Dr. Shazia Hasan

Assistant Professor

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☎ 971-04-368-9413   🏠 114, CBD 21, Universal Apartment International City, DUBAI

SUMMARY

I have more than 14 years of teaching experience at different levels and more than 11 years of experience in Research in various areas of Signal Processing application to Power Systems, Renewable Energy Integration, Modelling, and Computational Techniques, Intelligent Optimization of Power Signals, Parameter Estimation of non-stationary Signals and BioMedical Signal Processing.

I have co-authored a book accepted for publication with Springer Nature and published more than 30 papers in international refereed journals and conferences.

My current research interest includes Renewable Energy Integration and Management.

Google Scholar

🌐 http://scholar.google.co.in/citations?user=84AH_ycAAAAJ

ORCID iD

🌐 https://orcid.org/0000-0003-3119-2589

ResearcherID

🌐 http://www.researcherid.com/rid/N-8635-2017

Scopus Author

🌐 https://www.scopus.com/authid/detail.uri?authorId=24734053600

ACADEMIC EXPERIENCE

2015 - PRESENT

BITS Pilani Dubai

ASSISTANT PROFESSOR

- Department of Electrical and Electronics Engineering BITS Pilani, DUBAI
- May 2015- till date

2010 - 2015

I.T.E.R, Bhubaneswar Odisha, India

ASSISTANT PROFESSOR

- Department of Instrumentation and Control Engineering, I.T.E.R, Bhubaneswar, Odisha, INDIA
- November 2010 - April 2015

2003 - 2006

Silicon Institute of Technology Bhubaneswar Odisha, India

LECTURER

- Department of Electronics and Telecommunication Engineering, Silicon Institute of Technology Bhubaneswar, Odisha, INDIA
- June 2003 - October 2006

EDUCATION

2012

BIJU PATTNAIK UNIVERSITY OF TECHNOLOGY, INDIA

Ph.D.
Engineering

- Major: Adaptive Filtering Techniques for Parameter Estimation of Time Varying Sinusoids in noise, 2007-2012.

2002

UNIVERSITY COLLEGE OF ENGINEERING, BURLA, INDIA

B.E.
Electronics and Telecommunication

- Major: Electronics and Telecommunication Engineering, 1998-2002.

1997

CHSE, ODISHA, INDIA

Grade 12

- Major: Science, 1997

1995

HSC, ODISHA, INDIA

Grade 10

- 1995

PROFESSIONAL ACHIEVEMENTS

AWARDS

-Academic Achievement for University Professor/Researcher Award, **LEWAS 2020**.
-Received **Young Scientist award** from VIFRA, INDIA 2015.

CONSULTANCY PROJECT

As **Principal Investigator(PI)** for Star Cement Consultation Project on "**Harmonic Mitigation**". Duration of the project: 01/06/2017 to 14/08/2018 at Ras Al Khaimah, UAE Plant.

KEYNOTE

"**Recent Trends in Power Quality Techniques in Industrial Environment**", DoT-2019, 4th Industrial Revolution in Power Sector, SNAGS Analytics, Dubai, UAE, 20th September 2019.

CONFERENCE CHAIR

Springer International Conference on Modelling, Simulation & Intelligent Computing. **MoSICom 2020**, Dubai, 29-31st January 2020.

CONFERENCE CO-CHAIR

The 2020 IEEE Conference on Telecommunications, Optics and Computer Science (**TOCS2020**), China, 11-13th December 2020.

BOOK PUBLISHED

A.B.Chattopadhaya, Shazia Hasan, Snehaunshu Chowdhury "**Mathematical Modelling of Physical Systems**" accepted for publication in Advances in Intelligent Systems and Computing, Springer Nature.

BOOK EDITOR

Modelling, Simulation and Intelligent Computing, Proceedings of MoSICom 2020, Lecture Notes in Electrical Engineering, Springer, Singapore.

INVITED TALK

- "**Virtual Inertia Support in the microgrid, its research challenges and its technology potentials in recent years.**" as part of One Week International FDP organized by GMR Institute of Technology, INDIA. 13-17th July 2020.

- "**Renewable energy Forecasting-deep learning methods**." as part of five days International FDP, "Recent trends in power electronics, controls, and power systems", organized by GMR Institute of Technology, INDIA. 19-23rd July 2021.

JOURNAL EDITORIAL BOARD

- Associate Editor, Journal of Mechanics of Continua and Mathematical Sciences
- Editor in Chief, International Journal of Instrumentation Control and Automation

JOURNAL PAPERS REVIEWED

- IEEE Sensors Journal
- IET Signal Processing
- IET Science, Measurement & Technology
- Measurement Elsevier
- IET Renewable Energy
- Resources, Conservation & Recycling - Elsevier
- IET Radar, Sonar & Navigation

MANUSCRIPTS PUBLISHED

INTERNATIONAL JOURNAL

1. Neethu Elizabeth Michael, **Shazia Hasan**, B.Biswal, Manohar Mishra, "Reactive power compensation using virtual power plant with electric vehicle and data center batteries and virtual synchronous generator concept", **Journal: Electric Power Components and Systems, Taylor & Francis** (Under Review).
2. Neethu Elizabeth Michael, **Shazia Hasan**, Manohar Mishra, "Investigation of virtual inertia topologies considering energy storage systems and multi-resource virtual power plant", *Journal Electrical Engineering* (Under Review).
3. Aamer Abdul Rahman, Birendra Biswal, Geetha Pavani, Shazia Hasan, M.V.S Sairam, "Robust Segmentation of Vascular Network using Deeply Cascaded AReN-UNet", **Biomedical Signal Processing and Control, Elsevier** (Vol. 26, Aug 2021).
4. Manohar Mishra, Manoj Kumar Swain, Professor Ramesh Bansal, **Dr Shazia Hasan**, "A self-powered Solar Panel Automated Cleaning System: Design and Testing analysis", *Journal: Electric Power Components and Systems, Taylor & Francis* (Accepted).
5. Neethu Elizabeth Michael, **Shazia Hasan**, "Virtual Inertia Support in the microgrid, its research challenges, and its technology potentials in recent years", *International Journal of Power Electronics -IJPELEC* (Accepted).
6. **Shazia Hasan**, K Kulkarni, S Parija and P.K.Dash, "A systematic review on detection and estimation algorithms of EEG signal for epilepsy", *Int. J. Medical Engineering and Informatics* (Vol. 13, Issue 2, pp. 143-156, Jan 2021).

7. Neethu Elizabeth Michael, Shazia Hasan, "Virtual Inertia provision through Data Center and Electric Vehicle for ancillary services support in microgrid", IET Renewable Power Generation (Vol. 14, Issue 18, pp. 3792-3801, Nov 2020).

8. A. R. Abdul Rajak, Shazia Hasan, Bushra Mahmood, "Automatic Waste Detection by Deep Learning and Disposal System Design", Journal of Environmental Engineering and Science, (Vol. 15, Issue 1, pp. 38-44, March 2020).

9. A. B. Chattopadhyay, **Shazia Hasan**, Sunil Thomas, "Parameter based non linearity in a state variable model of a practical system: A case study", *J. Mech. Cont. & Math. Sci*, (Vol. 14, Issue 3, pp. 135-149, 2019).

10. M. Bhuvaneshwari, **Dr. Shazia Hasan**, Dr. Abdul Razak, "Study on soliton pulse and its characteristics for fiber optic communication", *International Journal of Engineering & Technology*, (Vol. 7, Issue 4, pp. 2845-2847, 2018).

11. Aaron D'costa, Abdul Razak, **Shazia Hasan**, "Analysis and comparison of fast multiplier circuits based on different parameters", *International Journal of Engineering & Technology*, (Vol 7, Issue 3, pp. 1189-1192, 2018).

12. **Shazia Hasan**, A.B.Chattopadhyay, Mohammed Abdul Jabbar, Sunil Thomas, "Steady State Stability Analysis of a CSI-fed synchronous motor drive using Digital modeling", *J. Mech. Cont. & Math. Sci*, (Vol. 13, Issue 3, pp. 68-86, July-August 2018).

13. S Nanda, PK Dash, T Chakravorti, **S Hasan**, "A quadratic polynomial signal model and fuzzy adaptive filter for frequency and parameter estimation of Non-stationary power signals", *Elsevier Measurement*, (Vol. 87, pp. 274-293, June 2016).

14. B. Biswal, M. Biswal, **S. Hasan**, P.K. Dash, "Non-stationary power signal time series data classification using LVQ classifier", *Applied Soft Computing, Elsevier*, (Vol. 18, pp. 158–166, 2014).

15. **Shazia Hasan**, S. Nanda and P.K.Dash, "A Signal Processing Adaptive Algorithm for Non-stationary Power Signal Parameter Estimation", *International Journal of Adaptive Control and Signal Processing, John Willey*, (Vol. 27, Issue 3, pp. 166–181, March 2013).

16. P.K.Dash, **Shazia Hasan**, "A Fast Recursive Algorithm for the Estimation of Frequency, Amplitude, and Phase of Noisy Sinusoid", *IEEE Transactions on Industrial Electronics*, (Vol. 58, Issue 10, pp. 4847-4856, October 2011).

17. P.K.Dash, **Shazia Hasan**, B. K. Panigrahi, "A Hybrid Unscented Filtering and Particle Swarm Optimization Technique for Harmonic analysis of Non-stationary Signals", *Elsevier Measurement*, (Vol. 43, Issue 10, pp. 1447-1457, December 2010).

18. P.K.Dash, **Shazia Hasan**, B. K. Panigrahi, "Adaptive complex unscented Kalman filter for frequency estimation of time varying signals", *IET Proceeding on Science, Measurement & Technology*, (Vol. 4, Issue 2, pp. 93–103, March 2010).

19. P.K.Dash, B. K. Panigrahi, **Shazia Hasan**, "Hybrid Particle Swarm Optimization and Unscented Filtering Technique for Estimation of Non-stationary Signal Parameters", *IETE Journal of Research*, (Vol. 55, Issue 6, pp. 266–274, November-December 2009).

NATIONAL/ INTERNATIONAL CONFERENCE

CONFERENCE

1. S K Rai, H D Mathur and **Shazia Hasan**, "Converter Efficiency Improvement of Islanded DC Microgrid with Converter Array", *2020 International Conference on Modelling, Simulation & Intelligent Computing (MoSICom 2020)*, January 29-31, 2020.

2. Ranjit Singh and **Shazia Hasan**, "Comparative Study on Load Frequency Control of a Single Microgrid Coupled with Thermal Power Plant Using Fuzzy and PID Controllers", *2020 International Conference on Modelling, Simulation & Intelligent Computing (MoSICom 2020)*, January 29-31, 2020.

3. Sebamai Parija, P. K. Dash, **Shazia Hasan**, "Identification Of Non-linear Dynamic Systems Using Smooth Variable Structure Filter", *2015 IEEE Power, Communication and Information Technology Conference (PCITC)*, October 15-17, 2015.

4. Sarita Nanda, **S. Hasan**, S. S Pujari, P. K. Dash, "A Fast Hybrid Adaptive Filter For Parameter Estimation of Non Stationary Sinusoid Under Noise", *2015 IEEE Power, Communication and Information Technology Conference (PCITC)*, October 15-17, 2015.

5. S. Parija, **S. Hasan**, "A modified adaptive Filtering algorithm for identification of a Dynamic system", *IEEE Conf. EECSO -2015*, January 24-25, 2015.

6. P.Raiguru, B.K. Sarap, **S. Hasan**, "Performance analysis of Direction of Arrival estimation using model based approach", *IEEE Conf. EECSO -2015*, January 24-25, 2015.

7. S. Nanda, **S. Hasan**, B. K. Swain, P. K. Dash, "Improved ADALINE Based Algorithm For Power System Frequency Estimation", *5th International conference on Swarm, Evolutionary and Memetic computing (SEMCO-2014)*, December 18-20, 2014.

8. **Shazia Hasan**, S. Nanda and P.K.Dash, "A fast adaptive notch smoother for parameter estimation of complex sinusoid under noise", *IEEE Conference on energy automation and signal- 2011*, December 28-30, 2011.

9. **Shazia Hasan**, P. K. Dash, B. K. Panigrahi, B. Biswal, "Adaptive Unscented Filtering Technique and Particle Swarm Optimization for Estimation of Non-stationary Signal Parameters", *The 4th IEEE Conference on Industrial Electronics and Applications (ICIEA-2009)*, at International Conference Center, Xi'an, China, May 25-27, 2009.

10. **Shazia Hasan**, P. K. Dash, B. K. Panigrahi, B. Biswal, "An Adaptive Gauss-Newton Algorithm for Estimation of Nonstationary Sinusoidal Parameters in Noise", *National Conference on Advances in Computational Intelligence Applications in Power, Control, Signal Processing and Telecommunications (NCACI-2009)*, at SIT, Bhubaneswar, March 20- 22, 2009.

11. B.Biswal, P.S. Mohanty, B.D. Sahu, **Shazia Hasan**, S.Panda, "Power Quality Event Classification Using Support Vector Machine", *National Conference on Advances in Computational Intelligence Applications in Power, Control, Signal Processing and Telecommunications (NCACI-2009)*, at SIT, Bhubaneswar, March 20-22, 2009.

12. P. K. Dash, **Shazia Hasan**, H. Sahoo, "Adaptive Filtering using Swarm Intelligence", *National Seminar on Emerging & Futuristic Communication Technologies and Systems (EFCTS-2008)*, at NMIT, Bhubaneswar, February 22, 2008.

13. B.Biswal, P.K. Dash, B.K. Panigrahi, T.Panda, **Shazia Hasan**, "Non-stationary Power signal processing and pattern Recognition using Genetic algorithm", *The Sixth International conference on information, Communication, and Signal processing, (ICICS-2007)*, at Singapore, December 10-13, 2007.

14. **Shazia Hasan**, P. K. Dash, "A Hybrid Particle Swarm Optimization and Kalman Filtering Technique for Signal Parameter Estimation", *National Conference on Soft Computing & Machine Learning for Signal Processing, Control, Power and Telecommunication (NCSC-2006)*, at CEB, Bhubaneswar, March 24-26, 2006.

CONFERENCE/ SEMINAR ORGANIZED

1. The 2020 IEEE Conference on Telecommunications, Optics and Computer Science (**TOCS 2020**), China, December 11-13, 2020.

2. Springer conference on International Conference on Modelling, Simulation & Intelligent Computing (**MoSICom 2020**), Dubai, January 29-31, 2020.

3. Springer conference on Swarm, Evolutionary and memetic computing (**SEMCO-2014**), October 20-22, 2014.

4. Springer conference on Swarm, Evolutionary and memetic computing (**SEMCO-2012**), December 20-22, 2012.

5. IEEE Conference on Energy Automation and Signal 2011, December 28-30, 2011.
6. National Conference on Advances in Computational Intelligence Applications in Power, Control, Signal processing and Telecommunications (**NCACI-2009**), January 9-11, 2009.
7. National workshop on advanced Signal and Image Processing (**WASIP-2008)**, December 11-13, 2008.

DETAILS OF WORKSHOP CONDUCTED

1. EEE Dept of BITS Pilani, Dubai Campus conducted school students workshop on, "Build your own drones", Dr. Anand Kumar, Dr. Jagadish Nayak, Dr. V.Kalaichelvi, Dr. Vilas Gaidane, **Dr. Shazia Hasan** and Dr. Nilesh Goel on 27th March 2019.
2. EEE Dept of BITS Pilani, Dubai Campus organized a workshop for school students on, "Build and Control your own robot", Dr. Anand Kumar, Dr.Jagadish Nayak, Dr. V.Kalaichelvi, Dr.Vilas Gaidane, Dr. Raja Muthalagu & **Dr. Shazia Hasan** on 3rd November 2018.
3. EEE Dept of BITS Pilani, Dubai Campus organized a school students workshop on, "Build your own drones", Dr. Anand Kumar, Dr.Jagadish Nayak, Dr. V.Kalaichelvi, Dr. Vilas Gaidane, Dr. Raja Muthalagu & **Dr. Shazia Hasan** on 17th October 2018.
4. EEE dept of BITS Pilani, Dubai Campus organized a school students workshop on, "Build your own drones", Dr. Abdul Rajak, Dr. Chattopadyay, Dr. Jagadish Nayak, Dr. V. Kalaichelvi, Dr. Swarnalatha, Dr. Vilas H Gaidhane, **Dr. Shazia Hasan** & Dr. Sunil Thomas on 28th March 2018.

CONFERENCE/ SEMINAR/ SHORT TERM PROGRAM ATTENDED

1. International Webinar on, "Physics Does Digital Optimization - for Machine Learning, Control Theory, Back Propagation", Jointly organized by *MHRD-Institution Innovation Council, DDUC Chapter, Deen Dayal Upadhyaya College, University of Delh*, July 28 2020.
2. Faculty Development Program on, "Advances in Signal Processing and Machine Learning", Jointly organized by *MHRD-Institution Innovation Council, DDUC Chapter, Deen Dayal Upadhyaya College, University of Delh*, July 20–26, 2020.
3. International Webinar on "SMART CITY: Beyond the Pandemics", at *BITS Pilani*, July 10-11, 2020.
4. Workshop on, "Image and Signal processing Applications using Xilinx system Generator", *IIIT Bhubaneswar*, on June 19-20, 2015.
5. National Conference on, " Sustainable energy, Micro and Smart Grid technology (**NCSEMSG-2015**), jointly organized by *ITER, SOA University and DST*, January 2-3, 2015.

6. National workshop on, "Embedded Computer application systems and technologies (**ECAST-2013**), jointly organized by *ITER,SOA University and SUIIT, Sambalpur University*, *March 22-23, 2013*.
7. Workshop on, "Computational intelligence", *ITER Bhubaneswar*, July 12, 2013.
8. Workshop on, "Advances in Signal processing for Power, Control & communication (**ASPCC**)", *IIIT Bhubaneswar*, June 27-29, 2013.
9. Workshop on, "Soft Computing and Applications (**WSCA'11**)", *ITER Bhubaneswar*, January 13-15, 2011.
10. Workshop on, "Pedagogy for Engineering Education", *MHRD*, February 7-9, 2009.
11. Workshop on, "Recent Trends in DSP and Evolutionary Computing", *NIT Rourkela*, May 19-30, 2008.
12. National Workshop on, "Emerging Technologies in Electrical Power Systems (**NWEPS**)", *SIT Bhubaneswar*, March 23-26, 2007.
13. Technical Teachers Training by Institute Dept of education MHRD eastern region, *SIT Bhubaneswar*, April 5-9, 2004.
14. Workshop on, "VLSI & Embedded Systems", *KIIT Bhubaneswar*, December 20-21, 2003.