

Professor Sathans
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Personal Information:

Date of Birth: 29th January, 1971

Father's Name: Shri Pratap Singh

Mailing Address: Department of Electrical Engineering
National Institute of Technology
Kurukshetra (Haryana)-136119

Academic Qualifications (Graduation onwards):

Ph. D. (Electrical Engineering), NIT Kurukshetra—2013

M. Tech. (Electrical Engineering), NIT Kurukshetra — 1996, **Distinction** in Dissertation

B. Tech. (Electrical Engineering), NIT Kurukshetra — 1992, **Ist Division with Honors**

Teaching & Research Experience: 28 Years

Number of Research Publications: 90-(Annexure-A)

Ph. D. Theses Supervision: 09 (Completed:05; In progress: 04)-(Annexure-B)

M. Tech. Dissertations Supervised: 59 (Awarded: 54 In progress: 05) (Annexure-C)

R &D Projects

1. Title: “Building Integrated PVT Systems for Domestic and Industrial Applications”, under TEQIP-III collaborative research scheme, AICTE, New Delhi, **Amount: Rs. 15.97 Lacs as Co-PI (completed)**

2. SPARC Proposal submitted as PI with Dr. Tek Tjing LIE Professor and Deputy Head of School (Research) Electrical and Electrical Engineering, School of Engineering, Computer and Mathematical Sciences, Auckland University of Technology, Auckland, New Zealand.

Title of Project: Design of Hardware-In-Loop (HIL) Prototype of AC/DC Microgrid with Reinforcement Adaptive Control; Thrust Area: Action Oriented Research; Sub-domain: Future of Earth: Green and Renewable Technologies; Amount **Rs. 74,71,200/- (submitted)**

GIAN Course organized:

Title of Course: Precision Positioning Systems: Dynamics and Control

Duration: 31.01.2022 to 04.02.2022

Foreign Faculty: Dr. Hassan HosseinNia, TU Delft / 3mE / Precision & Microsystems Engineering (PME) Assistant Professor Mechatronic System Design, Netherlands

Book Edited:

Title: "Control and Measurement Applications for Smart Grid", Springer publication, January 2022

Book Chapter Written:

Energetic and Exergetic Comparison of Opaque and Semi-transparent PVT Arrays Under Natural Convection Mode for Building Integration" In the book: Advancement in Materials, Manufacturing and Energy Engineering, Vol. II (pp.361-373), DOI:10.1007/978-981-16-8341-1_29

Research and Teaching Areas:

Control System, Intelligent Controllers, Microgrid and Renewable Energy Systems, Automatic Generation Control, Soft Computing Techniques and Applications.

Recognition / Awards / Fellowships:

- **Union Ministry of Energy - Department of Power Prize Award** for the paper titled "Impact of TCPS, SMES and DFIG on Load Frequency Control of Nonlinear Power Using Differential Evolution Algorithm", published in the Series B Journal of IEI, Vol. 100, Issue 2, which was presented at the Prize Distribution Ceremony of the 36th Indian Engineering Congress held at Vigyan Bhawan, Maulana Azad Road, New Delhi on December 26, 2021.
- **Best Faculty Award** by NIT Kurukshetra for Administrative Contributions, 2018.
- **Conference Chair** and Key Note Speaker, 2nd International Conference on Control, Mechatronics and Automation (ICCMA-2014), December 8-10, 2014, **Dubai, UAE.**
- Best Paper (Poster) Presentation Award, National Conference on Nanomaterials and Instrumentation (NCNI-2014), National Institute of Technology Kurukshetra.
- Letter of appreciation by the District Kurukshetra Administration for conducting trainings on EVM.
- Life Member, Indian Society for Technical Education (ISTE), New Delhi.
- Member Executive Committee and Life member, Vigyan Bharti, Haryana
- Honours in B.Tech. (Electrical Engineering).
- Distinction in M.Tech. (Electrical Engineering) Dissertation.

- Recipient of Merit-cum-Means Scholarship at B. Tech. level.

Assignments at National / State Level:

- Chancellor's Nominee, Dr. B.R. Ambedkar Open University, Ahmedabad, Gujrat,** Appointed by the *Hon'ble Governor of Gujrat* in his capacity as the Chancellor of University
- Member, Academic Council,** National Institute of Technical Teachers' Training and Research, Bhopal
- Visiting Professor,** University of Ladakh, for 2022-2023
- Chancellor's Nominee, Gujrat Technological University, Ahmedabad, Gujrat,** Appointed by the *Hon'ble Governor of Gujrat* in his capacity as the Chancellor of University
- Member, AICTE Panel of Experts on NEP-2020**
- Member of the Committee for finalizing the AICTE-MODROB Scheme for Polytechnics**
- Member, Faculty of Engineering and Technology,** MD University, Rohtak, Haryana
- Member, U.G. Board of Studies in Instrumentation Engineering,** Kurukshetra University Kurukshetra
- Member, Academic Council,** Central University of Haryana, Mahendergarh
- Member, Senate,** National Institute of Technology Silchar
- Member,** All India Board of Technician Education, All India Council for Technical Education (AICTE), New Delhi.
- Member,** All India Board of Vocational Education, All India Council for Technical Education (AICTE), New Delhi.
- Chairman,** Committee for monitoring the effective implementation of AICTE Model Curriculum of Diploma Programs, All India Council for Technical Education (AICTE), New Delhi.
- Member, Task Force for Drafting the frame work for implementation of NEP 2020,** AICTE, New Delhi.
- Member, Board of Governors,** Government Engineering College Bikaner, Rajasthan
- Member, School Board of School of Engineering & Technology,** Central University of Haryana, Mahendergarh
- Member,** Task Force to Recommend the Roadmap for Implementation of NEP-2020, Central University of Haryana, Mahendergarh
- Member, Board of Studies, Engineering & Technology,** Maharshi Dayanand University, Rohtak
- Member, Board of Studies, Engineering & Technology,** Kurukshetra University, Kurukshetra
- Visitor's Nominee** (19th May 2017- 18th May 2020), National Institutes of Technology, Appointed by the *Hon'ble President of India* in his capacity as Visitor of the NITs.
- Chairman,** All India Board of Technician Education (May 2016-December 2019), All India Council for Technical Education (AICTE), New Delhi.

- v. **Member**, Working Committee for the University Enterprise Architecture Framework (UEAF), MHRD, New Delhi (2018).
- w. **Visitor's Nominee** (Feb. 2015- Jan., 2018), Manipur Central University, Imphal, Appointed by the *Hon'ble President of India* in his capacity as Visitor of the University.
- x. **Member, Board of Studies**, Department of Instrumentation & Control Engineering, National Institute of Technology (NIT), Jalandhar.
- y. **Member, Board of Studies**, Department of Electrical Engineering, University Institute of Engineering & Technology (UIET), Kurukshetra University.
- z. **Member, Research Advisory Committee**, Department of Instrumentation & Control, NIT Jalandhar.

Administrative Positions Held (contributions made as per Annexure-D):

- a. **Dean (Academic), NIT Kurukshetra** (September 2021 onward)
- b. **Coordinator, Technical Education Quality Improvement Program phase-III (TEQIP-III)** (October 2017- January 2022), NIT Kurukshetra
- c. **Coordinator (ERP-SAMARTH)** (April 2020- August 2022), NIT Kurukshetra
- d. **Regional Coordinator, Unnat Bharat Abhiyan for the State of Haryana** (March 2019- till date), Regional Coordinating Institute, NIT Kurukshetra
- e. **Regional Co-coordinator** (Regional Academic Centre for Space in collaboration with ISRO) (2019- till date), NIT Kurukshetra
- f. **Dean (Students' Welfare)** (September 2015-August 2018), National Institute of Technology Kurukshetra.
- g. **Prof. In-charge, Institute Health Centre** (September 2013- August 2015), National Institute of Technology, Kurukshetra.
- h. **Co-coordinator / Coordinator (TEQIP-I)** (December 2006-May 2010), NIT Kurukshetra.
- i. **Co-coordinator (TEQIP-II)** (July 2011- July 2017), NIT Kurukshetra.
- j. **Hostel Warden** (2005-2015).
- k. **Prof. I/C Students' Clubs** (Audio Visual Club, Students Activities Centre).
- l. **Prof. In-charge** of ELECTRORECK- A technical society of the Electrical Engineering Department, NIT Kurukshetra.
- m. **Member**, Departmental Advisory Committee, Centre for Computing & Networking (CCN), NIT Kurukshetra.

Positions Held:

- a. **Professor of Electrical Engineering**, Department of Electrical Engineering, National Institute of Technology (NIT), Kurukshetra from August 2013-till date.

- b. **Associate Professor**, Department of Electrical Engineering, National Institute of Technology (NIT), Kurukshetra from July 2008-August 2013.
- c. **Assistant Professor**, Department of Electrical Engineering, National Institute of Technology (NIT), Kurukshetra from December 1994-June 2008.

Membership of Advisory, Review, Assessment, Accreditation, and Selection Committees:

- a. **Expert Member**, faculty selections, National Institute of Technology, Delhi
- b. **Expert Member**, faculty selections, Central University of Haryana, Mahendergarh
- c. **Expert Member**, faculty selections, National Institute of Technology, Silchar.
- d. **Expert Member**, faculty selections / other selections, Uttarakhand Public Service Commission, Gurukul Kangari, Haridwar.
- e. **AICTE Expert** for joint UGC-AICTE Expert Committee visit to IEC, Baddi, Distt. Solan, Himachal Pradesh for granting University status to the institution.
- f. **Expert Member**, faculty selections, Maharshi Dayanand University, Rohtak, Haryana.
- g. **Expert Member**, faculty selections, Maharshi Markandeshwar University, Mullana, Haryana.
- h. **Member**, as Visitor's Nominee, faculty selections, Manipur Central University, Imphal.
- i. **Expert Member**, faculty selections, National Institute of Technology, Delhi.

Visits Abroad: Visited the following countries for various academic interactions:

- **USA**
- **Australia**
- **France**
- **UAE**
- **Canada**
- **Japan**

Review / Invited Talks:

- Delivered an expert lecture in the STC on Advanced Computational Methods in Energy and Power Sector (23.03.2022) at GEC, Bikaner during 21- 25 March, 2022.
- Delivered an expert lecture in the STC on Recent Advancements in Sustainable Development through Renewable Energy Systems (09.03.2022) at GEC, Bikaner during 07-16 March 2022.
- Delivered an expert Lecture in the FDP on Recent Trends in Renewable Energy: Opportunity & Challenges (02.02.2022) at GJU, Hisar during 31.01.2022 to 05.02.2022.
- Delivered an expert Lecture on The Sustainable Way Forward and the Role of Engineers in the FDP on Waste Technology (12.01.2022) at Govt. Women Engineering College, Ajmer during 10-15 January 2022.

- Delivered an expert Lecture in the STC On Smart Grid Technology (10.01.2022) at EIE, SLIET, Longowal during 10-15 January 2022.
- Delivered an expert Lecture in the STTP on Rural Development through Rural Infrastructure Facilities (25.11.2021) at NIT Raipur during 22-26 November 2021.
- Delivered an expert Lecture in the FDP on Integration of Renewable Energy Systems (25.11.2021) at GEC, Bikaner during 22-26 November 2021.
- Delivered the expert lecture on “Intelligent Control and Applications” in the STC on Advances in Modeling and Control of Robotics (AMCR-2021), organized by Department of Electrical Engineering during 18th – 23rd October 2021.
- Served as External Expert for examining the research plan for Ph.D. work entitled “Study on the applicability of a deep learning controller for process control system” submitted by Mr. Bhawesh Prasad, PEI 1904/NDF and thereafter for conducting Research Plan Presentation at SLIET, Longowal, July 2021.
- Delivered an expert lecture on “” in the one week online ATAL FDP on Green Technology and Sustainability Engineering organized by Department of Chemistry, GEC Bikaner during 1st – 5th July 2021
- Delivered the Expert Lecture on “The Impact of Energy and its Assessment” in the online STTP on Advances in Mechanical Engineering for Sustainability, organized by Mechanical Engineering Department, GEC Bikaner during May 27th – 31st 2021.
- Delivered an Expert lecture on “Renewable Energy: A Recent Perspective” in the AICTE-ISTE Induction Program on Micro-Grid Scenario and Control, organized by Rajasthan Institute of Engineering and Technology, Jaipur during 19th – 25th May 2021
- Delivered an Expert lecture on “Skill Education: Insights from NEP-2020” in the online webinar organized by PSG Institute of Technology and Applied Research, Coimbatore on 17th April 2021
- Delivered an Expert lecture on “Skill Education and NEP-2020: A Fresh Perspective” in the online webinar organized by Department of Civil Engineering, KCT, Coimbatore on 9th April 2021
- Delivered the Expert Lecture on “Load Frequency Control in Hybrid Power System” in the National Seminar on “Recent Trends in Power Engineering”, organized by Electrical Engg. Dept., UIET, MD University, Rohtak on 24th March 2021
- Delivered the Expert Lecture on “Renewable Energy: A Recent Perspective” in the National Conference on Recent Advances in Renewable Sources of Energy 2021, organized by Electrical Engg. Dept., UIET, MD University, Rohtak on 18th March 2021.
- Delivered the inaugural talk as Guest of Honor in the International Conference on Sustainable Engineering (ICSE 2021) organized by Engineering College, Bikaner, during 26-27 February 2021
- Delivered the Expert Lecture on “भारतीय सांस्कृतिक परिपेक्ष में अक्षय ऊर्जा एवं प्रकृति के साथ समन्वय तथा भविष्य की संभावनाएं” in the talk series organized by विद्या भारती संस्कृति शिक्षा संस्थान on February 6th 2021
- Served as Panelist for AICTE-MODROB Polytechnics Scheme Awareness Program, 12th January 2021
- Delivered the Expert Lecture on “Intelligent Control” in the STTP on Advanced Control Paradigms and Evolving Trends (ACPET-2020) organized by Department of Electrical Engineering, NIT Kuruksehtra during October 26th - 28th 2020.

- Delivered the Expert Lecture on “Vocational Education in the light of New Education Policy-2020” at the Online Web Training course on “Modernization of Vocational Training Centers for Online Training and Development of Skill and Competent Work Force” organized by Department of Mining Engineering IIT Kharagpur during October 14th – 18th 2020.
- Delivered a talk as Guest of Honor at “A webinar on नई शिक्षा नीति- 2020 एवं उन्नत भारत अभियान” organized by RCI UBA NIT Kurukshetra in collaboration with BPS Women University, Khanpur Kalan, Sonapat, Haryana on 26 September 2020.
- Delivered the Expert Lecture on “Feedback and Interaction Session” at Online STC on "Security Challenges, Objectives and Issues in IoT enable Smart Grids (SCOICG 2020)" from September 23rd – 27th, 2020 at NIT Kurukshetra.
- Delivered the Expert Lecture on “Feedback and Interaction Session” at One week Online FDP on "Designing Pedagogies for Online Teaching & Learning" jointly organized by NIT Kurukshetra and GEC Bikaner during September 23rd – 27th, 2020.
- Delivered the Expert Lecture on “Feedback and Interaction Session” at One week Online STTP on "Research Scholars' Week: Engineering" jointly organized by NIT Kurukshetra and GEC Bikaner September 17th - 22nd, 2020.
- Convener, Online meeting regarding short listing of CSIR Technologies organized by RCI, UBA, NIT Kurukshetra on September 14th 2020.
- Delivered the Expert Lecture on “हिंदी भाषा की उपयोगिता” at the workshop on हिन्दी तरंग उत्सव organized by विद्या भारती संस्कृति शिक्षा संस्थान on September 14th 2020.
- Delivered a talk as Guest of Honor on “Literacy in New Education Policy-2020” at a Webinar on “International Literacy Day 2020” is jointly organized by NITTR Chandigarh and NIT Kurukshetra on 08th September 2020.
- Delivered the Expert Lecture on “Intelligent Control and its Applications in Microgrid” at the One week International STTP on “Power Electronics Application to Industrial Systems” during September 07th – 11th 2020, organized by Department of Electrical Engineering NIT Silchar.
- Delivered the Expert Lecture on “Clean Energy Options” at One Week Online Faculty Development Program on 1st September 2020 organized by Department of Chemistry GEC Bikaner, during 1st September to 5th September 2020, Sponsored by AICTE Training & Learning (ATAL) Academy.
- Delivered the Expert Lecture on “Feedback and Interaction Session” at Online Workshop on "Mechanisms for Rural Good Through UBA" organized by RCI, UBA NIT Kurukshetra during 28th - 29th August 2020.
- Delivered the Expert Lecture on “Feedback and Interaction Session” at Online FDP on "Designing Pedagogies for Online Teaching & Learning" organized by Department of Computer Engineering at NIT Kurukshetra during August 10th-14th 2020
- Delivered the Expert Lecture on “Intelligent Control and Applications to Smart Grid” at TEQIP-III Sponsored Online Short Term Training Program on “Smart Grid: Operation and Planning with Renewable Energy Sources and FACTS” organized by Electrical Engineering department NIT Kurukshetra during July 29th – August 02nd, 2020.
- Evaluator for the National Education Alliance of Technologies (NEAT) scheme of AICTE, Delhi, August 2020.

- Participated in Orientation meeting for the 1st phase of UBA collaboration with CSIR organized by NCI, UBA, IIT Delhi on July 28th 2020.
- Delivered the Expert Lectures on 29th July on “Intelligent control and its Applications to smart grid” at the Short Term Course on “Smart Grid: Operation & planning with Renewable Energy Sources and FACTS (SGOPRES-2020)”, organized by the Department of Electrical Engineering, NIT Kurukshetra during 29.07.2022 to 02.08.2020.
- Delivered the Expert Lectures on “Clean Energy: The Way Forward”, and “Feedback-cum-Interaction Session” at Online Short Term Training Program on "Environmental Crisis and Sustainable Development" jointly organized by NIT Kurukshetra and GEC Bikaner July 1st - 5th, 2020
- Delivered the Expert Lecture on “Feedback and Interaction Session” at TEQIP-III Sponsored Online Short Term Training Program on Online Short Term Training Program on “Data Science & Learning Systems for Engineering Research & Design” jointly organized by NIT Kurukshetra and GEC Bikaner June 24th -30th , 2020
- Delivered the Expert Lecture on “Feedback-cum-Interactive Session” at TEQIP-III Sponsored Online Short Term Training Program on “Challenges in Grid Integration with Renewable Sources jointly organized by NIT Kurukshetra and GEC Bikaner, during June 22nd -26th, 2020.
- Delivered the Expert Lecture on “Intelligent Control: Overview, Issues, and Applications” at TEQIP-III Sponsored Online Short Term Training Program on “Challenges in Grid Integration with Renewable Sources jointly organized by NIT Kurukshetra and GEC Bikaner, during June 22nd -26th, 2020.
- Delivered the Expert Lecture on “Why Green Energy ?” at TEQIP-III Sponsored Online Short Term Training Program on Green Energy Technologies for Sustainable Development jointly organized by NIT Kurukshetra and GEC Bikaner, June 11th -20th , 2020.
- Delivered the Expert Lecture on “The Impact of Energy and its Assessment” at TEQIP-III Sponsored Online Short Term Training Program on Life Cycle Analysis for Sustainability organized by Mechanical Engineering department GEC Bikaner, May 27th -31st, 2020.
- Delivered the Expert Lecture on “Feedback-cum-Interactive Session” at Online Short-Term Training Program on “Bio-Energy: Technologies & Transitions” sponsored by TEQIP-III Jointly organized by Department of Mechanical Engineering, Engineering College Bikaner and NIT Kurukshetra from 18th to 22nd May 2020.
- Delivered the Expert Lecture on “Renewable Energy: A recent perspective” at Online Short-Term Training Program on “Bio-Energy: Technologies & Transitions” sponsored by TEQIP-III Jointly organized by Department of Mechanical Engineering, Engineering College Bikaner and NIT Kurukshetra from 13th to 17th May 2020.
- Delivered the Expert Lecture on “Renewable Energy Systems: A recent perspective”, in the Short Term Training Programme on Solar Photovoltaic Installation 25-29 November 2019, organized at Government Engineering College Bikaner, Rajasthan in collaboration with National Institute of Technology Kurukshetra under TEQIP-III.
- Participated in a meeting of RCIs of UBA organized by NCI, UBA, IIT Delhi on March 6th 2019

- Invited Expert on the Committee for planning/evaluation and assessment of University Enterprise Architecture Framework (UEAF) under the chairmanship of JS (ICC & TEL), Ministry of Human Resource Development, New Delhi, 2018.
- Delivered the Expert Lecture on “Intelligent Control: A recent perspective”, Short Term Course on Estimation Guidance and Control: Applications to Missile Systems, January 10-15, 2018, organized at National Institute of Technology Kurukshetra under TEQIP-III.
- Delivered the Expert Lecture on “Soft Computing in Power Systems”, Short Term Course on Control Strategies for Power Quality Improvement (CSPQI), January 12-16, 2018, organized by Electrical Engineering Department, National Institute of Technology Kurukshetra.
- Delivered the Plenary invited talk on “Control Schemes for Hybrid Energy System under Different Operating Conditions”, at International Conference on Control, Mechatronics & Automation (ICCMA-2018), October 12-14, 2018, **Tokyo, Japan.**
- Delivered the Plenary invited talk on “Load Frequency Control in Hybrid Power Systems”, at International Conference on Control, Mechatronics & Automation (ICCMA-2017), October 11-13, 2017, University of Alberta, **Edmonton, Canada**
- Reviewer for International Conference on Control, Mechatronics & Automation, October 11-13, 2017, Edmonton, Canada
- Reviewer for the journal of Electric Power Components and Systems, Taylor & Francis, USA
- Reviewer for International Conference on Control, Mechatronics & Automation, December 21-22, 2015, Barcelona, Spain.
- Reviewed research papers for 4th International Conference on Eco-Friendly Computing and Communication Systems (ICECCS), December 7-8, 2015, NIT Kurukshetra.
- Reviewed research papers for International Conference on Control, Mechatronics & Automation, Dec. 8-10, 2014, Dubai, UAE.
- Reviewed research papers for IEEE 6th India International Conference on Power Electronics, December 8-10, 2014, NIT Kurukshetra
- Reviewed research papers for International Conference on Control, Mechatronics & Automation, December 6-7, 2013, Sydney, Australia.
- Delivered a Talk and participated, as one of the panelists, in a panel discussion on “New Age Teaching and Learning”, at One Day conference on Leveraging Technology in Education, April 18, 2017, conducted by Confederation of Indian Industry (CII) on the sidelines of Global Exhibition on Services-The India Opportunity, April 17-20, 2017, organized jointly by CII, Department of Commerce, Ministry of Commerce and Industry, Govt. of India and Services Export Promotion Council (SEPC) at Expo Centre, Greater Noida, UP. The other two panelists were: (i) Dr. Francisco Marmalejo, Lead, Global Solutions Group on Tertiary Education, Lead Education Specialist for India, World Bank (ii) Dr. Geoffrey, Chairman, Commonwealth Association for Infrastructure Development (CIID).
- Delivered expert lecture on “Technology Enabled Teaching-Learning: a Recent Perspective”, at Faculty Development Program, organized by the office of Dean (Faculty Welfare), March 15-20, 2017, National Institute of Technology Kurukshetra.

- Delivered expert lecture on “Advances in Control systems: A historical perspective”, Short Term Course on ‘Control Systems and Missile Guidance’, for the students, December 16-20, 2016, organized at National Institute of Technology Kurukshetra in collaboration with RCI Lab, DRDO, Hyderabad
- Delivered expert lectures on “Indian Scientists and their Contributions” and “Renewable Energy Systems” at One Day Workshop on Development of Scientific Temperament, August 13, 2016, SMB Gita Sr. Sec. School, Kurukshetra.
- Delivered expert lectures on “Intelligent Control Applications” at Short Term Training Program on Nonlinear Systems and Control, May 16-20, 2016, Department of Electrical Engineering, National Institute of Technology Kurukshetra.
- Delivered an invited talk on “Computer and IT skills”, at Training Workshop, Nehru Yuva Kendra, Pipli, Kurukshetra (Haryana), February, 2016.
- Delivered a talk on “IT applications in daily life” to the school children visiting the Institute under IT-education project.
- Delivered a talk on “IT applications in daily life”, Workshop on “Computer and IT Skills; Health and Hygiene; and Efficient use of Electrical Appliances’ for the youth participants from three nearby villages adopted by the Institute under Unnat Bharat Abhiyan, Feb. 6, 2016, organized by National Institute of Technology Kurukshetra.
- Delivered the Keynote address on “Biologically Inspired Computing and Intelligent Systems”, National Conference on Machine Intelligence and Research Advancement, March 19-20, 2015, School of Engineering and Sciences, BPS Women University, Khanpur Kalan, Sonapat, Haryana.
- Delivered the Keynote address on “Intelligent Control: Overview, Issues and Prospects”, at International Conference on Control, Mechatronics & Automation (ICCMA-2014), December 8-10, 2014, Dubai, UAE.
- Delivered invited lectures on “Fuzzy based intelligent frequency control in AC hybrid microgrid” and “Artificial Intelligent Techniques and applications to Electrical Engineering”, Workshop on Artificial Intelligence and Renewable Energy Interconnection with Smart Grid, Sept. 19, 2014, University Institute of Engineering & Technology, Kurukshetra University, Kurukshetra.
- Delivered invited lectures on “Fuzzy System Design & Applications” and “Soft Computing: Recent Perspectives”, Workshop on Computational Intelligence and Signal Processing, September 3, 2013, Department of Electrical Engineering, Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonapat, Haryana.
- Delivered invited lectures on “Design of Fuzzy Systems” and “Soft Computing: An Overview”, Faculty Development Program on Advances in Signal Processing & its Applications, July 26, 2013, University Institute of Engineering & Technology, Kurukshetra University, Kurukshetra.
- Delivered Keynote Talk on “Soft Computing Technologies”, National Conference on Futuristic Trends in Computing, Communication & Information System-FTTCCIS- July 13, 2013, Yamuna Institute of Engineering & Technology, Yamunangar, Haryana.

- Delivered invited lectures on “E-Learning: A New Paradigm of Learning” and “Aakash Tablet and Computer Networking Basics”, Orientation Course at UGC Academic Staff College, Bhagat Phool Singh Women University, Khanpur Kalan, Sonapat, Haryana, June 28, 2013.
- Delivered invited lectures on “Information Communication Technology Enabled Teaching-Learning Process: A Recent Perspective” and “Android Operating System and Aakash Tablet”, Refresher Course on ICT- UGC Academic Staff College, May 31, 2013, Bhagat Phool Singh Women University, Khanpur Kalan, Sonapat, Haryana.
- Delivered invited lecture on “Intelligent Control and Fuzzy Systems Design”, Subject Domain Lecture Series, April 4, 2009, Textile Institute of Technology & Science (TITS) Bhiwani, Haryana.
- Delivered expert lectures on “Energy Efficient Appliances”, “Maintenance of Electrical Appliances of Agricultural use” and “Solar energy based products for domestic use”, Workshop on Energy Savings through Effective Maintenance and Efficient Utilization of Electrical Appliances, February 13-15, 2009, Department of Electrical Engineering, National Institute of Technology Kurukshetra.
- Delivered expert lectures on “Intelligent Control and Fuzzy System Design”, at Short Term Course on Advances in Power System Operation and Control, December 1-5, 2008, Department of Electrical Engineering, National Institute of Technology Kurukshetra.
- Delivered expert lectures on “Intelligent Control: a recent perspective” and “Fuzzy System Design”, Short Term Training Program on Intelligent Control, June 25th – 29th, 2007, Department of Electrical Engineering, National Institute of Technology Kurukshetra.

Seminars, Symposia, Conferences, and Workshops/Short Term Courses Organized / Participated:

- FDP Director, Faculty Development program on “Mentoring Institutional Social Responsibility and Facilitating Community Engagement in Higher Education Institutions”, 19-24 September 2022.
- Convenor: Expert Lecture on “वर्तमान समय में तनाव से कैसे बचें” by Maj. (Dr.) Samiksha Tyagi, Consultant Plastic Surgeon, Army Hospital Research & Referral, New Delhi, under Unnat Bharat Gram Aarogya Series at NIT Kurukshetra on 1st July 2021.
- Convenor: Expert Lecture on “भविष्य में भारतीय चिकित्सा का स्वरूप” by Dr. Himanshu Tyagi, Senior Consultant Spine and Orthopaedic Surgeon, Artemis Hospital, Delhi, NCR, under Unnat Bharat Gram Aarogya Series at NIT Kurukshetra on 28th June 2021.
- General Chair: International Online Conference on Smart Grid Energy Systems and Control, (SGESC-2021), organized by NIT Kurukshetra, March 19-21, 2021
- Convenor, Webinar on “Celebrating the Leader in the Woman” organized under TEQIP-III at NIT Kurukshetra on 8th March, 2021 in celebration of the International Women’s Day.
- Convenor, Webinar on " Technical Education in the light of NEP 2020: A Fresh Perspective " organized under TEQIP-III on 6th March 2021.
- Convenor: Online three-day talk series on “Mantras of Excellence” for all the B.Tech.1st year students of NIT Kurukshetra under TEQIP-III from 17th February to 19th February 2021.
- Convenor: Online Teaching Sessions for B.Tech. student of GEC Bikaner Jointly organized by NIT Kurukshetra and GEC Bikaner during 25th January-28th January 2021

- Convenor: Online Session for faculty and staff members of GEC Bikaner Jointly organized by NIT Kurukshetra and GEC Bikaner 27th January 2021
- Course Convener: Online STC on “Advanced Control Paradigms and Evolving Trends (ACPET-2020)” organized by NIT Kurukshetra during 26th-31st October 2020.
- Participated in online meeting with PIs for Discussing on CSIR Technology Template and Working Module (CSIR- UBA- VIBHA Collaboration) organized by NCI, UBA, IIT Delhi on 23rd October, 2020
- General Chair: International Conference on “Challenges and Application in Clean Energy (ICCACE-2020)” jointly organized by NIT Kurukshetra and GEC Bikaner, 25-26 December 2020.
- As RCI, UBA Coordinator NIT Kurukshetra organized: “A webinar on नई शिक्षा नीति- 2020 एवं उन्नत भारत अभियान” organized in collaboration with BPS Women University, Khanpur Kalan, Sonapat, Haryana on 26 September 2020
- Advisor: Online STC on "Security Challenges, Objectives and Issues in IoT enable Smart Grids (SCOICG 2020)" from September 23rd – 27th, 2020 at NIT Kurukshetra
- Convener: One week Online STTP on "Research Scholars' Week: Applied Sciences and Humanities” jointly organized by NIT Kurukshetra and GEC Bikaner September 23rd – 27th, 2020
- Convener: One week Online FDP on "Designing Pedagogies for Online Teaching & Learning" jointly organized by NIT Kurukshetra and GEC Bikaner September 23rd – 27th, 2020
- Convener: A webinar on “National Education Policy 2020” for the participating institutions of Haryana organized by RCI NIT Kurukshetra on September 22, 2020
- Participated in a webinar on “राष्ट्रीय शिक्षा नीति 2020 के क्रियान्वयन में राष्ट्रीय प्रौद्योगिकी संस्थानों की भूमिका: चुनौतियाँ और समाधान” organized by राष्ट्रीय प्रौद्योगिकी संस्थान कुरुक्षेत्र एवं शिक्षा संस्कृति उत्थान न्यास नई दिल्ली के संयुक्त तत्वाधान on 17 सितंबर 2020
- Convener: One week Online STTP on "Research Scholars' Week: Engineering" jointly organized by NIT Kurukshetra and GEC Bikaner September 17th - 22nd, 2020
- Convener: One week Online STTP on "Control, Guidance and Estimation of Flight Vehicles" jointly organized by NIT Kurukshetra and GEC Bikaner September 11st – 16th, 2020
- Convener, Online Workshop on "Mechanisms for Rural Good Through UBA" organized by RCI, UBA NIT Kurukshetra during 28th - 29th August 2020.
- Convener: Online FDP on "Designing Pedagogies for Online Teaching & Learning" organized by Department of Computer Engineering at NIT Kurukshetra during August 10th-14th 2020
- Convener: One day Webinar on "Gender Stereotyping Challenges and Issues" jointly organized by NIT Kurukshetra and GEC Bikaner on 9th August, 2020
- Convener: One day Webinar on "Employability Skills and Industry Perspective" jointly organized by NIT Kurukshetra and GEC Bikaner on 30th July, 2020
- Advisor: Online STC on Smart Grid: Operation & planning with Renewable Energy Sources and FACTS (SGOPRESF-2020) from 29th July to 02nd August 2020 at NIT Kurukshetra
- Convener: Online Webinars/Seminars on "Gender Equality and Women's Right" on July 16th 2020 under TEQIP-III.
- Publicity Chair, 1st IEEE International Conference on Measurement, Instrumentation, Control and Automation (ICMICA 2020) organized by Department of Electrical Engineering, NIT Kurukshetra during 24th -26th June 2020 in online mode.

- Session Chair, 1st IEEE International Conference on Measurement, Instrumentation, Control and Automation (ICMICA 2020) organized by Department of Electrical Engineering, NIT Kurukshetra during 24th -26th June 2020 in online mode.
- Convener: Online Short Term Training Program on "Environmental Crisis and Sustainable Development" jointly organized by NIT Kurukshetra and GEC Bikaner July 1st - 5th , 2020
- Convener: Online Short Term Training Program on “Data Science & Learning Systems for Engineering Research & Design” jointly organized by NIT Kurukshetra and GEC Bikaner June 24th -30th , 2020
- Convener: Online Short Term Training Program on “Challenges and Grid Integration with Renewable Sources” jointly organized by NIT Kurukshetra and GEC Bikaner June 22nd -26th, 2020
- Convener, TEQIP-III Sponsored Online Short Term Training Program on “Green Energy Technologies for Sustainable Development” jointly organized by NIT Kurukshetra and GEC Bikaner, June 11-20, 2020.
- Convener, TEQIP-III Sponsored Five days Online Short-Term Training Program (Repeat version) on “Bio-Energy: Technologies & Transitions” jointly organized by GEC Bikaner and NIT Kurukshetra from 18th May- 22nd May 2020.
- Convener, TEQIP-III Sponsored Five days Online Short-Term Training Program on “Bio-Energy: Technologies & Transitions” jointly organized by NIT Kurukshetra and GEC Bikaner from 13th May- 17th May 2020.
- Convener: A Web Meeting with all PIs of Haryana State on “Creating awareness regarding COVID-19” on 04th April 2020
- Course Convener: One week Short Term Course on “Waste Management & Sustainable Environment (WMSE-2020)” organized by School of Renewable Energy & Efficiency, NIT Kurukshetra from 26th Feb. – 3rd March 2020.
- Convener, “Orientation Workshop for the PIs of Haryana” organized by RCI, UBA NIT Kurukshetra on 24 December 2019.
- Patron: Online Short Term Course on “Advances in Renewable Energy Systems” organized by NIT Kurukshetra and GEC Bikaner on December 09th to 20th 2019, at GEC Bikaner.
- Patron: Online Short Term Course on “Solar Photovoltaic Installation” organized by NIT Kurukshetra and GEC Bikaner on November 25th to 29th 2019, at GEC Bikaner.
- Participated in “Tech4Seva” National Workshop organized by National Coordinating Institute, UBA, IIT Delhi during 10-12 August 2019.
- Participated in “National Conference on Rural Immersion Management” organized by Mahatma Gandhi National Council of Rural Education (MGNCRE), Hyderabad during 13-14 July 2019 Hyderabad
- Convener: A STC on “Data Analytics” organized by NIT Kurukshetra in collaboration in technical association with Acad gild during 26th June – 30th June 2019.
- Convener: International workshop on Energy, Propulsion and Environment (IWEPE 2019) organized by NIT Kurukshetra during 17th March- 20th March 2020.
- Convener: A FDP on “Data Analytics” organized by NIT Kurukshetra in technical association with Acad gild during 28th February– 03rd March 2019.
- Coordinator, Short Term Course on “Start-up Week”, January 21-27, 2019, organized at National Institute of Technology Kurukshetra under TEQIP-III.
- Steering Committee Member and Plenary Speaker, “International Conference on Control, Mechatronics & Automation, (ICMA-2018), October 12-14, 2018, **Tokyo, Japan**.

- Chairman, Organizing Committee, National IT Challenge for Youth with Disabilities, June, 2018, organized by National Institute of Technology Kurukshetra in collaboration with Department of Empowerment of Persons with Disabilities, Ministry of Social Justice and Empowerment, Govt. of India, New Delhi.
- Coordinator, Short Term Course on “Estimation Guidance and Control: Applications to Missile Systems”, January 10-15, 2018, organized at National Institute of Technology Kurukshetra under TEQIP-III.
- Publicity Chair, 5th International Conference on Control, Mechatronics & Automation, October 11-13, 2017, Edmonton, Canada.
- Chairman, Organizing Committee, National IT Challenge for Youth with Disabilities, July, 2017, organized by National Institute of Technology Kurukshetra in collaboration with Department of Empowerment of Persons with Disabilities, Ministry of Social Justice and Empowerment, Govt. of India, New Delhi.
- State Coordinator, Vidyarthi Vigyan Manthan 2016- Talent Search for Future India, a state level camp (Level-III) for the state of Haryana, organized by Vigyan Bharati (VIBHA) in association with National Council of Education Research and Training (NCERT), Ministry of Human Resource Development, Govt. of India and Vigyan Prasar, Department of Science and Technology, Govt. of India on April 14th 2017 at National Institute of Technology Kurukshetra.
- Coordinator, Special Passport Camp organized in collaboration with Regional Passport Office, Chandigarh and Passport Seva Kendra, Ambala, to encourage and facilitate the students to apply for their passports, 24th January, 2017 at National Institute of Technology Kurukshetra.
- Coordinator, Short Term Course on ‘Control Systems and Missile Guidance’, for the students, December 16-20, 2016, organized at National Institute of Technology Kurukshetra in collaboration with RCI Lab, DRDO, Hyderabad.
- Program Chair, 4th International Conference on Control, Mechatronics and Automation (ICCMA-2016) held during December 8-10, 2016 at **Barcelona, Spain**.
- Member, Organizing Committee and Chairman of Anubhav Kathan Session, One Day Workshop on Yuva & Seva-480 Minutes for Sewapath, September 4, 2016, jointly organized by Yuva & Seva Foundation and Annamika Hindi Society, National Institute of Technology Kurukshetra.
- Chairman, Organizing Committee, National IT Challenge for Youth with Disabilities, July 19-20, 2016, organized by National Institute of Technology Kurukshetra in collaboration with Department of Empowerment of Persons with Disabilities, Ministry of Social Justice and Empowerment, Govt. of India, New Delhi.
- Convener: Expert lecture on New Education Policy-Necessity and Relevance (नई शिक्षा नीति- आवश्यकता और प्रासंगिकता) delivered by Shri Dina Nath Batra, President, Shiksha Sanskriti Utthan Nyas, New Delhi on 24th May 2016
- Convener, Short Term Training Program on Nonlinear Systems and Control, May 16-20, 2016, Department of Electrical Engineering, National Institute of Technology Kurukshetra.

- Convener; Lecture cum Interactive Session on Relevance of Human Values and Ethics in Professional/Higher Education by Sh. Atul Kothari, Secretary, Shiksha Sanskriti Utthan Nyas, New Delhi National Institute of Technology Kurukshetra on April 20, 2016
- Convener, One Day Workshop on 'Computer and IT Skills; Health and Hygiene; and Efficient use of Electrical Appliances' for the youth participants from three nearby villages adopted by the Institute under Unnat Bharat Abhiyan, February 6, 2016, National Institute of Technology Kurukshetra.
- Convener, One Day Awareness Program on Road to Safety, October 8, 2015, organized by National Institute of Technology Kurukshetra in collaboration with Institute of Road Traffic Education, Faridabad.
- Member, Technical Program Committee, International Conference on Recent Developments in Control, Automation and Power Engineering, March 12-13, 2015, Department of Electrical & Electronics Engineering, Amity School of Engineering and Technology, Amity University, Noida, Uttar Pradesh.
- Conference Chair and Key Note Speaker, 2nd International Conference on Control, Mechatronics and Automation (ICCMA-2014), December 8-10, 2014, **Dubai, UAE.**
- Chairman, Technical Session, 2nd International Conference on Control, Mechatronics and Automation (ICCMA-2014), December 8-10, 2014, Dubai, UAE.
- Presented Research Paper in 2nd International Conference on Control, Mechatronics and Automation (ICCMA-2014), December 8-10, 2014, Dubai, UAE.
- Publicity Chair, 6th IEEE India International Conference on Power Electronics (IICPE-2014), December 8-10, 2014, organized by National Institute of Technology Kurukshetra in collaboration with the PES-IAS & PELS-IES Chapters of IEEE Delhi Section.
- Participated and presented Research Paper in the 2014 IEEE Multi-Conference (MSC-2014). October 8-10, 2014, **Antibes, France.**
- Convener, One Day Awareness Program on National Mission on Education through Information and Communication Technology (NMEICT) for the faculty of the Higher Education Institutions in the state of Haryana, September 26, 2014, National Institute of Technology Kurukshetra.
- Chairman, Technical Session, 1st International Conference on Control, Mechatronics and Automation (ICCMA-2013), December 6-7, 2013, **Sydney, Australia.**
- Presented Research Paper in 1st International Conference on Control, Mechatronics and Automation (ICCMA-2013), December 6-7, 2013, Sydney, Australia.
- Chairman, Technical Session, in the National Conference on Futuristic Trends in Computing, Communication & Information Systems (FTTCCIS), July 12-13, 2013, Yamuna Institute of Engineering & Technology, Yamunanagar, Haryana.
- Delivered an Expert Talk in the National Conference on Futuristic Trends in Computing, Communication & Information Systems (FTTCCIS), July 13, 2013, Yamuna Institute of Engineering & Technology, Yamunanagar, Haryana.

- Member, Organizing Committee and Reviewer, National Conference on Recent Trends in Energy, Systems and Control, March 15-16, 2013, Department of Electrical Engineering, National Institute of Technology Kurukshetra.
- Co-coordinator, Two Day Interactive Workshop of Academia and DRDO, April 27-28, 2012, organized by National Institute of Technology Kurukshetra in collaboration with ARMREB, DRDO, New Delhi.
- Participated and presented a Research Paper in the IEEE International Conference on Systems Engineering, August 16-18, 2011, **Las Vegas, USA**.
- Coordinator, Three Day Community Service Workshop on Energy Saving through Effective Maintenance and Efficient Utilization of Electrical Appliances, February 13-15, 2009, Department of Electrical Engineering, National Institute of Technology Kurukshetra.
- Member, Organizing Committee, International Conference on Energy and Environment, 'ENVIROENERGY 2009', March 19-21, 2009, National Institute of Technology Kurukshetra.
- Coordinator, Short Term Course on Instructional Planning and Delivery for faculty of the Institute, October 20-24, 2008, organized by National Institute of Technology Kurukshetra in collaboration with National Institute of Technical Teachers Training & Research, Chandigarh.
- Coordinator, One Week Short Term Course on Advances in Power System Operation and Control, December 2008, Department of Electrical Engineering, National Institute of Technology Kurukshetra.
- Coordinator, Short Term Course on Instructional Planning and Delivery for faculty of the Institute, September 22-26, 2008, organized by National Institute of Technology Kurukshetra in collaboration with National Institute of Technical Teachers Training & Research, Chandigarh.
- Coordinator, Short Term Course on Modern Office Management for the Secretarial Staff of the Institute, September 8-12, 2008, organized by National Institute of Technology Kurukshetra in collaboration with National Institute of Technical Teachers Training & Research, Chandigarh.
- Coordinator, Short Term Training Program on Intelligent Control, June 25-29, 2007, Department of Electrical Engineering, National Institute of Technology Kurukshetra.

Annexure-A Research Publications

1. **Ravita Saraswat and Sathans Suhag**, "Type-2 fuzzy logic PID control for efficient power balance in an AC microgrid", Sustainable Energy Technologies and Assessments, Volume 56, 2023, 103048, ISSN 2213-1388, <https://doi.org/10.1016/j.seta.2023.103048>.
2. **Ankush Gupta and Sathans Suhag**, "Charging station control strategy considering dynamic behaviour of electric vehicles with variable state of charge regulation for energy management of autonomous micro-grid", Journal of Energy

Storage, Volume 59, 2023, 106460, ISSN 2352-152X, <https://doi.org/10.1016/j.est.2022.106460>.

3. **Ankush Gupta and Sathans Suhag**, "Evaluation of Energy Storage Systems for Sustainable Development of Renewable Energy Systems - A Comprehensive Review", *Journal of Renewable and Sustainable Energy*, <https://doi.org/10.1063/5.0075623>, May, 2022.
4. **Ravita Saraswat, Sathans Suhag**, "Effective power management and DC link voltage regulation in a WTG-PV-Battery-grid cogeneration scenario: Simulation and Experimental evaluation", *International Journal of Ambient Energy*, May 2022.
5. **Amit Sharma, Ravi Kumar, C.S. Rajoria, Sathans Suhag**, "Energetic and Exergetic Comparison of Opaque and Semi-transparent PVT Arrays Under Natural Convection Mode for Building Integration" In book: *Advancement in Materials, Manufacturing and Energy Engineering*, Vol. II (pp.361-373), DOI:10.1007/978-981-16-8341-1_29, January 2022, Springer.
6. **Archana Singh and Sathans Suhag**, "Minimum Order Quasi-Decentralized Functional Observer (MOQDFO) for Frequency Regulation in Multi-area Power System with DC Link and TCPS", *International Journal of Computing and Digital Systems*, January 2022.
7. **Amit Kumar and Sathans Suhag**, "Whale Optimization Algorithm Optimized Fuzzy-PID Plus PID Hybrid Controller for Frequency Regulation in Hybrid Power System. *Journal of The Institution of Engineers (India): Series B*, 2021, 1-16.
8. **Shilpam Malik and Sathans Suhag**, "A coordinated control strategy for frequency regulation in hybrid shipboard power system using novel salp swarm algorithm tuned fractional controller", *International Journal of Ambient Energy*, September 2021.
9. **Ravita Saraswat, Sathans Suhag**, "Optimal economic sizing of stand-alone hybrid renewable energy system (HRES) suiting to the community in Kurukshetra, India", *International Journal of Computing and Digital System*, <https://journal.uob.edu.bh:443/handle/123456789/4342>.
10. **Om Krishan, Sathans Suhag**, "Effective power management in Renewable Energy Resources based Power system incorporating Electric Spring" *International Online Conference on Smart Grid Energy Systems and Control*, (SGESC-2021), NIT Kurukshetra, March 2021
11. **Ravi Kumar, C.S. Rajoria, Amit Sharma, Sathans Suhag**, Design and simulation of standalone solar PV system using PVsyst Software: A case study, *Materials Today: Proceedings*, October 2020
12. **C.S. Rajoria, Ravi Kumar, Amit Sharma, Dharmendra Singh, Sathans Suhag**, Development of flat-plate building integrated photovoltaic/thermal (BIPV/T) system: A review, *Materials Today: Proceedings*, October 2020,
13. **Shilpam Malik and Sathans Suhag**, "Salp Swarm Algorithm tuned control scheme for mitigating frequency deviations in hybrid power system and comparative analysis" *International Journal of Computing and Digital Systems*, September 2020.
14. **Shilpam Malik and Sathans Suhag**, "A Novel SSA Tuned PI-TDF Control Scheme for Mitigation of Frequency Excursions in Hybrid Power System" *Smart Science*, September 2020
15. **Amandeep Singh and Sathans Suhag**, "Whale Optimization Algorithm Based Tilt Integral Derivative Control for Frequency Regulation in AC Microgrid with and without SMES" *International Journal of Computing and Digital Systems*, September 2020.

16. **Vinod Kumar and Sathans Suhag**, "Current Reduction in EPAS System of Electric Vehicles using 2-DOF PID Controller tuned with GWO and SSA" 2020 4th International Conference on Intelligent Computing and Control Systems (ICICCS), Madurai, India, 13-15 May 2020.
17. **Vinod Kumar and Sathans Suhag**, "Comparative Analysis of Salp Swarm Algorithm Tuned 2-DOF PID and PIDF controllers for Reducing the Current Consumption in EPAS System of Electric Vehicles" 2020 6th IEEE Students Conference on Engineering & Systems (SCES) July 10-12, 2020 MNNIT, Allahabad, Prayagraj, India
18. **Gunjan Chorasaya and Sathans Suhag**, "SSA optimized 2DOF-PID Controller for Mitigation of Frequency and Tie-Line Power Deviations in a Two-Area Power System with Integration of EV" 2020 4th International Conference on Intelligent Computing and Control Systems (ICICCS), Madurai, India, 13-15 May 2020.
19. **Gunjan Chorasaya and Sathans Suhag**, "A comparative study of MVO and SSA optimized PID controller for LFC in EV integrated multi area network" in 11th IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT-2020), IIT Kharagpur, India, 1-3 July 2020
20. **Itie Goswami and Sathans Suhag**, "Energy management in electric hybrid vehicle with diverse power sources", 2020 6th IEEE Students Conference on Engineering & Systems (SCES) July 10-12, 2020 MNNIT, Allahabad, Prayagraj, India.
21. **Om Krishan and Sathans Suhag**, "Grid-independent PV system hybridization with fuel cell-battery/supercapacitor: Optimum sizing and comparative techno-economic analysis", Sustainable Energy Technologies and Assessments, January 2020.
22. **Om Krishan and Sathans Suhag**, "A Novel Control Strategy for a Hybrid Energy Storage System in a Grid-Independent Hybrid Renewable Energy System", International Transactions on Electrical Energy Systems, October 2019, Wiley publications
23. **Amit Kumar and Sathans Suhag**, "Hybrid Bacterial Foraging Enhanced PSO Algorithm for Load Frequency Control of Hydro-Thermal Multi-Area Power System and Comparative analysis", International Journal of Computing and Digital Systems, January 2020.
24. **Amandeep Singh and Sathans**, "Frequency Regulation in an AC Microgrid Interconnected with Thermal system employing multiverse-optimized Fractional Order-PID controller", International Journal of Sustainable Energy, Taylor & Francis publication, published online November 2019.
25. **Mohit Kumar and Sathans**, "Level management in connected water reservoirs employing curve fitting based PID control scheme", 4th International Conference on Communication and Electronics Systems (ICCES-2019), 2019.
26. **Rahul Sharma and Sathans**, "Virtual Impedance based Phase Locked Loop for Control of Parallel Inverters Connected to Islanded Microgrid," *Computers and Electrical Engineering*, Elsevier Publication vol. no. 73, pp.58-70, January 2019.
27. **Amit Kumar and Sathans Suhag**, "Impact of TCPS, SMES and DFIG on Load Frequency Control of Nonlinear Power System Using Differential Evolution Algorithm," *Journal of the Institution of Engineers (India)*, Springer Publication, (published online Dec. 2018).
28. **Om Krishan and Sathans**, "An updated review of energy storage systems: Classification and applications in distributed generation power systems

- incorporating renewable energy resources", *International Journal of Energy Research, Wiley Publication (published online October 2018)*.
29. **Amandeep Singh and Sathans**, "Trends in islanded microgrid frequency regulation- a review", *Smart Science*, vol. 7, no. 2, pp. 91-115. *Taylor & Francis Publication (published online Nov. 2018)*.
30. **Rahul Sharma and Sathans Suhag**, "Super-capacitor based Inverter Control of Wind Energy System Connected to Weak Grid," *Journal of Marine Engineering & Technology, Taylor & Francis Publication (published online August 2018)*.
31. **Rahul Sharma and Sathans Suhag**, "Power Quality and Stability Improvement of Hybrid Energy System under Weak Grid Environment," *Arabian Journal of Science and Engineering, Springer Publication, vol. 43, no. 6., 2018*.
32. **Rahul Sharma and Sathans Suhag**, "Super-capacitor utilization for power smoothening and stability improvement of hybrid energy system in weak grid environment," *Turkish Journal of Electrical Engineering & Computer Sciences, vol. 26, no. 1, 2018*.
33. **Rahul Sharma and Sathans Suhag**, "Feedback Linearization based control for weak grid connected PV system under normal and abnormal conditions," *Frontiers in Energy, Springer publication, (published online April 2017)*.
34. **Rahul Sharma and Sathans**, "Novel Control Strategy for Hybrid Renewable Energy Based Standalone System", *Turkish Journal of Electrical Engineering & Computer Sciences, vol. 25, no.6, 2017*.
35. **Amit Kumar and Sathans Suhag**, "Multi-verse optimized fuzzy-PID controller with derivative filter for load frequency control of multi-source hydrothermal power system", *Turkish Journal of Electrical Engineering & Computer Sciences, vol. 25, 2017*.
36. **Amit Kumar and Sathans Suhag**, "Impact of TCPS, SMES and DFIG on multi-area power system using multi-verse optimizer hybrid fuzzy-PID with derivative filter controller", *Journal of Vibration and Control, SAGE Journals, published online, Sept. 2017*.
37. **Amit Kumar and Sathans Suhag**, "Whale optimization algorithm based tuning of fractional order PI^λD^μ controller for multi area multi source load frequency control with nonlinearities", *International Journal of Bio-Inspired Computation, Inderscience Publications 2019*.
38. **O. Krishan and S. Suhag**, "Techno-Economic analysis of a Hybrid Renewable Energy System for an energy poor rural community", *Journal of Energy Storage, Wiley publication.2019*
39. **Amandeep Singh and Sathans**, "Frequency Regulation in AC Microgrid with and without Electric Vehicle using multiverse-optimized Fractional Order-PID controller", *International Journal of Computing and Digital Systems, vol. 8, no. 4, pp. 375-385*.
40. **O. Krishan and S. Suhag**, "Novel Power Management Control Strategy for Hybrid Energy Storage System in a Grid-independent Hybrid Renewable Energy System: A Hardware-in-loop Real-time Verification", *IET Renewable Power Generation. 2019*
41. **Chetan Sharma and Sathans**, "Comparative Analysis of Multi-carrier PWM Methodologies for 3-Phase 9-Level Cascade Inverter", *International Conference on Advances in Electronics, Electrical and Computational Intelligence (ICAEEC-2019), MANIT, Allahabad, India, 31st May to 1st June 2019*.

42. **O. Krishan and Sathans**, "Optimum sizing and techno-economic analysis of grid-independent PV system under different tracking systems," *Proceedings of the 8th IEEE Power India International Conference, (PIICON 2018)*, Dec. 10-12, 2018.
43. **Rahul Soni and Sathans**, "Optimal control of a Ball and Beam system through LQR and LQG" *Proceedings of the 2nd International Conference on inventive systems and control (ICISC 2018) 19-20 January, 2018 organized by JCT College of Engineering and Tech., Coimbatore.*
44. **Gajraj and Sathans** "Survey on DC Microgrid architecture, Power Quality issues and Control Strategies" *Proceedings of the 2nd International Conference on inventive systems and control (ICISC 2018) 19-20 January, 2018 organized by JCT College of Engineering and Tech., Coimbatore.*
45. **ManjulOkteand Sathans** "Sliding-Mode Observer for Estimating position and Speed and Minimizing Ripples in Rotor Parameters of PMSM" *Proceedings of the 2nd International Conference on inventive systems and control (ICISC 2018) 19-20 January, 2018 organized by JCT College of Engineering and Tech., Coimbatore.*
46. **Om Krishanand Sathans**, "Design and Techno-Economic Analysis of a HRES in a Rural Village" *6th International Conference on Smart Computing and Commutations (ICSCC2017) NIT Kurukshetra, 7-8 Dec.,2017, Procedia Comput. Sci. vol. 125, pp. 321–328, 2018.*
47. **Amit Kumar and Sathans** "GWO algorithm based fuzzy-PID controller with derivation filter for load frequency control of multi-source hydrothermal power system" *5th International Conference on Control, Mechatronics and Automation (ICCMA 2017) organized by University of Alberta, Edmonton, Canada, October 11-13, 2017.*
48. **Amandeep Singh and Sathans**, "ANFIS Based Control Strategy for Frequency Regulation in AC Microgrid " *IEEE Fifth International Conference on Eco-friendly Computing and Communication Systems (ICECCS-2016)*, Dec. 8-9, 2016, Maulana Azad National Institute of Technology, Bhopal.
49. **Amandeep Singh and Sathans**, "GA Optimized PID Controller for Frequency Regulation in Standalone AC Microgrid", *IEEE Seventh India International Conference on Power Electronics (IICPE-2016)*, Nov. 17-19, 2016, Thapar University, Patiala.
50. **Om Krishan and Sathans**, "Optimum Sizing and Economical Assessment of Grid Integrated Hybrid System for a Rural Village: A Case Study", *IEEE 1st International Conference on Power Electronics, Intelligent Control and Energy System (ICPEICES) 2016*, Delhi Technological University, July 4-6, 2016, New Delhi,
51. **Ravita Saraswat and Sathans**, "Comparative performance Evaluation of Solar PV Modules from different Manufactures in India by using PVsyst", *IEEE 1st International Conference on Power Electronics, Intelligent Control and Energy System (ICPEICES) 2016*, Delhi Technological University, July 4-6, 2016, New Delhi.
52. **Vishal Saini, Sathans**, "Frequency Regulation in an AC Microgrid with Diverse Sources of Power Using Intelligent Control Technique", *Journal of Automation and Control Engineering*, vol. 4, no. 3, June 2016.
53. **Om Krishan and Sathans**, "Frequency Regulation in a Standalone Wind-Diesel Hybrid Power System using Pitch-Angle Controller", *3rd IEEE International Conference on Computing for Sustainable Global Development (INDIACom-2016)*, Bharati Vidyapeeth's Institute of Computer Applications and Management, New Delhi, March 16-18, 2016.

54. **Amandeep Singh and Sathans**, "Voltage Control Issues in Smart Grid-A Recent Perspective", Proceeding of Weentech Global Conference on Renewable Energy (GCRE-2015), National Institute of Technology Patna, March 2016.
55. **Prince Sharma and Sathans**, "Modeling and performance evaluation of hybrid wind/diesel generation system", Proceeding of Weentech Global Conference on Renewable Energy (GCRE-2015), National Institute of Technology Patna, March 2016.
56. **Kaushlendra Kumar and Sathans**, "A Novel Power Factor Correction Technique for Three Phase Rectifier System Employing Boost Topology", Proceeding of Weentech Global Conference on Renewable Energy (GCRE-2015), National Institute of Technology Patna, March 2016.
57. **Neha Aggarwal and Sathans**, "Comparative performance of cascaded h-bridge multilevel inverter with varying levels for PV system", Proceeding of Weentech Global Conference on Renewable Energy (GCRE-2015), National Institute of Technology Patna, March 2016.
58. **Ravita Saraswat and Sathans**, "Cost and Sensitivity Analysis of Hybrid System at different places in Haryana", Proceeding of Weentech Global Conference on Renewable Energy (GCRE-2015), National Institute of Technology Patna, March 2016.
59. **Himanshu Rana and Sathans**, "Computed PID-SMC controller for tracking of two link robotic manipulator and comparative analysis", Proceeding of Weentech Global Conference on Renewable Energy (GCRE-2015), National Institute of Technology Patna, March 2016.
60. **Amit Kumar, Sathans**, "Impact study of DFIG based Wind Power Penetration on LFC of a Multi Area Power System," Annual IEEE India Conference (INDICON) 2015, Jamia Millia Islamia, December 17-20, 2015, New Delhi.
61. **Prince Sharma, Sathans**, "Performance Analysis of Stand-alone Hybrid Renewable Energy Power System- A Simulation Study" Annual IEEE India Conference (INDICON) 2015, Jamia Millia Islamia, December 17-20, 2015, New Delhi.
62. **Abhishek and Sathans**, "Power Management and Control of Hybrid Power Generation System Comprising Wind turbine and Micro turbine with Solar Heater Cells" International Seminar on Renewable Energy and Sustainable Development (RESD-2015), Royal University of Bhutan (Bhutan), June 15-17, 2015.
63. **Sathans, A. Swarup**, "Fuzzy Based Intelligent Approach to AGC of Multi-Area Multi-Unit Power System with SMES under Random Load Disturbances", Journal of *Applied Mechanics and Materials* vol. 492 (2014) pp. 431-43, 2014, Trans Tech Publications, Switzerland.
64. **Vishal Saini, Sathans**, "Frequency Regulation in an AC Microgrid with Diverse Sources of Power Using Intelligent Control Technique", International Conference on Control, Mechatronics and Automation, Dubai, UAE, December 8-10, 2014.
65. **Rahul Sharma, Sathans**, "Survey on Hybrid (Wind/solar) Renewable Energy System and Associated Control Issues", 2014 IEEE 6th India International Conference on Power Electronics (IICPE), NIT Kurukshetra, December 8-10, 2014.
66. **Manoj Singh Bisht, Sathans**, "Fuzzy based Intelligent Frequency Control Strategy in Standalone Hybrid AC MicroGrid", The 2014 IEEE Multi-Conference on Systems and Control (MSC2014), Antibes, France, October 8-10, 2014.

67. **Vishal Saini, Sathans**, “Comparative Frequency Control Analysis in Standalone Hybrid AC Micro-grid”, International Conference on Optimization and Parametric Modeling (OPT-2014), NIT-Hamirpur, October 6-7, 2014.
68. **Vishal Saini, Sathans**, “Fuzzy Gain Scheduled Intelligent Frequency Control in an AC Microgrid”, International Conference on Optimization and Parametric Modeling (OPT-2014), NIT-Hamirpur, October 6-7, 2014.
69. **Manoj Singh Bisht, Sathans**, “Frequency regulation in isolated hybrid AC microgrid using fuzzy logic controller and comparative analysis”, *National Conference on, Recent Advances in Power Systems (RAPS–2014)*, organized by Department of Electrical Engineering PEC University of Technology (Deemed University) PEC Chandigarh, June 28, 2014.
70. **Vishal Saini, Sathans**, “Frequency Control in an Autonomous Hybrid AC Microgrid”, *National Conference on, Recent Advances in Power Systems (RAPS–2014)*, organized by Department of Electrical Engineering PEC University of Technology (Deemed University) PEC Chandigarh, June 28, 2014.
71. **Parvesh Kumar, Sathans**, “Fuzzy based Intelligent Under Frequency Load Shedding Scheme for Distributed Generation System Disconnected from Grid”, Proceedings of the International Mechanical Engineering Congress (IMEC) – 2014, organized by the Department of Mechanical Engineering, NIT, Tiruchirappalli, pp. 332-335, June 13-15, 2014.
72. **Shrestha Saurabh, Sathans**, “Intelligent Hybrid Fuzzy PD Control for Trajectory Tracking of Robot Manipulator and Comparative Analysis”, *International Conference on Industrial Engineering Science and Applications-2014 (IESA-14)*, NIT Durgapur, April 2-4, 2014.
73. **Manoj Singh Bisht, Sathans**, “Fuzzy Gain Scheduled Intelligent Voltage Control in Grid Interface Photovoltaic System”, *National Conference on Nanomaterials and Instrumentation (NCNI-2014)*, NIT Kurukshetra, March 9-10, 2014.
74. **Shrestha Saurabh, Sathans**, “Computed Torque Control for Trajectory Tracking of Robot Manipulator and Comparative Analysis using Simulink”, *National Conference on Nanomaterials and Instrumentation (NCNI-2014)*, NIT Kurukshetra, March 9-10, 2014.
75. **Vishal Saini, Sathans**, “Mitigating the Frequency Deviations in an AC Microgrid”, *National Conference on Nanomaterials and Instrumentation (NCNI-2014)*, NIT Kurukshetra, March 9-10, 2014.
76. **Sathans, Jitender Rohilla**, “Control of DFIG based Variable Speed Wind Turbine System using Artificial Neural Network”, Proceedings of the *International conference on Power System, Energy and Environment, 2014 (PSEE 2014)*, pp. 166-172, Interlaken, Switzerland, February 22-24, 2014.
77. **Sathans, A. Swarup**, “Fuzzy Based Intelligent Approach to AGC of Multi-Area Multi-Unit Power System with SMES under Random Load Disturbances”, International Conference on Control, Mechatronics and Automation, Sydney, Australia, December 6-7, 2013.
78. **Rishabh Verma, Shalini Pal, Sathans**, “Fuzzy Gain Scheduled Automatic Generation Control of Two Area Multi Unit Power System”, *IEEE Students Conference on Engineering and Systems*, NIT, Allahabad, April 12-14, 2013.
79. **Rishabh Verma, Shalini Pal, Sathans**, “Intelligent Automatic Generation Control of Two-Area Hydrothermal Power System using ANN and Fuzzy Logic”, *IEEE International Conference on Communication Systems and Network Technologies, Gwalior, India, April 6-8, 2013*.

80. **Manjeet, Sathans**, "Fuzzy based Control of Two Link Robotic Manipulator and Comparative Analysis", *IEEE International Conference on Communication Systems and Network Technologies, Gwalior, India, April 6-8, 2013*.
81. **Rishabh Verma, Shalini Pal, Sathans**, "Fuzzy based Automatic Generation Control of Two-area Power System and Comparative Analysis", *International conference on Biomedical Engineering and Assistive Technologies, Dec.6-7, 2012, NIT, Jalandhar*.
82. **Sathans, A. Swarup**, "Intelligent Automatic Generation Control of Two Area Interconnected Power System using Hybrid Neuro-Fuzzy Controller", *International Journal of Electrical and Computer Engineering*, vol. 5, no. 12, pp. 1938-onwards, 2011.
83. **Sathans, A Swarup**, "Fuzzy Gain Scheduled Load Frequency Controller for Two-area Interconnected Power System with SMES", *International Journal of Fuzzy Systems and Rough Systems*, vol. 4, no. 1, pp. 7-17, 2011.
84. **Sathans, A Swarup**, "Fuzzy PID Controller for Load Frequency Control of Two-Area Power System Considering Generation Rate Constraints", *International Journal of Electrical Systems and Control*, vol. 3, no. 1, pp. 43-48, 2011.
85. **Sathans, A Swarup**, "Automatic Generation Control of Two-area Power System with SMES: from Conventional to Modern and Intelligent Control", *International Journal of Engineering Science and Technology*, vol. 3, no. 5, pp. 3693-3707, 2011.
86. **Sathans, A. Swarup**, "Automatic Generation Control of Multi-Area Multi Unit Power system with SMES using Fuzzy Gain Scheduling Approach", *International Journal of Research and Reviews in Electrical and Computer Engineering*, vol. 1, no. 2, pp. 83-91, 2011.
87. **Sathans, A. Swarup**, "Intelligent Load Frequency Control of Two-area Multi unit Power System with SMES", *IEEE International Conference on Systems Engineering (ICSEng 2011) Las Vegas, USA, August 16-18, 2011*.
88. **Sathans, A. Swarup**, "Intelligent Load Frequency Control of Two-Area Interconnected Power System and Comparative Analysis," *IEEE International Conference on Communication Systems and Network Technologies*, organized by MIR Labs and SMVDU Katra (India), IEEE CPS, June 3-5, 2011.
89. **Sathans, M. K. Soni, A. Swarup**, "Intelligent Control for UPS Inverter Performance Improvement," *Proceedings of the National Conference on Power Electronics and Intelligent Control*, organized by department of Electrical Engineering, National Institute of Technology, Jaipur (India), pp. 53-56, March 17-18, 2007.
90. **Sathans, M. K. Soni**, "Design and Development of PC Based Frequency Response Analyzer", *Proceedings of the National Conference on Emerging Trends in Electronic Product Design and Technology, CEDT, SAS Nagar (Mohali) Punjab*, pp. 335-342, April 6-8, 1995.

Annexure-B
Ph. D. Theses Supervision

Sr. No.	Name of Candidate	Registration No. and Date	Area of Research	Status
1.	Amandeep Singh	2k13/NITK/Ph.D/ 6130063 03/08/2013	Control Strategies for Frequency Regulation in AC Microgrid Using Evolutionary Optimization Algorithms	Awarded
2.	Amit Kumar	2k14/NITK/Ph.D/ 6140003 27/01/2014	Load Frequency Control and Modern Heuristic Optimization Techniques in Hybrid Power System	Awarded
3.	Rahul Sharma	2k14/NITK/Ph.D/ 6140009 31/01/2014	Control Schemes for Hybrid Energy System under Different Operating Conditions	Awarded
4.	Om Krishan	2k14/NITK/Ph.D/ 6140027 03/02/2014	Techno-Economic Analysis and Power Management in Distributed Generation Power System Incorporating Energy Storage Systems	Awarded
5.	Shilpam Malik	2k14/NITK/Ph.D/ 6140073 08/08/14	Frequency Regulation in Distributed Generation Power System	Awarded
6.	Archana	2k15/NITK/Ph.D/ 6150039 09/02/2015	Power quality and voltage control in smart grids	In progress
7.	Ravita	2k19/NITK/Ph.D/ 61900053 08/07/2019	Power Management and Cost Analysis of Microgrid System	In progress
8.	Ankush Gupta	2K19-NITK-PhD- 61900116 01/01/2020	Energy Management and Control issues of RES	In progress
9.	Pratibha	2K21-NITK-PhD- 61900019 January 2022	Hybrid Renewable Energy Systems	In progress

Annexure-C
M. Tech. Dissertations Supervised

Sr. No.	Name of Candidate	Roll No.	Title of Dissertation	Session/Year
1	Ajay Mishra	295737	Chip and System Design using AHDL	Dec. 1997
2	Ajay Pratap Singh	295797	Digital System Design using AHDL	Dec. 1997
3	Ranbir Singh	296748	Phase Locked Loop: Modelling & Analysis using Simulation Software	March, 2001
4	Vijay Kumar Tayal	297746	Prediction of Limit Cycles in a 2 Dimensional Nonlinear System	August, 2002
5	ArvindBharati	298774	Study Analysis of Various Control Aspects in a Thermal Power Plant- A Case Study	August, 2003
6	Manoj Kumar Bhatt	298770	Architecture & Implementation of SDH Networks	May, 2003
7	Manish Srivastava,	299743	Performance Analysis of ATM Switches with Multiple Input Buffers	May, 2001
8	Amit Kumar,	299744	A Comparative Study and Simulation of Dynamic Queue Control Functions using ATM-ABR Switch Schemes	Feb., 2001
9	Sushil Kumar	299745	Performance Evaluation of DS-CDMA using Importance Sampling	Sept., 2001
10	Bhanu Pratap Singh	201747	Design of Fuzzy Controller for a Class of Complex Systems Based on Dynamic Fuzzy Model	Feb., 2003
11	Ms.Ruchika	742/03	Design & analysis of fuzzy logic controller	2005
12	Lokesh Budhalakoti	297768	Study of congestion control model for broadband intelligent and mobile network	Feb. 2005
13	Rajesh Kumar	753/04	A critical Study of Conventional & Evolutionary technique based power system stabilizer	2007
14	Venketeshwaralu Pal	746/05	Fuzzy logic controller for load frequency control problem in two area interconnected power system	2007

15	Ms.Jyoti Arora Deswal	2k2-752	Some aspects of fuzzy logic controller design	2007
16	Krishna Kishore M S	2209/06	Reactive power compensation for Transmission line using fuzzy logic controller	June 2008
17	Gurpreet Singh	207291	Fuzzy controller design for PWM inverter of a UPS system	28/07/2009
18	N Krishna Swami Naidu	207286	Transient stability analysis of a multi machine power system including wind generator	04/08/2009
19	Umesh Gupta	208206	Different control schemes for electrical servo drive system	28/7/2010
20	Ashwini Grover	208208	Adaptive automatic generation control using fuzzy logic	28/7/2010
21	Vikram	208218	Automatic generation control using different control strategies and their comparative analysis	19/7/2010
22	Pardeep Kr.	741/05	Demand side loss minimization in power system using genetic algorithm	19/07/2010
23	Manjeet	209243	Design and implementation of different controllers for two line robotic manipulator	14/07/2011
24	Aman Kumar	209278	Automatic generation control of interconnected power system by using particle optimization technique	01/12/2011
25	JitenderVerma	209282	Fuzzy logic based automatic generation control of interconnected power system with G.R.C.	22/05/2011
26	Arif Sheikh	210168	AGC of multi-area power system in restructured environment	12/07/2012
27	Gagan Deep Yadav	210177	Automatic generation control in restructured power system	25/04/2013
28	Rishabh Verma	211170	Intelligent automatic generation control in deregulated scenario with wind power penetration	28/06/2013

29	Shalini Pal	211606	Automatic generation control of multi area power system under deregulated environment using intelligent control techniques	28/06/2013
30	Jitender Kumar	211609	Modelling and control of variable speed wind turbine using intelligent controller technique	28/06/2013
31	VineetGautam	211119	Intelligent control of doubly fed induction generator based variable speed wind turbine	28/06/2013
32	Manoj Singh Bist	3121706	Dynamic Frequency Regulation in an Isolated Hybrid AC Microgrid Using Intelligent Control	June 2014
33	Vishal Saini	3121044	Intelligent Frequency Control in an AC Microgrid Power System Network	June 2014
34	Parvesh Kumar	3121046	Intelligent Under Frequency Load Shedding Scheme for Islanded Distribution Power System Network	June 2014
35	ShresthaSaurabh	3121522	Robotic Manipulator Control using Intelligent Techniques	June 2014
36	HimanshuRana	3131508	Controller Design for Trajectory Tracking of Two Link Robotic Manipulator	July 2015
37	Prince Sharma	3137518	Modelling and Analysis of Hybrid Renewable Energy System	July 2015
38	Abhishek Kumar	3137511	Modeling and control of an isolated hybrid power generation system	July 2015
39	Ravita Saraswat	3147510	Economic and Feasible Solution of Hybrid Renewable Energy System at Different Places of Haryana	August 2016
40	Kaushlender Kumar	3141711	Power Factor Correction Technique and THD Analysis for Three Phase Rectifier System	August 2016

41	Rahul Soni	31604115	Stabilization of Ball and Beam System: an Optimal and Robust Approach	August 2018
42	Gajraj Rawat	31610118	Modeling & Performance Analysis of Renewable Sources under Islanded DC Microgrid	August 2018
43	Manjul Okte	31604323	Sensorless Adaptive Control of Permanent Magnet Synchronous Motor Drives	August 2018
44	Chetan Sharma	31704102	Comparative Analysis of Multi carrier PWM Methodologies for 3-Phase 9 level cascade inverter	July 2019
45	Mohit Kumar	31704103	Design and Implementation of Efficient Level control Scheme for Two connected Reservoirs	July 2019
46	Vinod Kumar	31804106	Meta-Heuristic Techniques Based Tuned Current Reduction for Electric Power Assist Steering Control of Electric Vehicles	July 2020
47	Gunjan Chorasias	31804120	Load Frequency Control of Integrated Two Area Power System With Integration of Electric Vehicle	July 2020
48	Itie Goswami	31810115	Energy Management In Electric Hybrid Vehicle With Diverse Power Sources	September 2020
49.	Raju Kumar	31904103	Modelling and Control of RERs based hybrid renewable energy systems	November 2021
50.	Ravi Kumar Rajput	31904115	Some control issues in microgrids	November 2021
51.	Kanishk Bhatt	31904102	Renewable Energy Based Power systems and their control	November 2021
52.	Steffy L. Chandra Bhas	31910114	Parameter Estimation of PV Model	September 2021
53	Keerthana M	32014112	Distributed Predictive Control for Frequency and Voltage Regulation in Microgrid	September 2022

54	Ranjana	32014116	Engineering Analysis and Part Retrofitment for Class 3 Medical Devices	September 2022
55	Aastha Luthra	32019101	Renewable Energy Systems	In progress
56	Shubham Gupta	32115111	Battery Energy Management and Control	In progress
57	Dharani Mullapati	32114123	Event based Control of Microgrid	In progress
58	Jay Bharti	32214111	Control Issues	In progress
59	Nitin Prakash	32214101	Control Issues	In progress

Annexure-D

Contributions Made at Different Administrative Positions

A. Contributions as Dean (Students' Welfare), National Institute of Technology, Kurukshetra (September 2015 – August 2018).

■ Student Mentorship Program

- ▷ To enable constructive and positive interaction, guidance and mentorship of B. Tech. students by the faculty, Student Mentorship Program was introduced from the Academic Session 2017-18, where faculty mentors are playing effective role in observing and monitoring students' progress throughout their stay in the Institute.

■ Students' Advisory Committees

- ▷ Students' Advisory Committees have been constituted in every department aiming at providing a platform to the students to air their grievances and seek redressal, and provide suggestions to improve the systems in the Institute. It has been made mandatory for every department / school to hold at least two meetings of the committee every semester. Meetings of the Committees are held regularly, as expected, and appropriate action is taken on the issues raised therein.

■ Students' Feedback Mechanism

- ▷ The mechanism of students' feedback was introduced, w.e.f. the Academic Session 2017-18, as a system of performance audit of the teachers to strengthen the quality of teaching learning process. Accordingly, a Proforma for Student Feedback on Teachers' Performance in Theory and Laboratory Courses was designed for seeking honest opinion/inputs on the various performance aspects of the teachers. The feedback thus obtained is being shared, individually/collectively, with the faculty members by the respective Heads of the Departments/ Coordinators of Schools.

■ Psychological Counselling Service

- ▷ The proposal to appoint a professional counsellor for the students was finalized after discussion with the Director and was included as the agenda item in the 41st meeting of the BoG. Subsequently on approval by the BoG, the Professional Counsellor was appointed w.e.f. the Academic Session 2017-18, who is providing counselling services to the students and other Institute community alike.

■ Foreign Students' Cell

- ▷ With an aim of providing foreign students a platform for redressal of their issues / concerns and to look after their welfare, the Foreign Students' Cell has been constituted. The activities of the Cell include coordination with the ICCR / DASA / MEA and embassies of the respective countries, conduct of regular meetings, welfare activities etc. for the students of foreign origin.

■ Encouraged Students to participate more actively in National Campaigns like Swachh Bharat Abhiyan, Unnat Bharat Abhiyan, Ek Bharat Shreshth Bharat etc.

- ▷ A Professor-in-charge has been appointed for each of the national campaigns so that some activities related to these campaigns are taken up regularly. For example, under Swachh Bharat Abhiyan, a Swachhta Ambassadors' Committee (SAC), headed by the Professor-in-charge, Sanitation & Cleanliness, was formed in the Session 2017-17 to monitor the cleanliness status and conduct swachhata drives in the Institute premises. Volunteers, comprising faculty and students, in the committee regularly take up awareness campaigns and cleanliness drives in and outside the campus. Cleanliness Drives, under the effective coordination of the office of Dean(SW), have been conducted in the Institute from time to time.
- ▷ In case of Unnat Bharat Abhiyan, three villages neighboring the Institute: Jyotisar, Sunehri, and Alampur were adopted by the Institute. Based on the discussions with the District Administration and the village Panchayat, IT education, hygiene & healthcare and efficient use of electrical appliances were identified as areas of interest for the villages. Accordingly, a One Day Workshop on 'Computer and IT Skills; Health and Hygiene; and Efficient use of Electrical Appliances' was conducted on February 6, 2016, at NIT Kurukshetra for the youth participants including some village elders as well.
- ▷ A campus waste management system in collaboration with the Ministry of Urban Development, Govt. of India, involving a team of students, was coordinated during the session 2017-18. Apart from recording daily data input of waste, generated from different blocks in the campus, in segregated quantities, the team did the analysis of input data and displayed the same to the users with an objective of bringing about an attitudinal change among the campus community to adopt proper waste management practices.
- ▷ Under Ek Bharat Shresth Bharat, where Telangana is the partner state with us, various activities are being conducted involving Students' Clubs under the guidance of Prof. I/C (Students' Clubs) with Dean(SW) as the Nodal Officer.
- ▷ Popularization of the Govt. of India's initiatives such as BHIM App, Viitiya Saksharta Abhiyaan etc. among the students through effective dissemination of information and workshops etc.

■ National IT Challenge for youth with disabilities

- ▷ Organized, **for the first time in the country**, in July 2016 and subsequently in 2017 and 2018, the National IT Challenge for youth with disabilities, in collaboration with the Department of Empowerment of Persons with Disabilities, Ministry of Social Justice & Empowerment, Govt. of India, New Delhi where I was the Chairman and Prof. Ashutosh Kr. Singh Dept. of Computer Applications, as the Convener. The events were very successfully conducted all these years and well appreciated by Ministry of Social Justice & Empowerment, Govt. of India. Every year, the winners of this National IT Challenge went on to participate in the Global IT Challenge for youth with disabilities organized in countries like China, Vietnam etc.

■ Miscellaneous Activities

- ▷ A Short Term Course on 'Control Systems and Missile Guidance' was organized for the students in December 2016 during winter break, in collaboration with the RCI, DRDO,

Hyderabad, wherein 56 students participated, besides some of the faculty members from the relevant departments. The participants got a chance to be exposed to real systems and their complexities. This course was conceptualized on the expression of interest by the students.

- ▷ A Special Passport Camp was organized on 24th January, 2017, in collaboration with Regional Passport Office, Chandigarh and Passport Seva Kendra, Ambala, to encourage and facilitate the students to apply for their passports. More than 650 students and staff participated and got benefited.
- ▷ SANKALP SE SIDDHI: As per directions by the Ministry of Human Resource Development, Govt. of India, to observe 70 years of Freedom and 75 years of Quit India Movement from 9th August to 1st September, 2017, Sankalp Se Siddhi program was organized successfully. The program included a QUIZ on the Quit India Movement, a Sankalp, taken in the form of a pledge, to free India from Poverty, Terrorism, Regionalism, Corruption and non-hygiene by the year 2022, New India Manthan: the brain-storming session of the youth in the Institute on the theme New India 2022, and finally “Yeh India Ka Time Hai” – Rock Concert by Swastic Band.
- ▷ Organized and conducted many Workshops/Programs/Expert Lectures on subjects such as Road to Safety, Yoga and Health issues, Wellness, importance of Moral Values in Education, Youth Speak, New Education Policy etc. to enhance the awareness and skills of the students.
- ▷ *Organized the celebrations of the important Events and Days of national and international importance such as International Yoga Day, United National Day, Unity Day etc. all through the tenure of three years and submitted the reports and photographs/videos etc. on time to the MHRD, New Delhi and on the social media as per need.*

■ **Institute Magazine and the Handbook of Information**

- ▷ Publishing of the Institute magazine: The Helios, was regularized. Similarly, efforts were made to publish the Handbook of Information in time.

■ **Institute Newsletter**

- ▷ Publishing of the Institute Newsletter, covering various activities and achievements of the students, faculty and staff, was started from the session 2017-18 and efforts made to make it a regular activity.

■ **Induction Program for the B. Tech. First Year Students of 2018 Batch**

- ▷ As per the guidelines from MHRD/AICTE/NPIU, the B.Tech. 1st year students of the Institute were required to undergo a compulsory induction programme of three weeks' duration where the students would follow a daily routine of activities rather than their regular classes. The aim of the programme was to familiarize the students in the new environment. As such, as a first, the Induction Program was planned, coordinated and implemented for the students of the B. Tech. first year batch of 2018 from the start of the

academic session 2018-19 i.e. during July 25th to August 10th 2018. The detailed daily schedule of activities for the said induction programme was monitored and coordinated very meticulously. The planning for the same was initiated well in advance. The program was around the activities like visits to different departments and around the campus, Physical/Sports activities in the Sports Ground (Morning as well as Evening), Creative Arts / Technical Workshops, Lecture Sessions or Films on Universal Human Values / Cultural / Talent hunt Activities / Performances by Classical or folk artists, Presentation cum Interactive Session with Eminent Alumni/Eminent Speaker, Universal Human Values, Proficiency Module (English), Local Visits, Wake-up call/Hostel related activities, Talent Show and Valedictory, and Directors' Address to the students.

■ **Outreach Activities**

- ▷ Conducted, under Unnat Bharat Abhiyan (UBA), Awareness Drives for "Electrical Energy Conservation and Solar Energy Prospects, at Villages-Sunehri, Aalampur, Jyotisar-adopted by the Institute under UBA, 2017-18.
- ▷ Organized Vidyarthi Vigyan Manthan 2016-17 (in collaboration with Vigyan Prasar, DST, Govt. of India and Vigyan Bharti) on 14th April, 2017 for the students from 6th to 11th Class of different schools of Haryana.
- ▷ Organized Regional Science Congress for the students of various Jawahar Navodaya Vidyalayas of Haryana, Rajasthan and Delhi during 2017 and planned for 2018 as well.
- ▷ Organized one-day skill training visits of the students of Government Schools of the Haryana state to the Institute during 2017.

■ **Coordination of the Major Annual Festivals of the Institute**

- ▷ Coordinated the process of planning and organizing the major annual festivals of the Institute: Techspardha, the annual techno-managerial fest; CITIUS, the annual athletic meet and Confluence, the annual cultural fest, during the tenure.

In addition to the above contributions, the office of the Dean (SW) has been pro-actively involved in conducting/organizing/coordinating various activities for the overall benefit of the students.

B. Contributions as Coordinator, TEQIP-III (September 2017 onward)

- ▷ Prepared the Institutional Development Proposal for submitting to the NPIU
- ▷ Made the presentation on the IDP at NPIU headquarter Noida and successfully got the TEQIP-III project for the Institute through a competitive selection procedure.
- ▷ Prepared the Quarterly Action Plan and got the project money sanctioned for the 1st quarter (October 2017 to December 2017) and continuously since then.
- ▷ PFMS was implemented for TEQIP-III activities for the first time
- ▷ Various activities under TEQIP-III are being effectively implemented in the Institute.
- ▷ Successfully accomplished the task of faculty interviews of around 830 candidates under TEQIP-III, which was acknowledged and appreciated by NPIU on behalf of the Ministry of HRD (copy enclosed).

- ▶ Conducted joint activities such as Short Term Course and Summer Internships with the Govt. Engineering College, Bikaner, Rajasthan, the Mentee Institute.
- ▶ Conducted various STTPs, STCs, and Conferences jointly with Mentee Institute GEC Bikaner and within NIT Kurukshetra.
- ▶ Got the outdoor electronic display systems purchased and installed at four strategic locations on the institute campus.

C. Contributions as Professor in-charge, Institute Health Centre, NIT Kurukshetra (Sept. 2013-August 2015):

- The Health Centre of the Institute was modernized and renovated for improving the medical facilities for the students and employees of the Institute by procuring state of the art equipment and refurbishment of Doctors' chambers, medical store room, pathological lab, patients' waiting area and other facilities etc.
- Augmentation of the medical equipment and paramedical staff.
- Indoor admission facility made operational through procurement of hospital equipment like Beds, Oxygen Concentrators, other necessary furniture and air conditioners etc. Thus created a good fully air conditioned and functional facility for indoor admission and treatment.
- Established modern Radiological facilities by procuring Digital X-Ray equipment.
- Urgent maintenance and repair of Dental Chair and related equipment was got done to improve dental medical facilities.
- Organized the conduct of Medical check-up camp by Doctors of reputed hospital like Medanta Medicity, Gurgaon.

D. Contributions as Co-coordinator/Coordinator, TEQIP-I/II (2011-2017):

- Effectively implemented at the Institute the World Bank supported Technical Education Quality Improvement Program-I (TEQIP-I) (2005-10) of MHRD, Govt. of India involving a budget of approx. Rs. 18.5 crores. Also, TEQIP-II (2011-17), involving a budget of approx. Rs. 20 crores and focused on enhancing PG education, Research & Development and innovation, is being effectively implemented.
- Organized, as convener/coordinator, following workshops/training programs under TEQIP-I/II:
- Facilitated faculty members and students for participation in International/National conferences and seminars.
- Facilitated modernization of lab facilities of different departments of the Institute.
- Supported innovation and filing of patents.
- Facilitated UG/PG/Ph.D. students for participation in conferences/seminars by sponsoring the registration fee with a view to enhance research & development.

E. Other Academic/Administrative Contributions at NIT Kurukshetra:

- Coordinated the conduct of Academic Audit of all the 22 M.Tech. Programs being offered in the Institute during January 4, 2019 to February 6, 2019.
- Coordinated the conduct of faculty recruitment process in the Institute during November 2018 and February 2019.
- Anchored various important events of the Institute such as Convocation, Teachers Day function etc.
- Served as Chief/Convener, Souvenir Printing Committee, VVIP Addresses/Messages Drafting Committee, etc. during Convocation

Have been available to the Institute administration for any assignment within or outside the Institute as and when required e.g. represented the Institute in the Budget finalization meeting at MHRD in 2018.