

ANJU GUPTA

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- **Professor**, Department of Electrical Engineering, J.C. Bose University of Science and Technology, YMCA, Faridabad-121002
- **Teaching Experience: 23 Years**

QUALIFICATIONS:

- Third topper of state in Senior Secondary Examination.
- B. Tech (Electrical) N.I.T. Kurukshetra (Gold Medalist) in 1997. Secured 76.6% marks and was **Gold Medalist** in B.Tech. State Scholarship holder for consecutive four years in B.Tech.
- College scholarship holder for securing first position in semester examination
- M. Tech (Control Systems) N.I.T Kurukshetra in 1999. Secured 78% marks and was **Topper of branch**.
- PhD in Electrical Engineering in 2014 from MDU, Rohtak Title of thesis" Optimal Location of FACTS devices using AI tools".

TEACHING EXPERIENCE:

- **MAY 2019 - PRESENT:** Professor, JCB UST, YMCA, Faridabad, India
 - **Courses taught**
 - **UG(B.Tech) level:** Fuzzy Control Systems, Power System Dynamics, Control System Engineering, Circuit Theory, Basic Electrical Engineering, Electrical Measurement and Instrumentation
 - **PG(M.Tech) level:** Power System Dynamics, Stochastic Control, AI Techniques in power Systems including Artificial Neural Network and Genetic algorithm, Python
 - **Projects supervision at B. Tech and M. Tech level:**
UG projects (Major): 10 (Completed), 02(under Process),

PG Major Projects: 15(Completed)

1. Comparison of PID and fuzzy controller for speed control of brushless DC motor using MATLAB SIMULINK.
2. Short term load for casting using Artificial Intelligence.
3. Performance analysis of Grid connected solid oxide fuel cell system and implementation of low-cost inverter for domestic fuel cell applications.
4. Automatic irrigation system using Lab view.
5. A study of adaptive wavelet technique for speckle noise removal.
6. Comparative analysis of PID controller using tuning methods.
7. Modelling and simulation of 6 pulse static synchronous compensator for voltage stability of power system.
8. Design of optimal self-tuning PID controller based on low power consumption for a serve fan cooling system.
9. Modelling and simulation of D-Statcom for voltage Quality improvement.

- **Supervision of Ph.D Scholars:** 03(Under Process)

Uma Yadav, “Performance Improvement of Grid Tied three phase SPPS (Solar Photovoltaic power System)”.

Shipra Aggarwal, “Control Aspects of Micro grids”.

- ❖ **JAN 2007-MAY 2019:** Associate Professor, JCB UST, YMCA, Faridabad, India
- **DEC 2000 - Dec 2006:** Assistant Professor at Institute of Technology and Management
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- (ITM), Gurugram, India
- **JULY 1999-DEC 2000:** Lecturer at Jind Institute of Engineering and Technology, Jind, India
- **JAN 1999-JULY 1999:** Lecturer at N.I.T, Kurukshetra, India

ADMINISTRATIVE EXPERIENCE:

- Worked as active member of women welfare cell since 2012. Actively participated and organized various women empowerment and gender sensitization programs and resolved sexual harassment cases.
- Worked as Chairperson of ICC (Internal Complaint Committee) from Oct 2016-March 2020.
 - Conducted various gender sensitization programs such as expert lectures, workshops for women empowerment.

- Actively involved in creating awareness among Girls about gender equality and their rights.
- Organised various health and yoga camps for mental and physical health of girl students.
- Organised various skill development programs for girl students of university.

➤ Worked as Centre Superintendent in University Examination in 2016, 2017, 2018 and 2019.

➤ Worked as member central purchase committee of university for three years.

MAJOR RESEARCH INTERESTS:

- Flexible AC Transmission Systems
- AT Techniques
- Power system dynamics
- Control techniques

PROFESSIONAL ACHIEVEMENTS:

1. Keynote Speaker on the topic, “**Artificial Intelligence Techniques**” in IETE Sponsored One Day Workshop for Electronics and Electrical Engineers on latest trends” Sept. 2019 at UEM.
2. Member of Interview panel for selection of Assistant Professors in Haryana by State Govt.
3. Chairman of Interview Committee for the Assistant Professors for community college courses (B.Voc in Electrical) 2018.
4. Reviewer of various prestigious International Journals like Information System modelling and design,
5. Reviewer of various IEEE conferences
6. Speaker of webinar on “**Gender myths and leadership opportunities: Post covid 19 lockdown**” on 28th June 2020 organised by J.C. Bose UST, YMCA, Faridabad.
7. Keynote Speaker of IETE sponsored webinar on” **Applications of AI and Machine Learning in Engg.**” On 14th July 2020 organised by University of Engineering and Management, Jaipur.
8. Speaker of SDP on “**Basic Computer skills and ICT tools**” organised by J.C. BOSE university of Science and Technology, YMCA, Faridabad from 10th to 14th July 2020.
9. Convener of webinar on “**Artificial Intelligence, Machine Learning and Robotics: A paradigm for new Generation**” on 19th June 2020 organised by electrical Engg. Department, J.C. Bose UST, YMCA, Faridabad
10. Convener of webinar on “**Building Motivation and Nurturing Opportunities: Post COVID -19 Lockdown**” organised by Electrical Engg. Department, J.C. Bose UST, YMCA, Faridabad on 20th June 2020
11. Convener of webinar on” **Industry 4.0: Thinking with Thingwor Xplateform for IIOT**” organised by electrical Engg. Department, J.C. Bose UST, YMCA, Faridabad on 22nd June 2020.

12. Worked as one of the panelist for interview of Professors in Electrical Engg. at Central University Haryana, Mahendergarh.

PUBLICATIONS:

A. INTERNATIONAL JOURNALS:

- ❖ Shipra Jain, Rajesh Kr. Ahuja, Anju Gupta, Yogendra Arya, " Hybrid intelligent h-AFSA- ANN controller for the SPV -BESS-DG based DC microgrid integrated system", Electrical Engineering, 2023, <https://doi.org/10.1007/s00202-023-02130-9>
- ❖ Ms. Uma Yadav, Dr. Anju Gupta, Dr. Rajesh Kr Ahuja, " A Novel PRESH Controller Design for Three Phase Grid Tied SPPS," Energy Reports, Volume 8, Supplement 1, April 2022, Pages 1-8, DOI: 10.1016/j.egyr.2021.11.173.
- ❖ Ms. Uma Yadav, Dr. Anju Gupta, Dr. Rajesh Kr Ahuja , "Harmonic Mitigation In Grid-Tied TPSPPS Via Novel PRESH Controller," International Journal of Mathematical Models and Methods in Applied Sciences, **E-ISSN: 1998-0140, Volume 15, 2021, Pages: 233-238**, DOI: 10.46300/9101.2021.15.30
- ❖ Anju Gupta, Mohan," Modelling and Simulation of DFIG Based Wind Energy Conversion System", Caribbean Journal of Science, ISSN: 0008-6452, Volume 53, ISSUE 2 (MAY - AUG), 2019.
- ❖ Rajender Kumar Tayal, Sudhir Kumar, Vikram Singh, Anju Gupta & Deepa Ujjawal, "Experimental Investigation and Evaluation of Joint Strength of A356/Mg Bimetallic Fabricated Using Compound Casting Process," International Journal of metal casting, ISSN 1939-5981, Dec 2 018, <https://doi.org/10.1007/s40962-018-0288-2>.
- ❖ Subhash Sharma, Dr Anju Gupta, Uma Yadav, Dr DK Bhalla, "Simulation of Grid Connected Solar Power System and Harmonic Reduction" Journal of Power Electronics and Devices, Volume 4, Issue 2, 2018.
- ❖ Lalit Negi, Preeti Ranga, Anju Gupta, "Hybridized network for grade Approximation Using Neural and Fuzzy logic Method," International Journal of Advanced Trends in Technology Management and Applied Sciences, Vol 3,454-5678, pp 41-48, April 2017.
- ❖ Lalit Negi, Anju Gupta, Neetu Gupta, "Improving Hearing Capability by Simulation of Speech signal algorithm using MATLAB," International Journal of Engg. Scientific and Engg. Research, Vol 8, Issue 4, 2229-5518, April 2017.

- ❖ Lalit Negi, Anju Gupta, Pooja Khurana "Enhancing Security System using Finger Print based Authentication, International Journal of Computer Applications, Volume 166, Number 3, 973-93-80896-33-3,2017.
- ❖ Urmila Bainsla, Anju Gupta, "Comparison of SVC and TCSC for Transient Stability Enhancement of Multi-machine System," International Journal of advanced Research in electrical, Electronics and Instrumentation Engg., Volume 5, Issue 9, 2278-8875, Sept 2016.
- ❖ Anju Gupta, P.R.Sharma, "Optimal location of SVC for dynamic stability enhancement based on Eigen value," Electrical and Electronics Engineering: An International Journal (ELELIJ) vol 3, No 1, February 2014.
- ❖ Anju Gupta, P.R.Sharma, "Application of GA for Optimal Location of FACTS Devices for Steady State Voltage Stability Enhancement of Power System," International Journal of Intelligent systems and Applications, PP.69-75, 03, Feb 2014, DOI: 10.5815/ijisa.2014.03.07.
- ❖ Anju Gupta, P.R. Sharma, "Static and Transient Voltage Stability Assessment of Power System by Proper Placement of UPFC with POD Controller," WSEAS Trans. of Power Systems, Issue 4, Vol 8, October 2013, pp 197-206
- ❖ Anju Gupta, P.R.Sharma, "Optimization of Power system Performance Using Genetic Algorithm," International Journal of Artificial Intelligence and Knowledge Discovery, vol 3, no 3, July 2013, pp 16-22.
- ❖ Anju Gupta, P.R.Sharma, "Fuzzy Based Multi-Objective Evolutionary Algorithm for optimal location of FACTS Devices in a Power System," International Review of Modeling and Simulation, Volume 6 issue 4, August 2013.
- ❖ Anju Gupta, P.R. Sharma, "Optimal Placement of FACTS Devices for Static Voltage Stability Enhancement," International Journal of Power System Operation and Energy management, ISSN (PRINT): 2231– 4407, Volume-2, Jan 2013 Issue 3-4, pp 67-70
- ❖ Anju Gupta, P.R.Sharma, "Design and Simulation of Fuzzy Logic controller for DSTATCOM in Power System," International Journal of Engineering Science and Technology, (IJEST), ISSN: 0975-5462, vol. 3, no.10 October 2011, pp 7816-7822.

B. INTERNATIONAL AND NATIONAL CONFERENCES

- ❖ Shipra Jain, Rajesh Kr. Ahuja, Anju Gupta, " An approach for the supervision and management of power for the solar photovoltaic and BESS based DC Microgrid integrated system 2023 (CCPIS 2023) 2nd-3rd Sep 2023.

- ❖ Shipra Jain, Rajesh Kr. Ahuja, Anju Gupta, " Control Structure of DC Microgrid",, RDCAPE 2023 12th-13th Oct 2023.
- ❖ Gupta, A.; Sharma, P.R., "Optimal Location of FACTS devices for voltage stability Using Line Indicators," IEEE Fifth Power India Conference, Murthal, Dec 2012, pp- 1-5.
- ❖ Gupta, A.; Sharma, P.R, "Static and Transient Stability Enhancement of Power system by optimally placing UPFC (Unified Power Flow Controller)," IEEE Third International Conference on Advanced Computing and Communication Technologies (ACCT), Rohtak, April 2013, pp 121-125.
- ❖ Gupta, A.; Sharma, P.R,"Fuzzy logic based Auxiliary Controller for Damping Low frequency Oscillations in a Multi-Machine System," IEEE Conference, Confluence 2013,4th international conference, Amity University Noida, 26- 27 Sept, 2013,pp 87- 91.
- ❖ Anju Gupta,P.R.Sharma, "Optimal Location of FACTS devices for transient stability enhancement based on Critical Clearing Time (CCT)," proc. International Conference on advanced computing and communication Technologies, ACCT, Rohtak, April 2014, pp532
- ❖ Anju Gupta, P.R.Sharma, "Static Voltage Stability Enhancement by optimally placing FACTS devices Using Genetic Algorithm", Paper presented in IEEE conference in Allahabad, ICCCCM-2013, 3-4 august 2013.
- ❖ Anju Gupta, P.R.Sharma, "Optimal Placement of Flexible Alternating Current System (FACTS) Devices for Static Voltage stability Enhancement," International conference on Electrical Engineering and Computer Science, Chandigarh, June 2012, pp16-20
- ❖ Lalit Negi, Preeti Ranga, Anju Gupta, Neetu Gupta," Security System using Finger Print Based Authentication," Recent Trends in Science, Engineering, Information Technology & Management, Echelon Institute of Technology, Faridabad, April 2017.
- ❖ Lalit Negi, Anju Gupta, Neetu Gupta," Designing and Simulation of Speech Signal Algorithm for enhancing intelligibility in Hearing Impairment", NHTSEE 2017, YMCA UST, 29 March 2017.
- ❖ Lalit Negi, Anju Gupta, Neetu Gupta, "Improving Hearing Capability by Simulation of Speech Signal Algorithm using MATLAB", National Conference on Innovations In Electronics and Telecommunication Design (NCIETD-2017), Lingaya's University, Faridabad, March 2017.
- ❖ Anju Gupta, Neha Chaudhary, Yogesh Kumar, "Design and Analysis of Tuning Methods of PID Controller with interfacing MIMO System", NHTSEE 2017, YMCA UST,35, March 2017.

- ❖ Tamanna Gaur, Anju Gupta, “Image Compression Using MATLAB”, NHTSEE 2017, YMCA UST,31, March 2017.
- ❖ Muzamil Rasool Malik, Anju Gupta,” Domination of SOGC over other fuel Cells and Batteries used in a micro grid”, NHTSEE 2017, YMCA UST,43, March 2017.
- ❖ Lalit Negi, Anju Gupta, Neetu Gupta, “Braking System using Eddy Currents”, National Conference on AMC 2017, YMCA UST.
- ❖ Lalit Negi, Anju Gupta, Neetu Gupta, “Anti-Social Security issues and their solutions in Data Mining”, Manav Rachna International University, ISSC 2017.
- ❖ Uma Yadav, Anju Gupta, H. K. Rai, D. K. Bhalla,” Mitigation of Harmonic Current in Grid-Connected Solar Power System”, Recent Advances in Mechanical Engineering, ITME ,oct 2019,pp 605-610.
- ❖ U Yadav, A Gupta, R Ahuja,” Robust control design procedure and simulation of PRES controller having PLL in Grid Tied Converter”, IEEE 3rd International Seminar on Research of Information technology and Intelligent System, Dec. 2020(ISRITI) YOGYAKARTA - INDONESIA

C. WEBINARS/WORKSHOPS/FDP ATTENDED:

- i. Two weeks course on, “**Digital Transformation and Teaching learning Process**”, April 6th -22nd 2020 organised by NPIU.
- ii. Six days Webinar series on “**PLC programming and HMI Development**”, 28may-12th June 2020 organised by electrical Engg Department JCBOSE UST, YMCA Faridabad
- iii. One-week international webinar on, “**Industry 4.0: Artificial Intelligence and Related Technology**,” 6th -10th July 2020 organisd by Deptt.of electronics and communication Engg. Integral University, Lucknow.
- iv. Two days’ workshop on, “**Covid-19 outbreak Prediction, Forcasting, Data Analysis & Data Visualization with Python**”, from 11th-12th July 2020 organised by Edux Labs.
- v. One week SDP on, “**Basic Computer Skills and ICT Tools**”, from 10th -14th July 2020 organised by electrical Engg. Department, J.C. Bose, UST, YMCA, Faridabad.
- vi. One-week STC on, “**Smart grid: Operation &planning with renewable energy Sources and FACTS**”, from 29th July-02 August 2020 organised by Electrical Engg. Deptt. N.I.T, Kurukshetra.
- vii. Workshop on, “**Basics of Machine Learning**”, on 27th April organised by CREATEs, IISER Bhopal.

- viii. Workshop conducted by NPTEL on 31st Jan 2020 by IIT madras conducted at JCBOSE UST, YMCA Faridabad.
- ix. Professional Development Training (PDT) for National Project Implementation Unit (NPIU) from 27th -31st, May 2019, organised by IIM, Indore.
- x. Workshop Under TEQIP-III on "**Hands on Training on Design and Fabrication of PCB**", 18-24/07/2019 organised by Electrical Engg Department JCBOSE UST, YMCA Faridabad.
- xi. FDP on "**Intelligent Management of renewable energy Techniques**" 18th jan-23rd jan 2018 conducted by Electrical Engg Department JCBOSE UST, YMCA Faridabad.
- xii. FDP on "Real time Data Acquisition and analysis using Lab View" from 8th May 2017- 12th May 2017 organised by Electrical Engg Department JCBOSE UST, YMCA Faridabad.
- xiii. One day workshop on "Women Health Awareness and Depression" organized by Department of Electronics Engg in collaboration with Rotary club Faridabad, April 2017.
- xiv. Workshop on "**Automation: PLC and SCADA**", 17-21 Jan 2017 organised by electrical Engg Department JCBOSE UST, YMCA Faridabad.
- xv. AICTE approved Short Term Course on "**Environment, Development and Sustainability**" conducted by Centre for Clean technologies and Sustainable Developement from 04th July 2016-08th July 2016
- xvi. Workshop on "**MATLAB and SIMULINK Fundamentals**" 18th July 2016-22nd July 2016, conducted in association with Design Pvt Ltd and Maths work at J C BOSE UST, YMCA Faridabad.