

National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Dr. Suman M. received the B.E. degree in electrical and electronics engineering from Vel Tech, (Anna University) Chennai, India, in 2012, the M.Tech. degree in power system from the Motilal Nehru National Institute of Technology Allahabad, India, in 2014, and the Ph.D. degree in electrical and electronics engineering from the National Institute of Technology, Tiruchirappalli, India, in 2019.



He worked as a Research Associate in the Indian Institute of Technology, Kanpur, India from March 2019 to June 2019. He worked as an Assistant Professor in the Electrical Engineering Department of Motilal Nehru National Institute of Technology Allahabad, National Institute of Technology, Calicut, and Indian Institute of Technology (BHU), Varanasi during June 2019 to June 2024. He is currently working as an Assistant Professor in the Electrical and Electronics Engineering Department of National Institute of Technology, Tiruchirappalli, India.

His research interests include unintentional islanding detection, protection of microgrids, and applications of power electronics in power system, resynchronization of active distribution networks.

1. Name: **Suman M**
2. Designation: **Assistant Professor**
3. Office Address: **Assistant Professor, Electrical and Electronics Engineering, National Institute of Technology, Tiruchirappalli, Trichy - 620015**
5. Email (Primary): **sumanm@nitt.edu** Email (Secondary): **sumanmnitt@gmail.com**
6. Field(s) of Specialization: **Power System**

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7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	National Institute of Technology, Tiruchirappalli	June 2024	Till date
Assistant Professor	Indian Institute of Technology (BHU), Varanasi	January 2024	June 2024
Assistant Professor	National Institute of Technology, Calicut	October 2023	December 2023
Assistant Professor	Motilal Nehru National Institute of Technology Allahabad	June 2019	September 2023
Research Associate	Indian Institute of Technology, Kanpur	March 2019	June 2019

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Subjects
Ph. D.	National Institute of Technology, Tiruchirappalli	2019	Electrical and Electronics Engineering
M. Tech.	Motilal Nehru National Institute of Technology Allahabad	2014	Power System
B. Tech.	Vel Tech (Affiliated to Anna University, Chennai)	2012	Electrical and Electronics Engineering
H. S. C.	E. R, Higher Secondary School, Trichy	2008	Science
S. S. L. C.	E. R, Higher Secondary School, Trichy	2006	Science

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
NIL			

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
NIL			

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11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2023	3 rd Best Poster Award	5th International Conference on Power, Control and Embedded Systems (ICPCES 2023)
2021	Best Paper Award	IET Generation, Transmission & Distribution
2011	Best Paper Award	Synchro'11 - symposium held at Sri Muthukumaran Institute of Technology

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
NIL				

13. Details of Academic Work

(i) Courses taught at Postgraduate and Undergraduate levels

- 1) EEPE21 - Utilization of Electrical Energy - B. Tech. Electrical and Electronics Engineering (3 Credits, PE)
- 2) EEIR11 - Basics of Electrical and Electronics Engineering - B. Tech. Metallurgical and Materials Engineering (2 Credits, Core)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
A Novel Resynchronization Methodology for Active Distribution Networks	Anusandhan National Research Foundation (ANRF) (formerly called as SERB)	2024	2027	Approved

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Development of Unintentional Islanding Protection Scheme with Low Voltage & Frequency Ride Through Capability	Anusandhan National Research Foundation (ANRF) (formerly called as SERB)	2022	2025	Ongoing
Development of Smart Power System Laboratory with Renewables	Department of Science and Technology (DST)	2023	2027	Ongoing

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
NIL			

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convener / Co-Convener)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Intelligent Control and Protection Techniques for HYBRID Microgrid (ICPT 2022)	National	March 5th – March 9th, 2022	Convener	Motilal Nehru National Institute of Technology Allahabad

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Advances in Power Technologies	National	Dec 20th – Dec 24st, 2021	Convener	Motilal Nehru National Institute of Technology Allahabad
Modeling and Simulation of Dynamical Systems (MSDS),	National	Sep 27th – Oct 1st, 2021	Convener	Motilal Nehru National Institute of Technology Allahabad
Future trends in Wide Area-based Power Systems Control and Protection	National	Oct. 13-17, 2020	Convener	Motilal Nehru National Institute of Technology Allahabad
Resilient Operation and Control of Microgrid (ROC _μ G)	National	Jan. 6-10, 2020	Coordinator	Motilal Nehru National Institute of Technology Allahabad

18. Invited Talks delivered

Topic	Date	Inviting Organization
Opportunities and Challenges in Integrating Renewable Energy in EV Charging Infrastructure	24th June 2024 to 29th June 2024	Kongunadu College of Engineering and Technology, Tiruchirappalli
Navigating the Future with Green Energy Resources, Smart Grid Technologies & Emission-Free Vehicle Infrastructure	22 April 2024 to 27 April 2024	Vishnu Institute of Technology, Andhra Pradesh
Power Converters for Green Energy and EV Integration	13th - 17th March 2024	National Institute of Technology, Rourkela
Integration of Green Energy Resources	01st February 2022 to 07th February 2022	Vishnu Institute of Technology, Andhra Pradesh
A Prologue for Renewable Power in Distributed System	30th December 2021	Kongunadu College of Engineering & Technology, Tamilnadu

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Grid Modernization: Opportunities and Challenges	20th December 2021 to 24th December 2021	National Institute of Technology, Kurukshetra
Technologies for Smart Electrical Power Grid	24th May 2021 to 28th May 2021	National Institute of Technology, Tiruchirappalli
Research perspectives & Sustainable applications of artificial intelligence in Electrical Engineering	18th August 2020	Francis Xavier Engineering College, Tirunelveli, Tamil Nadu
Recent Trends in Electric Vehicle	30th November 2020 – 04th December 2020	IFET College of Engineering, Tamilnadu
Novel Design & Control Strategies and Innovative Technical Practices in LV/HV Modern Switch Gear	03rd August 2020 to 08th August 2020	Saranathan College of Engineering, Tamilnadu

19. Membership of Learned Societies

Type of Membership	Organization	Membership No. with date
Senior Member	Institute of Electrical and Electronics Engineers	92996682
Life Member	Indian Society for Technical Education	132115 (Life Time Membership)
Associate Member	Institution of Engineers (India)	AM3001715 (Life Time Membership)

20. Academic Foreign Visits

Country	Duration of Visit	Programme
NIL		

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21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year
Suman M.	A Hybrid Unintentional Islanding Identification Methodology for IIDGs	IEEE Transactions on Industry Applications	Early Access		
T T Mahi, Suman M., Karthikeyan V, and Pragaspathy S.	The Capacity Estimation of Li-Ion Battery Using ML-Based Hybrid Model	Electrical Engineering, Springer	Early Access		
Suman M. and Venkatakirthiga M.,	Decentralised Unintentional Islanding Identification for Converter Interfaced Multiple DGs	IEEE Transactions on Industrial Informatics	17 (7)	4512 – 4520	2021
Suman M. and Venkatakirthiga M.,	Active Unintentional Islanding Detection Method for Multiple-PMSG-Based DGs	IEEE Transactions on Industry Applications	56(5)	4700-4708	2020
Suman M. and Venkatakirthiga M.,	Disturbance Injection Based Decentralized Identification of Accidental Islanding	IEEE Transactions on Industrial Electronics	67(5)	3767-3775	2020
Suman M. and Venkatakirthiga M.,	Hybrid Analyzing Technique Based Active Islanding Detection for Multiple DGs	IEEE Transactions on Industrial Informatics	15(3)	1311-1320	2019

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Suman M., Venkatakirthiga M., and S. A. Daniel	Hybrid Analyzing Technique for Active Islanding Detection Based on d-Axis Current Injection	IEEE Systems Journal	12(4)	3608-3617	2018
Suman M. and Venkatakirthiga M.,	Band pass filter and AFVmean-based unintentional islanding detection	IET Generation Transmission Distribution	13 (9)	1489-1498	2019
Suman M. and Venkatakirthiga M.	Q-axis Current Perturbation based Active Islanding Detection for Converter Interfaced Distributed Generators	Turkish Journal of Electrical Engineering & Computer Sciences	26 (5)	2633-2647	2018
Prasanajit K., Suman M., and M. V. Kirthiga	Estimation and Analysis of Harmonics and Power Factor Correction in A Modern Steel Manufacturing Facility	Journal of Institution of Engineers (India): Series B, Springer	100	425-434	2019

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Paper	Conference	Venue	Year
Suman M., and Senthil Kumar M.	An Islanding Identification Strategy based on Disturbance Injection and Wavelet Transform	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	NITK Surathkal	2024
Suman M.	A Novel Passive Islanding Detection Strategy for DC Microgrid	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	NITK Surathkal	2024

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Senthil Kumar M. and Suman M.	d-axis Disturbance Injection and Wavelet Transform based Islanding Detection	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	NITK Surathkal	2024
Janani T. and Suman M.	Utilization of Master and Smart Meter Readings for Pin Pointing Electricity Theft using Correlation Analysis	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	NITK Surathkal	2024
Ponraj P. and Suman M.	A Bi-level Decision Support System for Home Energy Management in Smart Homes	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	NITK Surathkal	2024
Mahi Teja T., Amalina D., Suman M., and Karthikeyan V.	Optimized Power Quality Using Integrated Current and Voltage PFC for Energy Storage Application	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	NITK Surathkal	2024
Suman M., Ponraj P., and Maria Jenisha. C. T. P.	In-direct Communication through Disturbance Injection based Islanding Detection Strategy	IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)	Gokaraju Rangaraju Institute of Engineering & Technology	2024
Suman M., Ponraj P., and Maria Jenisha. C. T. P.	Communication-less Hybrid Unintentional Islanding Detection Technique for IIDGs	IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)	Gokaraju Rangaraju Institute of Engineering & Technology	2024
Suman M.	A Hybrid Unintentional Islanding Identification Methodology for IIDGs	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	MNIT Jaipur	2022

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M. S. Babu, Suman M. and S. Sarangi	Fault Detection in LVDC Microgrids Using Local Measurements	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	MNIT Jaipur	2022
P. Rani, Shikhar, Suman M. and A. K. Singh	Modeling and Implementation of Grid Following and Grid Forming Inverters	IEEE 9th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON)	IIT Allahabad	2022
Suman M. and V. Murali	Band Pass Filter based Active Island Detection Technique for PMSG based WECS	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	IIT Madras	2018
S. S. Yadav, V. S. Chauhan, Suman M. and V. Murali	olar Powered Buck Boost Inverter Based Inverter Topologies for Domestic Applications	IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)	IIT Madras	2018
K. Kumar, S. Subramanian, Suman M. and V. Kirthiga,	Stability Constrained Optimal Allocation of DGs in Autonomous Micro-grids	4th IEEE India Council International Conference (INDICON)	IIT Roorkee	2017
M. S. Sivasankaran, S. Subramanian, Suman M. and V. Murali	Optimal Placement and Sizing of Distributed Generators to ensure Protection Coordination	4th IEEE India Council International Conference (INDICON)	IIT Roorkee	2017
Suman M. and Asheesh K Singh	2B converter based Power Sharing between Utility Grid and AC Microgrid	EEE International Conference on Green Computing, Communication and Electrical Engineering(ICGCCEE'14)	Dr. N.G.P. Institute of Technology, Coimbatore	2014

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(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number