Curriculum Vitae

Dr. Vivek Mohan completed his Doctor of Engineering degree in Energy with specialization in Electric Power System Management from Asian Institute of Technology, Thailand. He was a post-doctoral fellow at The Hong Kong Polytechnic University during 2017-18. He completed his B.Tech in Electrical & Electronics Engineering from Amrita University, Amritapuri, Kerala and M. Tech in Power Systems from Government Engineering College Thrissur under Calicut university, Kerala. He works in power system optimization, power system economics, power system risk analysis, and power system stability. He has 7 years of teaching experience.

1. Name: Vivek Mohan
2. Designation: Assistant Professor
3. Office Address: Department of Electrical Engineering, National Institute of Technology Tiruchirappalli, Tamil Nadu, India. Pin: 620015
4. Telephone (Direct) (Optional): 04312504080
5. Email (Primary): vivekmohan@nitt.edu Email (Secondary) : vivekmohangokulam@gmail.com
6. Field(s) of Specialization: Power System Analysis, Risk and Uncertainty Management, Power Markets, Microgrid Energy Management, Renewable Energy and Optimization, Power System Stability, Distribution System Economics
7. Employment Profile:

Job Title	Employer	From	To
Assistant Professor at the Department of Electrical and Electronics Engineering	National Institute of Technology Tiruchirappalli	March 2018	Present
Post-Doctoral fellow at the Department of Electrical Engineering	The Hongkong polytechnic University, Hong Kong	Aug 2017	Jan 2018

Assistant Professor (Selection Grade) at the Department of Electrical and Electronics Engineering	Amrita University, Coimbatore, India	Aug 2016	June 2017
Assistant Professor, Department of Electrical and Electronics Engineering	Vidya Academy of Science and Technology, Kerala, India	Nov 2011	July 2013
Assistant Professor, Department of Electrical and Electronics Engineering	Amrita School of Engineering, Amritapuri, Kerala, India	July 2011	Nov 2011

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

Examination	Board / University	Year	Division/ Grade	Subjects
D.Eng (Doctor of Engineering)	Asian Institute of Technology, Thailand	2016	Distinction for Course Work	Energy – Electric Power System Management
M.Tech	Government Engineering College Thrissur, Calicut University, Kerala, India.	2011	First class	Power systems
B.Tech	Amrita Vishwa Vidyapeetham, Amritapuri	2009	First class	Electrical and Electronics Engineering
12th Standard	Vyasa Vidya Peethom Senior Secondary School, Kallekad, Palakkad, Kerala	2004	First class	Science-Maths
10th Standard	Vyasa Vidya Peethom Senior Secondary School, Kallekad, Palakkad, Kerala	2002	First class	-

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Class Committee Chairperson	Department of EEE - NIT Trichy	2018	2022
Dept. coordinator for Work-load and Timetable	Department of EEE - NIT Trichy	2019	2020

Dept. Board of Studies coordinator	Department of EEE - NIT Trichy	2019	2022
Institute Library Advisory Committee	Department of EEE - NIT Trichy	2019	2021
Committee Member for Institute PMRF committee	Department of EEE - NIT Trichy	2020	2022

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Doctoral Committee member	Government Engineering College Thrissur, Kerala, India	2019	2022
Doctoral Committee member	School of Electrical Engineering, Vellore Institute of Technology, Vellore, TN, India.	2020	2022
Doctoral Committee member	Amal Jyothi College of Engineering, Kanjirappalli, Kerala, India	2019	2022

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization

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

a. Developed elective course on ‘Optimization in Power Systems’ for M.Tech-Renewable Energy Technology at Amrita University, Coimbatore, Tamilnadu, India.

(ii) Courses taught at Postgraduate and Undergraduate levels

a. Power System Economics

b. Power System Stability
c. Power System Protection
d. Power System Restructuring
e. Control Systems
f. Power Generation Systems
g. Power System Dynamics

(iii)Projects guided at Postgraduate level

a. Real Time Energy Management and Bus Voltage Droop Control in Solar Powered Stand-Alone DC Microgrid
b. Optimal Energy Planning of a Rural Community in Jharghand
c. Reliability Assessment of PV-Wind Hybrid Energy system
d. Energy Portfolio Management and Optimization
e. Optimal Generation Mix for P2P Transactive Energy Markets
f. CVaR Based Renewable-Conventional Generation Mix
g. Optimal Solar PV Policy for Residential Consumers in India
h. Risk-Return Characteristics of Residential Solar Roof-Top PV Panels
i. Power System Reliability

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Potential Peer to Peer Transactive Energy Markets in Indian Power Distribution Systems	Ministry of Human Resource Development	April 2019	August 2022	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
2–4 April	2022 The 4th	International	Paper	CEES	Tokyo, Japan

2022	International Conference on Clean Energy and Electrical Systems		presenter		
17-20 October 2019	TENCON 2019 - 2019 IEEE Region 10 Conference (TENCON)	International	Paper presenter	IEEE	Cochin, Kerala
18th Sept 2019	One-day outbound workshop on "Supporting Student Learning & Well-Being – Crafting the New Millennial	National	Participant	NIT Trichy	Ideal River View Resort, Tanjore
21st to 23rd June 2018	Three days Faculty Development Program conducted by Teaching Learning Centre of IIT Madras	National	Participant	National Institute of Technology Tiruchirappalli, Tamilnadu, India	National Institute of Technology Tiruchirappalli, Tamilnadu, India
18-11-2016 to 20-11-2016	Short Term Training on PIC micro controllers	Local	Participant	Amrita School of Engineering	Kollam, Kerala, india
04-03-2010 to 06-03-2010	National Conference on Power, Instrumentation, Control and Computing	National	Student Organizer	Government Engineering College	Thrissur, Kerala, india
21-11-2009 to 22-11-2009	Energy Auditing for Young Engineers - 2009	National	Participant	Energy Conservation Society	Kerala, India
26-11-2012 to 30-11-2012	Recent advancements in Power Electronics	Local	Participant	Vidya Academy of Science and Technology	Thrissur, Kerala, India
02-01-	Numerical and	Local	Participant	ISTE	Thrissur,

2013 to 04-01-2013	Scientific Computation for Engineers				Kerala, India
02-01-2012 to 06-01-2012	International Conference on Power, Signals, Control and Computation - 2012	International	Participant and Organizer	Vidya Academy of Science and Technology	Thrissur, Kerala, India
02-07-2012 to 07-07-2012	Teaching Excellence and Methodologies	National	Participant	Indian Society for Technical Education	Kerala, India
24th to 25th June 2015	Tap Energy 2015	International	Paper presenter	Amrita School of Engineering	Kerala, India
6th to 8th August 2015	Smart Grid Technologies, ICSGT 2015	International	Paper presenter	Amrita School of Engineering	Coimbatore, Tamilnadu, India
19th to 21st March 2014	ICUE 2014	International	Paper Presenter	Asian Institute of Technology	Thailand
3rd to 6th November 2016	ISGT Asia 2015	International	Paper Presenter	IEEE Power and Energy Society	Bangkok, Thailand

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
5 days online workshop on "Integration of Renewable Energy & EV to Microgrid: Prospects and Challenges" under the aegis of SPARC	International	21st -25th Feb 2022	Organizer	Online
5 days online short-term course on "Sustainable Power Systems" under the aegis of SPARC	International	7th to 11th June 2021	Organizer	Online
Webinar on "Gandhian	National	11th Nov	Organizer	Online

Thoughts on Sustainability"		2020		
5 days Workshop on "Recent Trends in Operation & Planning of Distribution System and Microgrids" under the aegis of SPARC	International	4th – 8th Jan 2021	Organizer	Online
International Conference on Power, Signals, Control and Computation - 2012	International	02-01-2012 to 06-01-2012	Organizer	Thrissur, Kerala
2014 International Conference and Utility Exhibition on Green Energy for Sustainable Development	International	19-03-2014 to 21-03-2014	Student Co convener	Thailand
IEEE ISGT ASIA 2015	International	03-11-2015 to 06-11-2015	Student convener	Bangkok, Thailand

18. Invited Talks delivered

Topic	Date	Inviting Organization
Online keynote address on 'Electricity Markets' in Internation Conference on Circuits, Control & Energy 2021	14th July 2021	Dept. of Electrical & Electronics Engineering under the aegis of Christ Engineering Congress 2021 held at Christ College of Engineering, Irinjalakuda, Kerala
Online session on 'Microgrid Prosumer Consortium: Energy & Economics' in FDP	14-07-2021	MES college of engineering, Kuttippuram. Kerala
Online session on 'Power System Deregulation: Bidding, Settlements and Derivatives' delivered in FDP on 'Actuarial Science Applications' under ATAL scheme	17-06-2021	Amal Jyothi College of Engineering
Online session on 'Business Models and Commercial Aspects of	28-05-2021	Dept. of EEE, NIT Tiruchirappalli

Microgrids and VPP' delivered in National level 5-days FDP on 'Technologies for Smart Electrical Power Grid' under AICTE Margdarshan Scheme		
Online session on 'Feeder Protection and Relay Co-ordination' delivered in 5-Days FDP on 'Perspectives of Teaching Power Systems' under AICTE Margdarshan Scheme	20-05-2021	Dept. of EEE, NIT Tiruchirappalli
Online session on 'Microgrid Economics and Local Energy Markets' delivered in 5-Day Workshop on 'Recent Trends in Operation and Planning of Distribution System and Microgrids' under SPARC	05-01-2021	Dept. of EEE, NIT Tiruchirappalli
Online session on 'Smart, Optimal and Risk-Adjusted EV Scheduling in Microgrid' delivered in FDP on 'Research Opportunities, Challenges in Power Electronics for EV and its Impact on Smart Grid'	16-12-2020	Dept. of EEE, NIT Tiruchirappalli
Online session on 'Power System Restructuring & Deregulation'	6th Oct 2020	West Yangon Technological University, Myanmar
Online session on 'Modern Trends in Risk and Reliability Assessment of Power Systems' in online short-term training programme on 'Emerging Trends in Power Systems'	17th Sept 2020	CUSAT and THDC Institute of Hydropower Engineering and Technology, Uttarakhand
Session on 'Economic Dispatch and Unit Commitment' in faculty development programme on 'Advancements in	17th October 2019	Government Engineering College Kannur, Kerala

Power Systems and Power Electronics'		
Keynote address on 'Risk and Reliability Management in Power Systems with Renewable Energy' in Annual International Conference on Emerging Research Areas (AICERA 2019)	18th July 2019	Amal Jyothi College of Engineering, Kanjirappalli, Kerala
Session on 'Risk, Reliability and Commercial Aspects of Microgrids' in faculty development programme on 'Recent Trends in Renewable and Sustainable Energy Conversion systems' sponsored by APJ Abdul Kalam Technological University, Kerala	28th June 2019	Vidya Academy of Science and Technology, Thrissur, Kerala
Keynote address on 'P2P Transactive Energy Markets' in National Conference on 'Recent Advancements in Power Electronics and Power Systems'	May 2019	Federal Institute of Science and Technology, Kerala
'Microgrids, VPPs, P2P Transactive Energy Markets & Blockchain'	March 2019	College of Engineering Aranmula, Kerala
Derivatives in Power Markets' in one-day workshop on 'Recent Trends in Power Distribution System Analysis'	February 2017	Amrita University, Coimbatore
"Design of strategic information in the deregulated Indian power market: An agent-based approach" at All India Seminar on "Open Access and Market Development of Power in India"	2011	The Institution of Engineers (India) at Thrissur, Kerala
'Power System Analysis	October 2011	Amrita University, Coimbatore

Toolbox (PSAT)' for Post graduate diploma students in wind power development		
'Smart Grids and Microgrids'	May 2013	Amrita Centre for Wireless Networks and Applications, Amritapuri
'Efficient Energy Management Approaches in Microgrids'	March 2016	Department of Electrical and Electronics Engineering, Manipal University

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Member	IEEE and IEEE PES	2016-2022

20. Academic Foreign Visits

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)
Vivek Mohan, Jai Govind Singh, Weerakorn Ongsakul	Sortino Ratio Based Portfolio Optimization Considering EVs and Renewable	IEEE transactions on Sustainable energy	8	219-229	2017	8.31

	Energy in Microgrid Power Market					
Vivek Mohan, Jai Govind Singh, Weerakorn Ongsakul	An efficient two stage stochastic optimal energy and reserve management in a microgrid	Applied Energy-Elsevier	160	28-38	2015	11.446
Vivek Mohan, R. Suresh, J. G. Singh, W. Ongsakul and N. Madhu	Microgrid Energy Management Combining Sensitivities, Interval and Probabilistic Uncertainties of Renewable Generation and Loads	IEEE Journal on Emerging and Selected Topics in Circuits and Systems	7	262-270	2017	5.877
Vivek Mohan, Jai Govind Singh, Weerakorn Ongsakul & Reshma Suresh M.P	Performance enhancement of online energy scheduling in a radial utility distribution microgrid	International Journal of Electrical Power and Energy Systems-Elsevier	79	98-107	2016	5.659
Sachin M K, Nimal Madhu, **Vivek Mohan**, Reshma Suresh and Jai Govind Singh	A Generalized Approach for Enhanced Solar Energy Harvesting Using Stochastic Estimation of Optimum Tilt Angles: A Case Study of Bangkok City	DeGruyter Green	5	95-107	2015	
Vivek Mohan, Jai Govind Singh, Weerakorn Ongsakul, Reshma Suresh M P	Economic and network feasible online power management for renewable energy integrated smart	Sustainable Energy Grids and Networks-Elsevier	7	13-24	2016	5.405

	microgrid					
Vivek Mohan, Siqi Bu, Jisma M, Rijinlal V C, Karthik Thirumala, Mini Shaji Thomas, Zhao Xu	Realistic Energy Commitments in Peer-to-Peer Transactive Market with Risk Adjusted Prosumer Welfare Maximization	International Journal of Electrical Power and Energy Systems-Elsevier	124		2021	5.659
B. B. Nair, D. S. H. Ram, M. K. Panda, A. J. Balaji, T. G. Kumar, and **Vivek Mohan**	Future Engineering Curricula: Balancing Domain Competence with CPS Readiness	IEEE Design & Test	37	16-23	2020	2.223
M R Balwani, Karthik Thirumala, **Vivek Mohan**, Siqi Bu, Mini Shaji Thomas	Development of Smart Meter for Power Quality-based Tariff Implementation in Smart Grid	Energies, MDPI	14		2021	3.252
Jisma M, **Vivek Mohan**, Mini Shaji Thomas, Nimal Madhu M	Risk-Calibrated conventional-renewable generation mix using master-slave portfolio approach guided by flexible investor preferencing	Energy-Elsevier	245		2022	8.857
Jayaprakash B, Mayurkumar Rajkumar Balwani, Karthik Thirumala,	Tariff Rationalization for Reactive Power and Harmonics Regulation in Low Voltage	Electrical Engineering, Springer			2022	1.836

Vivek Mohan, Siqi Bu, Manoranjan Sahoo	Distribution Networks					
Vivek Mohan, Harish Ram, Ganesh Patil, Jisma M, Rohith C Unni, Nandakumar K, Karthik Thirumala, Siqi Bu	Policy assistance for adoption of residential solar PV in India: A stakeholder-centric approach for welfare optimization	Energy Reports, Elsevier	8	197-206	2022	4.937
Vivek Mohan, Anjula Antonis, Jisma M, Nila Krishnakumar, Siqi Bu	Energy-Risk Guided Tuning of Renewable Bids: Enhanced Pareto-Optimal Profits for the Utility and Prosumer in Microgrid	Energy Conversion and Economics, IET	3	156-169	2022	

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Vivek Mohan, Jai Govind Singh, Weerakorn Ongsakul	Sortino Ratio Based Portfolio Optimization Considering EVs and Renewable Energy in Microgrid Power Market	2017 IEEE Power & Energy Society General Meeting		IEEE PES General Meeting,	Chicago, IL, USA	2017
Manoj P, Malini Frey, Renjith	Raising Educational Level of Rural	2017 IEEE Global Humanitarian		2017 IEEE Global Humanitarian	San Jose CA, USA	2017

Mohan, **Vivek Mohan**, Vidal Conejo	Village Children Through Distance Learning Technology Secondary to Implementation of Reliable Sustainable Electrification System	Technology Conference		Technology Conference		
Vivek Mohan, Vidal Conejo-García, Malini Frey, Renjith Mohan, Manoj Pokkiyarath, Sai Shibu, Maneesha V Ramesh and Aryadevi	Assessing Village Power Grid Problems for Development of Quality and Stable Supplemental Sustainable Energy	2017 IEEE Global Humanitarian Technology Conference		2017 IEEE Global Humanitarian Technology Conference	San Jose CA, USA	2017
Vivek Mohan; Madhu, N; Ongsakul, W; Singh, J.G.; Reshma Suresh, M.P	Design of strategic information in the deregulated Indian power market: An agent-based approach	2014 International Conference and Utility Exhibition on Green Energy for Sustainable Development		2014 International Conference and Utility Exhibition on Green Energy for Sustainable Development	Pattaya, Thailand	2014
Vivek Mohan; Singh, J.G.; Ongsakul, W.; Nair, S.G.	Online benefit optimization in a liberalized/free microgrid market model	Technological Advancements in Power and Energy (TAP Energy), 2015 International Conference		Technological Advancements in Power and Energy (TAP Energy), 2015 International Conference	Amrita University, Coimbatore, Tamil Nadu	2015
Vivek Mohan, Reshma Suresh M P, Jai Govind	Online Optimal Power Management Considering Electric	2015 IEEE ISGT ASIA		2015 IEEE ISGT ASIA	Bangkok, Thailand	2015

Singh, Weerakorn Ongsakul, B Kalyankumar	Vehicles, Load Curtailment and Grid Trade in a Microgrid Energy Market					
Anand M.P, **Vivek Mohan**, Weerakorn Ongsakul, Reshma Suresh M P	Optimal Day Ahead scheduling of distributed EVs in a Smart Distribution Network	2015 IEEE ISGT ASIA		2015 IEEE ISGT ASIA	Bangkok, Thailand	2015
Vivek Mohan, Jai Govind Singh, Weerakorn Ongsakul, Arjun C Unni, Nikhil Sasidharan	Stochastic Effects of Renewable Energy and Loads on Optimizing Microgrid Market Benefits	Elsevier Procedia Technology		ICSGT 2015	Amrita University, Coimbatore	2015
A. C. Unni, A. S. Junghare, **Vivek Mohan** and W. Ongsakul	PID, fuzzy and LQR controllers for magnetic levitation system	2016 International Conference on Cogeneration, Small Power Plants and District Energy	1-5	2016 International Conference on Cogeneration, Small Power Plants and District Energy	Bangkok, Thailand	2016
Akhiya Sanal, **Vivek Mohan**, M.R. Sindhu	Real Time Energy Management and Bus Voltage Droop Control in Solar Powered Standalone DC Microgrid	IEEE TENSYMP		IEEE TENSYMP	Cochin, Kerala	2017
Nimal Madhu, **Vivek Mohan**, Jai Govind Singh and Reshma Suresh	Risk Adjusted Co-optimization of ATC in Transmission-Distribution System with Renewables	PEDES 2018		PEDES 2018	IIT Madras	2018
Venkata Sai	Probabilistic	TENCON		TENCON	Cochin,	2019

Aditya Gedda, **Vivek Mohan**, Jisma M	Evaluation of System Adequacy with Variations in Load Demand, Renewable Energy and Generator Topology	2019		2019	Kerala	
Sindhu M R, Jisma M, Maya P K, Krishnapriya and **Vivek Mohan**	Optimal Placement and Sizing of Harmonic and Reactive Compensators in Interconnected Systems	2018 15th IEEE India Council International Conference	1-6	2018 15th IEEE India Council International Conference	Coimbatore, India	2018

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
Nimal Madhu, Jai Govind Singh, **Vivek Mohan**, Weerakorn Ongsakul	Transmission Risk Optimization in Interconnected Systems: Risk-Adjusted Available Transfer Capability	Research Advancements in Smart Technology, Optimization, and Renewable Energy. City: IGI Global	2020	9781799839705