

Joel Jose

Ph. D.
Department of Electrical Engineering
IIT Bombay, Powai, Mumbai, India - 400076

📞 +91 (887) 903 9022
✉️ joeljose@iitb.ac.in
🌐 joel-jose.github.io

Education

- June 2020 **M. Tech. + Ph.D. (Dual Degree) in Electrical Engineering**
Indian Institute of Technology Bombay, Mumbai, India
CPI: 9.76/10.00
- April 2011 **B. Tech. in Electrical and Electronics Engineering**
National Institute of Technology Warangal, India
CPI: 9.50/10.00

Experience

Research

- 2015 - 2020 **Research Scholar** *Indian Institute of Technology Bombay, Mumbai, India*
Optimal Planning of Distribution Networks
Approaches leveraging graph theory and combinatorial optimization for efficient and reliable design and operation of distribution networks.
- 2014–2015 **Master's Research** *Indian Institute of Technology Bombay, Mumbai, India*
Reliability-oriented Distribution Feeder Reconfiguration
Path-based optimization formulation of distribution feeder reconfiguration for power loss minimization and reliability enhancement.
- May 2010 **Summer Research Fellow** *Indian Institute of Science, Bangalore, India*
Applications of Wavelet Transforms in Power Engineering
Studied the theory of wavelet transforms and their applications to fault-detection and power system relaying.

Teaching and Mentoring

- 2015–2016 **Mentor** *B. Tech. Project, IIT Bombay Mumbai, India*
Mentored an undergraduate student for the successful completion of his B. Tech Project under the guidance of Prof. Anupama Kowli on dynamic microgrids.
- 2014-2019 **Teaching Assistant**, IIT Bombay, Mumbai, India
EE 768: Power Distribution Systems
EE 655: Computer Aided Power System Analysis
EE 334: Power Systems
EE 234: Electrical Machines Laboratory
EE 101: Introduction to Electrical and Electronic Circuits

Professional Experience

- 2011-2013 **Engineering Officer** *Indian Oil Corporation Limited, Kozhikode Divisional Office, Kerala*
Designed new retail outlets, rolled out retail automation, drafted and executed annual maintenance contracts with various original equipment manufacturers.

Software Tools and Skills

Optimization	Gurobi, IBM CPLEX Optimization Studio, MATLAB's Optimization Toolbox
Graph theory	NetworkX graph algorithms package in Python
Power system	MATPOWER, PowerWorld Simulator, OpenDSS
Programming	MATLAB, Python, Julia, C/C++
Miscellaneous	L ^A T _E X, HTML, JavaScript

Awards and Recognition

TA	Received Best Teaching Assistant award from the Department of Electrical Engineering, Indian Institute of Technology Bombay for contributions in revamping the Electrical Machines Laboratory and modernizing the curriculum with new experiments.
TA	Received Excellence in Teaching Assistantship award from the Department of Electrical Engineering, Indian Institute of Technology Bombay for contributions to the course Power Systems.
Fellowship	Received Tata Consultancy Services (TCS) fellowship under their Research Scholar Program.
Travel Grant	Received Student Travel Grant for the Innovative Smart Grid Technologies Asia Conference (ISGT-Asia 2017).
Travel Grant	Received Student Travel Grant for the Innovative Smart Grid Technologies Asia Conference (ISGT-Asia 2016).

Publications

Journal	<i>Joel Jose and Anupama Kowli</i> , "Optimal Augmentation of Distribution Networks for Improved Reliability", IEEE Transactions on Power Systems. <i>[Under Review]</i> .
Journal	<i>Joel Jose and Anupama Kowli</i> , "Path-based Distribution Feeder Reconfiguration for Optimization of Losses and Reliability", IEEE Systems Journal, 2019. https://ieeexplore.ieee.org/document/8727910
Conference	<i>Joel Jose and Anupama Kowli</i> , "Network Expansion for Improved Reliability in Distribution Networks", 2018 IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC), Malaysia, 2018. https://ieeexplore.ieee.org/abstract/document/8566464
Conference	<i>Anupama Kowli, Joel Jose, V. S. Borkar, and T. P. Imthias Ahamed</i> , "A Dynamic Programming Framework for Optimal Home Scheduling", IEEE PES Innovative Smart Grid Technologies Asia Conference (ISGT Asia 2017), Auckland, 2017. https://ieeexplore.ieee.org/abstract/document/8378433
Conference	<i>Joel Jose, Anupama Kowli, Vaibhav Bhalekar, Krishna V. Prasad and Narayanan Rajagopal</i> , "Dynamic Microgrid-based Operations: A New Operational Paradigm for Distribution Networks", IEEE PES Innovative Smart Grid Technologies Asia Conference (ISGT Asia 2016), Melbourne, 2016. https://ieeexplore.ieee.org/abstract/document/7796446
Conference	<i>Joel Jose and Anupama Kowli</i> , "Reliability Constrained Distribution Feeder Reconfiguration for Power Loss Minimization", National Power System Conference (NPSC 2016), Bhubaneswar, 2016. https://ieeexplore.ieee.org/abstract/document/7858938