

# **2019 IEEE Students Conference on Engineering and Systems (SCES 2019)**

**Allahabad, India  
29 – 31 May 2019**



**IEEE Catalog Number: CFP1901S-POD  
ISBN: 978-1-7281-0578-9**

**Copyright © 2019 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1901S-POD
ISBN (Print-On-Demand):	978-1-7281-0578-9
ISBN (Online):	978-1-7281-0577-2

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com



Co-sponsored by  
IEEE Joint Societies  
Chapter of IE/PEL/CS

## 2019 IEEE STUDENTS CONFERENCE ON ENGINEERING AND SYSTEMS (SCES)

May 29 - 31, 2019

Organised by  
Department of Electrical Engineering  
Motilal Nehru National Institute of Technology Allahabad  
India

Technically sponsored by  
IEEE Uttar Pradesh Section



Financially sponsored by  
TEQIP-III



### Oral & Poster Sessions Paper Presentation Schedule

**Session:** TS-01 (Converter Design and Power Quality Analysis)  
**Session Chairs:** Prof. R. K. Tripathi (MNNIT Allahabad)  
 Prof. Rajesh Gupta (MNNIT Allahabad)  
 Dr. M. V. Naik (MNNIT Allahabad)  
**Date:** 30<sup>th</sup> May, 2019 (Thursday) **Time:** 9:30 AM - 11:00 AM  
**Venue:** Institute Seminar Hall

Pg. #	Paper ID	Author	Title
1	78	Satya Prakash, Madhusmita Mohanty and Subhransu Padhee	Design of Multi-Staged Power Electronic Interface for Stand-alone Application Powered by Photovoltaic Module
7	79	Manish sanwal, Ravindra Kumar Singh and S. venkataramana	High Gain DC-DC Converter using Coupled Inductors for Renewable Application
12	87	Niranjana Kumar, Alok Agrawal and Rajesh Gupta	Split Bridge Bi-directional DAB Converter for Multiple Battery Stacks in Solar PV System
18	89	Ankit Mittle, Ravindra Kumar Singh and Sarath Chandra	A New Interleaved High Step-up DC-DC Converter
23	94	Divya Yadav and Swapnajit Pattnaik	A Capacitor Voltage Balancing Method in Modular Multilevel Converter using Selective Mapping
28	128	Zeeshan Rayeen, Omar Hanif and Sourav Bose	Modelling and analysis of Interleaved Cuk converter controlled by PID controller with phase shift PWM method
34	53	Prachi Singh and Dr. Bramha P. Pandey	Theoretical study of single and dual gate MoS <sub>2</sub> based TMDFET by varying oxide thickness and channel length



Co-sponsored by  
IEEE Joint Societies  
Chapter of IE/PEL/CS

## 2019 IEEE STUDENTS CONFERENCE ON ENGINEERING AND SYSTEMS (SCES)

May 29 - 31, 2019

Organised by  
Department of Electrical Engineering  
Motilal Nehru National Institute of Technology Allahabad  
India

Technically sponsored by  
IEEE Uttar Pradesh Section



Financially sponsored by  
TEQIP-III



### Oral & Poster Sessions Paper Presentation Schedule

**Session:** TS-02 (Power Systems Operations & Control)

**Session Chairs:** Prof. R. K. Singh (MNNIT Allahabad)  
Prof. Asheesh Kumar Singh (MNNIT Allahabad)  
Dr. Navneet Kumar Singh (MNNIT Allahabad)

**Date:** 30<sup>th</sup> May, 2019 (Thursday) **Time:** 2:00 PM - 3:30 PM

**Venue:** Institute Seminar Hall

Pg. #	Paper ID	Author	Title
39	02	Satvik Sabarad and Shubhashis Sanyal	Establishing an optimal eco-driving strategy for an electric vehicle through test bed simulation – A case study from Shell Eco-Marathon 2018
45	104	Mohd Juned, Manisha and Prerna Gaur	Effect of Higher Order DC-DC Converter on Solar fed BLDC Motor Driven Water Pumping System
51	119	Anurag Sharma and Rajesh Gupta	PV-Battery Supported Level-1 DC Fast charger for Electric Vehicles
56	134	Anil Bharadwaj.Ch, Suman Maiti and Nirmalya Dhal	Control and State of Charge Balancing Technique of a Modular Multilevel STATCOM Integrated with Battery Energy Storage System
62	61	Prakash Chandra Gupta, Atanu Banerjee and Piyush Pratap Singh	Analysis and Control of Chaotic Oscillation in FOSMIB Power System Using AISMC Technique
68	117	Chandra Prakash Prajapati, A.K. Dahiya	Performance improvement of IEEE-30 bus system using UPFC and TCSC on PSAT



Co-sponsored by  
IEEE Joint Societies  
Chapter of IE/PEL/CS

## 2019 IEEE STUDENTS CONFERENCE ON ENGINEERING AND SYSTEMS (SCES)

May 29 - 31, 2019

Organised by  
Department of Electrical Engineering  
Motilal Nehru National Institute of Technology Allahabad  
India

Technically sponsored by  
IEEE Uttar Pradesh Section






Financially sponsored by  
TEQIP-III



### Oral & Poster Sessions Paper Presentation Schedule

**Session:** TS-03 (Soft Computing Approach in Engineering Applications)  
**Session Chairs:** Prof. Amit Dhawan (MNNIT Allahabad)  
 Prof. A. K. Singh (MNNIT Allahabad)  
 Dr. Dipayan Guha (MNNIT Allahabad)  
**Date:** 30<sup>th</sup> May, 2019 (Thursday) **Time:** 4:00 PM - 5:30 PM  
**Venue:** Institute Seminar Hall

Pg. #	Paper ID	Author	Title
74	30	Priyanka TS, Roshni Venkatesh, Sourabh RM and Bhaskarjyoti Das	Course Finder Based On An Ensemble of Similarities And Social Network Analysis
80	33	Satvik Kumar, Shreyas Vivek Patil, Siddhanth Vinay and Bhaskarjyoti Das	Node embedding based community detection and other techniques to analyze implicit social graph of a literary text series
86	35	Sai Rohit, Vishwas Sathish, Tanya Mehrotra, and Bhaskarjyoti Das	Applications of Optimal Stopping Algorithm for Social Graph Based Recommendation
92	65	Swati Jain, Suraj Prakash Narayan, Rupesh Kumar Dewang, Utkarsh Bhartiya, Nalini Meena, and Varun Kumar	A Machine Learning based Depression Analysis and Suicidal Ideation Detection System using Questionnaires and Twitter
98	115	Akansha Yadav and Sudhanshu Verma	Aperture coupled L-shaped slot based Microstrip Patch Antenna for Multiband Wireless Communication
104	108	Vishesh Middha, Sanjay Kumar Sonbhadra and Sonali Agarwal	Concept Drift Detection in Email Dataset through Intention Based Segmentation
109	112	Anirban Sarkar, Sanjay Kumar Sonbhadra and Sonali Agarwal	Predictive Analytics using Ensemble Models

 <p>Co-sponsored by <b>IEEE Joint Societies</b> Chapter of IE/PEL/CS</p>	<p><b>2019 IEEE STUDENTS CONFERENCE ON ENGINEERING AND SYSTEMS (SCES)</b></p> <p>May 29 - 31, 2019</p> <p>Organised by Department of Electrical Engineering Motilal Nehru National Institute of Technology Allahabad India</p>	<p>Technically sponsored by <b>IEEE Uttar Pradesh Section</b></p>  <p>Financially sponsored by <b>TEQIP-III</b></p>  <p>Technical Education Quality Improvement Programme</p>
---	--	---

## Oral & Poster Sessions Paper Presentation Schedule

**Session:** TS-04 (Model Order Reduction and Intelligent Control Systems)

**Session Chairs:** Prof. Shubhi Purwar (MNNIT Allahabad)  
Prof. Nand Kishor (MNNIT Allahabad)  
Dr. Niraj Kumar Choudhary (MNNIT Allahabad)

**Date:** 31<sup>st</sup> May, 2019 (Friday) **Time:** 2:30 PM – 4:00 PM

**Venue:** Institute Seminar Hall

Pg. #	Paper ID	Author	Title
114	120	Nitin Verma , Pavan Kumar Singh , Nitin Singh, and Richa Negi	Short Term Wind Power Forecasting using Optimized WT-ANFIS Hybrid Model
120	124	Ashish Kumar Singh, Parvez Ahmad, Nitin Singh, and Niraj Kumar Choudhary	Load Frequency Control of Single Area Hybrid Power System Using Fuzzy-PID (FPID) Controller
126	72	Chhabindra Nath Singh, Akhilesh Kumar Gupta, Deepak Kumar and Paulson Samuel	Improved Pole Clustering Based Simplification of Complex Systems using Big Bang-Big Crunch Optimization
132	143	Abhisek Satapathi and Deepak Kumar	A New Stability Preserving Model Reduction Technique for Discrete-Time Systems using Frequency-Limited Gramians
137	147	Satya Prakash Singh and Deepak Kumar	Singular Perturbation based Frequency-Weighted Model Reduction of Discrete-Time Systems
142	73	Jaynendra Kumar, Nitin Singh, Anshul Agarwal	Power Management of Solar based DCMG supported by Hybrid Energy Storage System



Co-sponsored by  
IEEE Joint Societies  
Chapter of IE/PEL/CS

## 2019 IEEE STUDENTS CONFERENCE ON ENGINEERING AND SYSTEMS (SCES)

May 29 - 31, 2019

Organised by  
Department of Electrical Engineering  
Motilal Nehru National Institute of Technology Allahabad  
India

Technically sponsored by  
IEEE Uttar Pradesh Section



Financially sponsored by  
TEQIP-III



### Oral & Poster Sessions Paper Presentation Schedule

**Session:** Poster Session

**Session Chairs:** Prof. Nand Kishor (MNNIT Allahabad)  
Prof. S. J. Pawar (MNNIT Allahabad)  
Dr. Himanshu Mishra (MNNIT Allahabad)

**Date:** 31<sup>st</sup> May, 2019 (Friday) **Time:** 12:30 PM - 1:30 PM

**Venue:** Institute Seminar Hall

Pg #	Paper ID	Author	Title
N/A	36	Biranchi Narayan Kar, Bandi Mallikarjuna Reddy, and Paulson Samuel	Indirect Vector Control of Induction Motor Using Brain Emotional Learning Based Intelligent Controller
N/A	42	Kirti Gupta and Saumendra Sarangi	Adapting Relaying Using Estimated Voltage for Inverter Based Distributed Generation System
N/A	45	Aakriti Pandey and Swapnajit Pattnaik	Design and Analysis of High Boost Converter with Reduced Switch-Voltage Stress
N/A	49	Shipra Tiwari and Dr. Saumendra Sarangi	Comparison of Current Stress For Different Modulation Techniques In Dual Active Bridge Converter
N/A	50	Ankit Attkan and Priyanka Ahlawat	Authentication Schemes for IoT security: A Survey
N/A	62	Ande Venkata durgaprasad, Nita R.Patne and Ajay kumar T	Voltage Sag Compensation at Point Common Coupling (PCC) using Parallel Resonance Fault Current Limiter
N/A	92	Suraj Kumar Gadari, Komal Mishra and Saumendra Sarangi	Detailed analysis of Fuzzy Logic Controller for Second order DC-DC Converters
N/A	139	Avinash Kumar and Ravi Prakash Tewari	'Pneumatic Artificial Muscle': A Bio-inspired Actuator for Bio-Robotic Applications
N/A	142	Sandeep Ojha and Rajesh Gupta,	Non-Periodicity of Current Tracking in Digitally Controlled HCC