

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

Curriculum Vitae



Brief Profile: Rakesh Kumar Panda

Rakesh Kumar Panda is a dedicated electrical engineer specializing in power systems. He earned his Ph.D. in Electrical Engineering from the Indian Institute of Technology Kanpur, Uttar Pradesh, India, in 2020. His doctoral research focused on power system stability and the integration of renewable energy sources, providing valuable insights for modern power system design. In recognition of his outstanding work, Rakesh received the POSOCO Power System Award for his Ph.D. thesis and the Outstanding Ph.D. Thesis Award at the 54th Convocation of IIT Kanpur in 2021.

Currently, Rakesh serves as an Assistant Professor at the National Institute of Technology (NIT) Tiruchirappalli, where he teaches undergraduate and graduate courses. He is also actively involved in mentoring students and conducting research that addresses critical challenges in the energy sector. His teaching emphasizes renewable energy technologies and sustainable power systems, equipping students with the knowledge needed for a rapidly evolving industry.

Before joining NIT Trichy, Rakesh worked as a Power System Engineer at Open Access Technology India Private Ltd (R&D). from June 2022 to May 2024. In this role, he focused on the design, control, and protection of power systems integrated with renewable energy sources, significantly contributing to the reliability and efficiency of power delivery systems.

Rakesh is an active member of the Institute of Electrical and Electronics Engineers (IEEE), engaging with a community committed to advancing technology and engineering practices. His involvement reflects his dedication to professional development and collaboration within the field.

His research interests include power system stability, renewable energy integration, and innovative control strategies. Rakesh advocates for the adoption of smart grids and energy storage solutions, believing they are essential for enhancing the stability and sustainability of energy systems. He envisions a future where resilient energy systems effectively respond to the evolving dynamics of energy generation and consumption.

1. Name:

RAKESH KUMAR PANDA

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2. Designation: Assistant Professor
3. Office Address: Room No.-F13, Department of EEE,
NIT Tiruchirappalli, TN-620015
4. Telephone (Direct) (Optional):
Telephone : Extn (Optional):
Mobile (Optional): +91-9198278168
5. Email (Primary): rakeshp@nitt.edu Email
(Secondary) : panda.rakesh1801@gmail.com
6. Field(s) of Specialization: Power system
7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Trichy	JUN 2024	Till date
Power System Engineer	OATI (R&D)	JUN 2022	MAY 2024
Research Associate I	IIT Kanpur	DEC 2021	MAY 2022
Senior Project Engineer	IIT Kanpur	AUG 2021	NOV 2021
Project Engineer	IIT Kanpur	JAN 2021	JUL 2021
Assistant Professor	KIIT University	JUN 2013	DEC 2014

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph. D.	IIT Kanpur	2020	First	Power Engineering
M. Tech	NIT Warangal	2013	First with Distinction	Power System Engineering
B. Tech	BPUT, Odisha	2010	First	Electrical Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/ Institution	From	To
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M. Tech 1 st Class committee chairman	EEE Department	Jun 2024	Till date
Electronics purchase co-ordinator	EEE Department	Jun 2024	Till date
BIS Co-ordinator	EEE Department	Jun 2024	Till date

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2024	Extreme Ownership Award 2024	Open Access Technical Int. (OATI) Annual Day, 2024
2021	Best outstanding PhD thesis award	IT Kanpur on 54th convocation, 2021
2021	POSO CO Power System Award	Power System Operation Cooperation Ltd. (POSO CO)
2019	Winner of Software edition of Smart India Hackathon (SIH)	Ministry of Education

12. Fellowships

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

13. Details of Academic Work

- (i) Curriculum Development : NA
- (ii) Courses taught at Postgraduate and Undergraduate levels
 - o **UG Level** – Power Generation System, Digital control system,
 - o **PG Level-** Power system computational lab
- (iii) Projects guided at Postgraduate level
 - o Supervising two M.Tech student
 - o Supervising one Ph. D. student
- (iv) Other contribution(s)
 - o Industrial talk organizer

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14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed

15. Number of PhDs guided

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

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
06-07 Feb 2020	2020 IEEE Texas Power and Energy Conference (TPEC)	International	Paper presenter	IEEE	College Station, TX, USA
19-23 March 2019	2019 IEEE PES GTD Grand International Conference and Exposition Asia (GTD Asia)	International	Paper presenter	IEEE	Bangkok, Thailand
05-10 August 2018	2018 IEEE & Power Energy Society	International	Paper presenter	IEEE	Portland, OR, USA

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	General Meeting (PESGM)				
14-16 Decem ber 2018	2018 20th National Power Systems Conference (NPSC)	National	Paper presenter	IEEE	Tiruchirappalli, India

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

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue

18. Invited Talks delivered

Topic	Date	Inviting Organization

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date

20. Academic Foreign Visits

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Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Atul Kumar Soni, Avinash Kumar, R. K. Panda, Abheejeet Mohapatra and S. N. Singh,	Adaptive Coordination of Relays in AC Microgrid Considering Operational and Topological Changes	IEEE Systems Journal	17	3071 - 3082	2023	4.4
Sunil Kumar Maurya, R. K. Panda Abheejeet Mohapatra and Ankush Sharma	ΔV - ΔI Plane-Based Line Faults Detection and Classification in DC Microgrid	IEEE Transactions on Power Delivery	38	1755 - 1767	2023	3.8
Avinash Kumar, Abheejeet Mohapatra, S. N. Singh and R. K. Panda	Space Vector Rotation-Based Controlled Decaying Current Injection for Islanding Detection of Inverter-Interfaced DG	IEEE Transactions on Smart Grid	13	4638 - 4650	2022	8.6
Avinash Kumar, R. K. Panda Abheejeet Mohapatra, S.N. Singh, S.C.	Mode of oscillation based islanding detection of inverter interfaced DG using ESPRIT	Electric Power Systems Research	200	107479	2021	3.3

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Srivastava						
R. K. Panda, Abheejeet Mohapatra, and S. C. Srivastava	Enhancing inertia of solar photovoltaic-based microgrid through notch filter-based PLL in SRF control	IET Generation, Transmission & Distribution	14	379 - 388	2020	
R. K. Panda, Abheejeet Mohapatra and S. C. Srivastava	Online Estimation of System Inertia in a Power Network Utilizing Synchrophasor Measurements	IEEE Transactions on Power Systems	35	3122 - 3132	2020	6.5

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Soni, Atul Kumar; Panda, Rakesh Kumar; Kumar, Avinash; Mohapatra, A; Singh, SN; Srivastava, SC;	Impact of Control Parameters on Short-Circuit Capacity of Inverter Based Sources	2022 IEEE IAS Global Conference on Emerging Technologies (GlobConET)	1113-1118	Connecting the Intelligent World through Africa	Arad, Romania	2022
Dewangan, Chaman Lal; Chakrabarti, S; Singh, SN; Panda, Rakesh Kumar;	An Improved Automatic Power Factor Controller in the RES-Integrated Distribution System	2021 International Conference on Control, Automation, Power and Signal Processing (CAPS)	1-6	Control, Automation, Power and Signal Processing	Jabalpur, India	2021
Panda, Rakesh Kumar; Patel, Viresh S; Mohapatra, Abheejeet; Mishra, Santanu	Propagation Delay Calculation in Power Hardware in Loop	2021 IEEE Transportation Electrification Conference (ITEC-India)	1-4	e-Mobility for AatmaNirbharBharat	New Delhi, India	2021

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K; Padhy, NP;	Simulation					
Panda, Rakesh Kumar; Mohapatra, Abheejeet; Srivastava, SC; Kezunovic, M;	Energy function based approach for online inertia estimation utilizing synchrophasors or measurements	2020 IEEE Texas Power and Energy Conference (TPEC)	1-6	Innovations in Power and Energy Systems	Texas, USA	2020
Nagam, Sai Sowmya; Panda, Rakesh Kumar; Mohapatra, Abheejeet; Anand, Sandeep;	Gaussian process regression based fault location in DC microgrid	2020 IEEE Texas Power and Energy Conference (TPEC)	1-6	Innovations in Power and Energy Systems	Texas, USA	2020
Garg, Garvis; Mohapatra, Abheejeet; Chakrabarti, Saikat; Kumar, Avinash; Panda, Rakesh Kumar;	Optimal Day-Ahead Load Scheduling for Voltage and Frequency Regulation in an Islanded Microgrid	2020 IEEE Power & Energy Society General Meeting (PESGM)	1-5	Empowering the Future of Energy	Montreal, QC, Canada	2020
Kumar, Avinash; Panda, Rakesh Kumar; Mohapatra, Abheejeet; Singh, SN;	Lissajous parameters based islanding detection of multiple DGs in microgrid	2020 IEEE Power & Energy Society General Meeting (PESGM)	1-5	Empowering the Future of Energy	Montreal, QC, Canada	2020
Panda, Rakesh Kumar; Mohapatra, Abheejeet; Srivastava, SC;	Application of indirect adaptive control philosophy for inertia estimation	2019 IEEE PES GTD Grand International Conference and Exposition Asia (GTD Asia)	478-483	Smart Power and Energy Systems for a Sustainable Future	Bangkok, Thailand	2019
Kumar, Avinash;	Phaselet approach for	2019 IEEE Power & Energy	1-5	Innovating the	Atlanta, GA,	2019

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Kumar, B Ravi; Panda, Rakesh Kumar; Mohapatra, Abheejeet; Singh, SN;	islanding detection in active distribution networks	Society General Meeting (PESGM)		Future of Power and Energy	USA	
Panda, Rakesh Kumar; Mohapatra, Abheejeet; Srivastava, SC;	An effective inertia control scheme for solar PV systems with conventional dq controller	2018 IEEE Power & Energy Society General Meeting (PESGM)	1-5	Transform ing the Future of Power	Portlan d, USA	2018
Panda, Rakesh Kumar; Mohapatra, Abheejeet; Srivastava, SC;	Impact of VSG Parameters on Transient Performance of Solar PV based System	2018 20th National Power Systems Conference (NPSC)	1-6	Power Systems: Challenge s and Innovatio ns.	Tiruchi rappalli , India	2018
Panda, Rakesh Kumar; Mohapatra, Abheejeet; Srivastava, Suresh Chandra;	A Lyapunov based controller for boost converter to integrate solar photovoltaic source	2016 IEEE Innovative Smart Grid Technologies- Asia (ISGT- Asia)	599-604	Smart Grids for Sustainabl e Energy Systems	Melbou rne, VIC, Austral ia	2016
Varaprasad, OVSR; Sarma, DVSS Siva; Panda, Rakesh Kumar;	Advanced windowed interpolated FFT algorithms for harmonic analysis of electrical power system	2014 Eighteenth National Power Systems Conference (NPSC)	1-6	Smart Grid and Renewabl e Energy	Bubane swar, India	2014
Varaprasad, OVSR; Panda, Rakesh Kumar; Sarma, DVSS Siva;	A novel synchronous sampling algorithm for power system	2013 Annual IEEE India Conference (INDICON)	1-5	Innovatio ns in Technolo gy for Sustainabl e	Mumba i, India	2013

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	harmonic analysis			Development.		
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(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
Avinash Kumar, Rakesh Kumar Panda, Kamakshi Swain, P Naga Yasasvi, and Abheejeet Mohapatra	Simulation Tools for Power Systems Applications	Electrical and Electronic Power Engineering, Elsevier,	2023	9780128232118