department of Electrical Engineering, NIT Srinagar  
Srinagar, Jammu and Kashmir, India
- April 2017 - March 2021* **Assistant Professor and Coordinator**  
Department of Electrical Engineering, Institute of Technology  
University of Kashmir, Srinagar, Jammu and Kashmir, India
- December 2016 - April 2017* **Assistant Professor (on contract)**  
Department of Electrical Engineering, NIT Srinagar  
Srinagar, Jammu and Kashmir, India

## Statistics

<i>Publications</i>	33
<i>h-index</i>	8
<i>i10-index</i>	7
<i>Official University Teacher Feedback Score</i>	8.6/10

## Skills & Activities

<i>Skills</i>	MATLAB Simulation, Power Electronics, Control Theory, Power Systems Simulation, Vector Control, AC Motor Drives, AI based Control, Nonlinear Dynamics, Microsoft Office, Latex, WordPress.
<i>Scientific Memberships</i>	IEEE, IAENG
<i>Interests</i>	Website designer
<i>Languages</i>	English, Urdu, Kashmiri, Hindi, Arabic

## Publication Highlights

[authors]: [title]. [details]

## Journal Publications

- [1] K. Khan, S. Sheikh, F. Malik, T. Mir, M. Mushtaq, S. Hussain: *Comparative Analysis of Various Controllers for Cruise Control of an Electrical Vehicle Drive*, International Journal of Power & Energy Systems (in print)
- [2] Suhail Ahmad Suhail, Mohammad Abid Bazaz, Shoeb Hussain: *Linear Active Disturbance Rejection Control with a Higher-Order Sliding Mode Observer Applied to a Cart Inverted Pendulum*, Mechatronic Systems and Control (in print)
- [3] Suhail, S. A., Bazaz, M. A., & Hussain, S. (2021). MPC based active disturbance rejection control for automated steering control. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering. <https://doi.org/10.1177/09544070211004506>
- [4] Shoeb Hussain, Mohammad Abid Bazaz: *Modified SVPWM Technique for a Sensorless Controlled Induction Motor Drive using Neural Network Observer and Predictive Controller*. International Journal of Advanced Intelligence Paradigms, 2020 Vol.16 No.2, pp.172 – 189, DOI:10.1504/IJAIP.2018.10014391
- [5] Shoeb Hussain, Mohammad A. Bazaz: *Neural Predictive Observer for Sensorless-Controlled Induction Motor Drive*. Control & Intelligent Systems 04/2017; 45(2):84-91., DOI:10.2316/Journal.201.2017.2.201-2798
- [6] Shoeb Hussain, Abid Bazaz: *Neural Network Observer Design for Sensorless Control of Induction Motor Drive*. IFAC Proceedings Volumes 02/2016; 49(1):106-111., DOI:10.1016/j.ifacol.2016.03.037

- [7] Shoeb Hussain, Mohammad Abid Bazaz: *Sensorless Control of PMSM Drive Using Extended Kalman Filter and Fuzzy Logic Controller*. International Journal of Industrial Electronics and Drives 01/2016; 3(1):12., DOI:10.1504/IJIED.2016.077677
- [8] Shoeb Hussain, Mohammad Abid Bazaz: *Sensorless Control of Permanent Magnet Synchronous Motor Drive Using Unscented Kalman Filter*. International Journal of Industrial Electronics and Drives 01/2015; 2(3):163., DOI:10.1504/IJIED.2015.072796
- [9] M. Singh, M. Sreejeth, Shoeb Hussain: *Implementation of Intelligent Controller for three phase vector-controlled Induction Motor*. Asian Power Electronics Journal, 03/2014; 8(1):10-16.

### **Book Chapters**

- [10] S. Hussain, R. Nazir, U. Javed, S. Khan, R. Sofi: *Voice Recognition using Artificial Neural Network*, Lecture Notes in Networks and Systems (in print)
- [11] Suhail Ahmad Suhail, Mohammad Abid Bazaz, Shoeb Hussain: *Active Disturbance Rejection Control Applied to a DC Motor for Position Control*. Proceedings of ICETIT 2019, Emerging Trends in Information Technology, 09/2019: pages 437-448; , ISBN: 978-3-030-30576-5, DOI:10.1007/978-3-030-30577-2\_38
- [12] Shoeb Hussain, Mohammad Abid Bazaz: *Adaptive Neural Type II Fuzzy Logic-Based Speed Control of Induction Motor Drive*. Ambient Communications and Computer Systems, 01/2018: pages 81-92; , ISBN: 978-981-10-7385-4, DOI:10.1007/978-981-10-7386-1\_7
- [13] Hadhiq Khan, Shoeb Hussain, Abid Bazaz: *ANFIS Based Speed Controller for a Direct Torque Controlled Induction Motor Drive*. Intelligent Systems Technologies and Applications 2016, 09/2016: pages 891-902; , DOI:10.1007/978-3-319-47952-1\_71
- [14] Shoeb Hussain, Abid Bazaz: *Sensorless Control of PMSM Drive with Neural Network Observer using a Modified SVPWM strategy*. Intelligent Systems Technologies and Applications 2016, 09/2016: pages 857-868; , DOI:10.1007/978-3-319-47952-1\_68

### **Conference Proceedings**

- [15] Suhail Ahmad Suhail, M A Bazaz, Shoeb Hussain: *Altitude and Attitude Control of a Quadcopter Using Linear Active Disturbance Rejection Control*. 2019 International Conference on Computing, Power and Communication Technologies (GUCON), Galgotias University, Greater Noida, UP, India. Sep 27-28, 2019; 12/2019.
- [16] M. Singh, M. Sreejeth and S. Hussain: *Implementation of Levenberg-Marquardt Algorithm for Control of Induction Motor Drive*, 2018 3rd IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT), Bangalore, India, 2018, pp. 865-869, doi: 10.1109/RTEICT42901.2018.9012353.
- [17] Shoeb Hussain, Hadhiq Khan, Mohammad Abid Bazaz: *Neural Network Observer for Sensorless Direct Torque Controlled Induction Motor Drive*. 2018 International Conference on Power Energy, Environment and Intelligent Control (PEEIC); 04/2018, DOI:10.1109/PEEIC.2018.8665540
- [18] Mohd. Amin Wani, Shoeb Hussain, P. Syal: *Comparative Study of Various Controllers for a Grid Connected Solar Photovoltaic System*. 2017 International Conference on Recent Innovation and Trends in Engineering, Technology and Research, 12/2017.

- [19] Saurabh Singh, Shoeb Hussain, Mohammad Abid Bazaz: *Short term Load Forecasting using Artificial Neural Network*. 2017 Fourth International Conference on Image Information Processing (ICIIP); 12/2017, DOI:10.1109/ICIIP.2017.8313703
- [20] Mohd. Amin Wani, Poonam Syal, Shoeb Hussain: *Implementation of Fuzzy-Sliding Mode Controller (FSMC) for a Grid Connected Solar Photovoltaic System to Control Voltage*. 2017 IEEE International Conference on Computational Intelligence and Computing Research (ICCIC); 12/2017, DOI:10.1109/ICCIC.2017.8524286
- [21] Suman Kumar Roy, Shoeb Hussain, Mohammad Abid Bazaz: *Implementation of MPPT Technique for Solar PV system using ANN*. 2017 Recent Developments in Control, Automation & Power Engineering (RDCAPE); 10/2017, DOI:10.1109/RDCAPE.2017.8358293
- [22] Zubair Iqbal, Shoeb Hussain, Mohammad Abid Bazaz: *Fuzzy tuned PID controller for Power System Stability*. 2017 International Conference on Computing, Communication and Automation (ICCCA); 05/2017, DOI:10.1109/ICCA.2017.8230056
- [23] Aadil Mehraj Wani, Shoeb Hussain, Mohammad Abid Bazaz: *Implementation of Hybrid Fuzzy Sliding Mode Controller for Power System Stability*. IEEE International Conference on "Electrical Power and Energy Systems"; 12/2016, DOI:10.1109/ICEPES.2016.7915974
- [24] Vimal Nigam, Shoeb Hussain, Satya Narayan Agarwal: *A Hybrid Fuzzy Sliding Mode Controller for a BLDC Motor Drive*. PEICES 2016, Delhi; 07/2016, DOI:10.1109/ICPEICES.2016.7853249
- [25] Shoeb Hussain, Mohammad Abid Bazaz: *Sensorless Control of PMSM Drive using Neural Network Observer*. PEICES 2016, Delhi; 07/2016, DOI:10.1109/ICPEICES.2016.7853081
- [26] Shoeb Hussain, Mohammad Abid Bazaz: *Comparative Analysis of Speed Control Strategies for Vector Controlled PMSM Drive*. International Conference on Computing, Communication and Automation (ICCCA2016); 04/2016, DOI:10.1109/ICCA.2016.7813950
- [27] Hadhiq Khan, Shoeb Hussain, Mohammad Abid Bazaz: *Neural Network Modulation for a Direct Torque Controlled Induction Motor Drive*. 2015 IEEE Student Conference on Research and Development (SCOREd); 12/2015, DOI:10.1109/SCORED.2015.7449379
- [28] Hadhiq Khan, Shoeb Hussain, Mohammad Abid Bazaz: *Direct Torque Control of Induction Motor Drive with Flux Optimization*. ICACCI 2015; 08/2015, DOI:10.1109/ICACCI.2015.7275678
- [29] Shoeb Hussain, Mohammad Abid Bazaz: *Review of Vector Control Strategies for Three Phase Induction Motor Drive*. 2015 IEEE International Conference on Recent development in Control, Automation and Power Engineering (RDCAPE); 03/2015, DOI:10.1109/RDCAPE.2015.7281376
- [30] Shoeb Hussain, Mohammad Abid Bazaz: *Sensorless Control of PMSM using Extended Kalman Filter with Sliding Mode Controller*. 2014 IEEE International Conference on Power Electronics, Drives And Energy Systems (PEDES), IIT Bombay; 12/2014, DOI:10.1109/PEDES.2014.7042090

- [31] Shoeb Hussain, Mohammad Abid Bazaz: *Fuzzy Integrated Sliding Mode Controller for Vector Controlled PMSM*. 6th IEEE Power India International Conference (PIICON); 12/2014, DOI:10.1109/34084POWERI.2014.7117646
- [32] Shoeb Hussain, Mohammad Abid Bazaz: *Fuzzy Based Sliding Mode Control for Vector Controlled Induction Motor*. 2014 IEEE International Conference on Advances in Computing, Communications and Informatics (ICACCI); 09/2014, DOI:10.1109/ICACCI.2014.6968234
- [33] Shoeb Hussain, Mohammad Abid Bazaz: *ANFIS Implementation on a Three Phase Vector Controlled Induction Motor with Efficiency Optimisation*. 2014 International Conference on Circuits, Systems, Communication and Information Technology Applications (CSCITA); 04/2014, DOI:10.1109/CSCITA.2014.6839293

### **Workshops/Short term courses/Certificate Courses**

- [1] Certificate of Achievement from Universitat Politecnica de Valencia, from Pedro Albertos, for the course Dynamics and Control
- [2] Participated in 112th Orientation Programme held at Jawaharlal Nehru University (JNU) by UGC-MHRD, from 2nd February 2019 to 1st March 2019.
- [3] Guest Lecturer for Electrical Drives & Artificial Intelligence in Winter Workshop, Institute of technology, University of Kashmir, February 2018.
- [4] Participated in workshop at NIT Srinagar on “Scientific and Technical Documentation using LATEX” from 3-4 June, 2016.
- [5] Coordinator/Organizer at technical festival of NIT Srinagar, “Techvaganza 2015”, from 22-24 May 2015.
- [6] Participated in short term course at NIT Srinagar on “Modelling and Simulation of Large Scale Systems” from 13-17 April, 2015.

### **Journal Reviewer**

- [1] IJFSA (International Journal of Fuzzy System Applications)
- [2] IJECE (International Journal of Electrical and Computer Engineering)
- [3] IJPES (The International Journal of Power and Energy Systems)

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Dr. Shoeb Hussain