

CV Outlines:

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Profile summary of Dr. Jai Govind Singh

Employment background:

July 2016 – present: Associate Professor, AIT

Dec 2009 – June 2016: Assistant Professor, AIT

July 2009 – Oct 2009: Postdoctoral Research Fellow, University of Queensland, Brisbane

April 2008 – June 2009: Postdoctoral Research Associate, KTH Stockholm

Aug 2003 – Feb 2008: Doctoral Research Scholar, IIT Kanpur, India

Jun 2003 – July 2003: Research Fellow in ARRPEEC-III, SERD, AIT, Thailand.

March 2003 – July 2003: Sr. Project Associate in (ARRPEEC-III),” EED, IIT Kanpur, India

Teaching and Research focuses:

1. Smart Grid and Variable Renewable Energy Integration
2. Microgrid Design, Control and Applications
3. Power System Restructuring and Economics
4. Design and Operations of Transmission and Distribution Systems
5. Electric and Hybrid Electric Vehicles
6. Energy Systems, Economics and Policy
7. Energy Storage and Performance Assessments

Academic degrees:

1. Ph.D.: IIT Kanpur, India
2. M. Tech.: IIT Roorkee, India
3. B.E.: MNNIT Allahabad, India

Total research projects: 22

Major sponsors are ERASMUS+, USAID, DST India, Bangchak Petroleum Thailand, IRENA, ADB, EBARA Japan, NSTDA, IEEE PES, ADEME, PEA, etc.

Master and Doctoral research supervisions: 66

1. Master: **57** in AIT and **3** in KTH Stockholm
2. Doctoral: **6** in AIT Thailand

No. of development projects:

1. Pump storage Micro-hydro system
2. 3 kW solar PV testing
3. Online electricity monitoring

Member of research supervisions committee: 156

1. Master: **150**
2. Doctoral: **6**

Training programs organized: 3

1. MP Power Distribution utility
2. Assam Power Distribution utility
3. Assam Generation and Transmission utilities

Published Articles: 96

1. Peer Reviewed International Journal: **28**
2. Peer Reviewed International Conferences: **58**
3. Book chapter: **4**
4. Monographs, reports, policy briefs: **5**
5. Workshop: **1**

Int. conferences organized:

1. Conference director: **1**
2. General Co-chair: **1**
3. Member of the technical organizing committee: **8**
4. Advisory board: **8+**

Research impacts:

1. **SCOPUS**: Total citations=602, h-index=12, i10-index=17
2. **Google Scholar**: Total citations=963, h-index=16, i10-index=24
3. **Researchgate**: Total citations=747, h-index=14, RG Score=22.39

Invited as keynote/expert/examiners:

1. Keynote speeches: **11**
2. Expert/Talks: **20**
3. Lectures in training programs for utilities: **30+**
4. External examiner of Doctoral Thesis: **15**

I. Biographical Data

A. **Name of candidate: Jai Govind Singh**

B. **Education**

Ph.D. (2008), Power and Control, EED, Indian Institute of Technology, Kanpur, India

M.Tech. (2003), Power System, EED, Indian Institute of Technology, Roorkee, India

B.E. (2001), Electrical Engineering, Motilal Nehru National Institute of Technology, Allahabad, India

C. **Positions held**

Duration	Position	Affiliation
January, 2020 – December 2022	Head of EECC Department	Department of Energy, Environment and Climate Change, SERD, AIT, Thailand.
January, 2019 – December 2020	Chair of ‘Sustainable Energy Transition’ Academic Program	Department of Energy, Environment and Climate Change (EECC), SERD, AIT, Thailand.
January, 2019 – December 2020	Director of RERIC	International Energy Journal, EECC Department
June 2017 – December 2018	Director of RERIC	International Conference on Green Energy for Sustainable Development, 24-26 October, Phuket, Thailand
July, 2016 – present	Associate Professor	Department of Energy, Environment and Climate Change, SERD, AIT, Thailand.
December, 2009 – June 2016	Assistant Professor	Department of Energy, Environment and Climate Change, SERD, AIT, Thailand.
November, 2013 – December 2015	Coordinator of ‘Energy’ Academic Program	Department of Energy, Environment and Climate Change, SERD, AIT, Thailand.
November, 2013 – December 2015	Coordinator of ‘Energy Business Management’ Academic Program	MBA in Energy Business, SERD/SOM, AIT, Thailand.
November, 2013 – December 2015	Director of RERIC	Regional Energy Resources Information Centre (RERIC), AIT
July, 2009 – October, 2009	Postdoctoral Research Fellow	University of Queensland, Brisbane, Australia.
April, 2008 – June, 2009	Postdoctoral Research Associate	Electric Power System Division, Royal Institute of Technology-KTH, Sweden.

Jun, 2003 – July, 2003	Research Fellow	Asian Regional Research Program in Energy, Environment and Climate-III (ARRPEEC-III), Energy FoS, SERD, AIT, Thailand.
March, 2003 – July, 2003	Sr. Project Associate	ARRPEEC-III,” Department of electrical engineering, IIT Kanpur, India

D. Special honors and awards

- i) Recipient of MHRD (Ministry of Human Resource Department, India) Fellowship for Doctoral study at IIT Kanpur, India.
- ii) Recipient of MHRD (Ministry of Human Resource Department, India) Fellowship for Master study at IIT Roorkee, India.
- iii) Recipient of Young Scientist Travel Financial Assistantship award from Department of Science and Technology (DST), India.
- iv) Recipient of International Travel Support award to attend a conference from Dean of Resources and Alumni Office, Indian Institute of Technology, Kanpur, India.
- v) Recipient of awards in terms of free accommodation by *IEEE PES Student Support Committee* to attend IEEE conference in Florida, USA, 2007, during my Doctoral study.
- vi) Three times recipients of cash award by IIT Kanpur on research articles published in international journals.
- vii) Recipient of class merit-cum-means scholarship in Under Graduate Study.

II. Pedagogy

A. Experience as a teacher (all are Post Graduate courses unless mentioned)

Year	Semester	Courses	Course category	Remarks
2021 (8.5 Credits)	January	ED86.07: Microgrid Design, Control and Applications 3(2-3)	Elective	New and 50% co-teaching
		ED86.11: Smart Grid and Variable Renewable Energy Integration 3(3-0)	Elective	Revised
		ED86.09: Energy Systems, Economics and Policy 3(3-0)	Required	New and 33% co-teaching
	Inter-sem	ED86.19: Electric and Hybrid Electric Vehicles 3(3-0)	Elective	
2020 (12 Credits)	January	ED72.22: Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
		ED72.47: Smart Grid and Electrical Energy Management Systems 2(2,0)	Elective	
		ED72.9028: Renewable Energy Integration and DC Microgrid 1(1-0)	Elective	
	Inter-sem	ED72.9030: Electric and Hybrid Electric Vehicles 3(3,0)	Elective	
	August	ED86.08: Design and Operation of Transmission and Distribution systems 3(2-3)	Elective	Revised
		ED86.13: Power System Restructuring and Economics 3(3-0)	Elective	Revised and 50% co-teaching

2019 (12 credits)	January	ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
		ED72.47:Smart Grid and Electrical Energy Management Systems 2(2,0)	Elective	
		ED72.9028: Renewable Energy Integration and DC Microgrid 1(1-0)	Elective	
	Inter-sem	ED72.9030: Electric and Hybrid Electric Vehicles	Elective	New
	August	ED72.08:Power Distribution Systems 3(3,0)	Elective	
		ED72.07:Power System Design and Operations 3(2,3)	Elective	50% co-teaching
2018 (13 Credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
		ED72.20: Workshop on Energy Issues and Communication 1(0,2)	Required	
	Inter-sem	ED72.47:Smart Grid and Electrical Energy Management Systems 2(2,0)	Elective	
		ED72.9028: Renewable Energy Integration and DC Microgrid 1(1-0)	Elective	
	August	ED72.08:Power Distribution Systems 3(3,0)	Elective	
ED72.07:Power System Design and Operations 3(2,3)		Elective	50% co-teaching	
2017 (13 Credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
		ED72.20: Workshop on Energy Issues and Communication 1(0,2)	Required	
	Inter-sem	ED72.47:Smart Grid and Electrical Energy Management Systems 2(2,0)	Elective	
		ED72.9028: Renewable Energy Integration and DC Microgrid 1(1-0)	Elective	
	August	ED72.08:Power Distribution Systems 3(3,0)	Elective	
ED72.07:Power System Design and Operations 3(2,3)		Elective	50% co-teaching	
2016 (13+4 [†] credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
		ED72.20: Workshop on Energy Issues and Communication 1(0,2)	Required	
	Inter-sem	ED72.47:Smart Grid and Electrical Energy Management Systems 2(2,0)	Elective	
		ED72.9028: Renewable Energy Integration and DC Microgrid 1(1-0)	Elective	
	August	ED72.08:Power Distribution Systems 3(3,0)	Elective	

		ED72.07:Power System Design and Operations 3(2,3)	Elective	50% co-teaching
		BS208:Electrical Engineering and Electronics for Bio-Engineers 4 (3-1)	Elective	UG
2015 (12+4 [†] credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
		ED72.20: Workshop on Energy Issues and Communication 1(0,2)	Required	
	Inter-sem	ED72.9022:Smart Grid for Sustainable Development 2(2,0)	Elective	
	August	ED72.07:Power System Design and Operations 3(2,3)	Elective	50% co-teaching
		ED72.08:Power Distribution Systems 3(3,0)	Elective	
BS208:Electrical Engineering and Electronics for Bio-Engineers 4 (3-1)		Elective	UG	
2014 (11+4 [†] credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
	Inter-sem	ED72.9022:Smart Grid for Sustainable Development 2(2,0)	Elective	
	August	ED72.07:Power System Design and Operations 3(2,3)	Elective	50% co-teaching
		ED72.08:Power Distribution Systems 3(3,0)	Elective	
		BS208:Electrical Engineering and Electronics for Bio-Engineers 4 (3-1)	Elective	UG
2013 (14.5+3* credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
		ED72.22:Power Sector Management under Deregulation 3(3,0) (PMEBM)*	Elective	50% co-teaching
	Inter-sem	ED72.9022:Smart Grid for Sustainable Development 2(2,0)	Elective	
	August	ED72.07:Power System Design and Operations 3(2,3)	Elective	
		ED72.08:Power Distribution Systems 3(3,0)	Elective	
		ED72.9026:Integration of Renewable Sources in Power Systems 2(2,0)	Elective	New course
2012 (12.5+3* credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching

	Inter-sem	ED72.9022:Smart Grid for Sustainable Development 2(2,0)	Elective	
	August	ED72.07:Power System Design and Operations 3(2,3)	Elective	
		ED72.08:Power Distribution Systems 3(3,0)	Elective	
		ED72.08:Power Distribution Systems 3(3,0) (PMEBM)*	Elective	
2011 (12.5 credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
		ED72.22:Power Sector Management under Deregulation 3(3,0)	Elective	50% co-teaching
	Inter-sem	ED72.9022:Smart Grid for Sustainable Development 2(2,0)	Elective	New course
	August	ED72.07:Power System Design and Operations 3(2,3)	Elective	
		ED72.08:Power Distribution Systems 3(3,0)	Elective	
2010 (10 credits)	January	ED72.21:Power System Dynamics and Stability 3(2,3)	Elective	
	August	ED72.07:Power System Design and Operations 3(2,3)	Elective	
		ED72.08:Power Distribution Systems 3(3,0)	Elective	
		ED72.9019:Integration of renewable energy resources in power system 1(1,0)	Elective	New course

*PMEBM: Professional Master in Energy Business Management

†Under Graduate (UG) Course

Post Graduate Taught Courses/Tutorials at other Institutions:

- Power system advanced course: (KTH, Stockholm, Sweden, as a teaching assistant)
- Power System Simulations Lab Development: 1st year postgraduate Lab (EED, IIT Kanpur, as tutor)
- Power system economics operation and control: 1st year postgraduate course (EED, IIT Kanpur, as a tutor)
- Economic operation and control of power systems: Sequential M. Tech. Program of Uttar Pradesh Technical University, Lucknow (Invited Course Lectures)

Under Graduate Taught Courses/Tutorials at other Institutions:

- Engineering Science: 1st year undergraduate course (IIT Roorkee, as a tutor)
- Engineering Science Optional: 2nd year undergraduate course (IIT Roorkee, as a tutor)
- Engineering Science: 1st year undergraduate course (IIT Kanpur, as a tutor)
- Engineering Science Optional: 2nd year undergraduate lab (IIT Kanpur, as a tutor)
- Basic Power Electronics: 2nd year undergraduate course (IIT Kanpur, as a tutor)

B. Pedagogical Development

1. Grants related to pedagogy and curriculum development.

- i) Developing curricula for master's degree Program under the project 'Mastering in Energy Supply for Isolated Areas (MESfIA)' sponsored by ERASMUS+, 2019-2021.
- ii) I was involved in developing two Master Courses for National University of Laos (NUOL) in a project of curriculum development and sponsored by SIDA, 2011-2012.

2. Initiation of new courses, degree programs, curricula (indicate the period delivered)
 - i) As a Chair of Energy Academic Program, led the team to develop a brand-new Postgraduate Program called as ‘Sustainable Energy Transition’ for Master and PhD degree students, which is approved from Academic Senate and implemented from August 2020. This new program reflects all new developments in technological advancement for sustainable energy as well as catering the emerging challenges in society and environment. Therefore, all the courses are being upgraded to cater the above things.
 - ii) Offered a 3 credit new course on *Electric and Hybrid Electric Vehicles* 3(3,0) in Inter-sem 2019.
 - iii) A one credit new course titled “*ED72.9028: Renewable Energy Integration and DC Microgrid 1(1-0)*” has been developed and offered in Inter semester 2016.
 - iv) Contributed in developing new UG curricula (BS208: Electrical Engineering and Electronics for Bio-Engineers 4 (3-1)) in August 2014.
 - v) A new doctoral degree program titled “PhD in Energy Business” has been developed in collaboration with SOM in 2014.
 - vi) A new Policy and Procedure has been developed in collaboration with SOM to enabled “Professional Master” degree holders to be eligible to apply for regular AIT Master Degree from 2014 with option to transfer credits gained in their Professional Master degree.
 - vii) A new Policy and Procedure has been developed in collaboration with SOM to enabled “Professional Master” degree holders to be eligible to apply directly in Unified Master leading to Doctoral degree programs from 2014 with transfer of credits gained in their Professional Master degree.
 - viii) One credit previously developed course *ED72.9019* modified and extended in two credit course titled “*ED72.9026: Integration of Renewable Energy Sources in Power System 2(2,0)*” and offered in August semester 2013.
 - ix) Involved as a member and contributed to develop a new degree program called as “MBA in Energy Business” and first batch started from August-2012.
 - x) Involved as member and contributed to develop a new professional program called as “Professional Master in Energy Business Management” and first batch started from August-2012.
 - xi) A two credit new interdisciplinary course titled “*ED72.9022: Smart Grid for Sustainable Development 2(2,0)*” has been developed and offered in each Inter semester from 2011 and onwards.
 - xii) A one credit course titled “*ED72.9019: Integration of Renewable Energy Resources into Power System 1(1,0)*” has been developed and offered in Inter semester 2010.

3. Development and introduction of innovative pedagogical techniques.

- i) Developing the new course ‘ED86.07: Microgrid Design, Control and its Applications’ and planned to offer (50%) in January 2021.
- ii) Revising the course on ‘ED86.11: Smart Grid and Variable Renewable Energy Integration’ and planned to offer in January 2021.
- iii) Developing the new course ‘ED86.09: Energy Systems, Economics and Policy’ and planned to offer (33%) in January 2021.
- iv) Revised and offered the course ‘ED86.08: Design and Operation of Transmission and Distribution Systems’ in August 2020.
- v) Revised and offered (50%) the course ‘ED86.13: Power System Restructuring and Economics’ in August 2020.
- vi) Course materials prepared for 3 credit new course on *Electric and Hybrid Electric Vehicles* 3(3,0).

- vii) A one credit revised new course material entitled “*ED72.9028: Renewable Energy Integration and DC Microgrid 1(1,0)*” has been developed in 2016 for post graduate students.
- viii) Revised 8 courses in 2015 under curriculum review process lead by ADRC, AIT.
- ix) Prepared course materials for new UG curricula (BS208: Electrical Engineering and Electronics for Bio-Engineers 4 (3-1)) in August 2014.
- x) A two credit new course material entitled “*Integration of Renewable Energy Sources in Power System (ED72.9026)*” has been developed and offered in 2013 for post graduate students.
- xi) A two credit new course material entitled “*Smart Grid for Sustainable Development (ED72.9022)*” has been developed in 2011 for post graduate students and since then continuously offering in every inter-semester.
- xii) A one credit new course material entitled “*Integration of Renewable Energy Resources into Power System (ED72.9019)*” has been developed in 2010 for post graduate students.
- xiii) I have revised/updated half of three credit course entitled “*Power Sector Management under Deregulation (ED72.22)*” in 2011 and onwards.

4. Participation in workshops, short courses, etc. relating to improvement of teaching.

- i) Seminar on ‘**Blockchain 1-2-3, What Electrical Engineers Need to Know!**’ organized by IEEE Thai Chapter on 12th December in Centara Grand at Central Ladprao, Bangkok.
- ii) Institute wide workshops: ERASMUS + project proposals titled “**Practical Approach on Erasmus + Capacity Building in Higher Education**” organized by the President’s Office and the Sponsored and Contracted Projects Unit on 30th October 2018.
- iii) IEEE PES Webinar, "How to Write a Quality Technical Paper and Where to Publish Within IEEE," presented by Saifur Rahman, Advanced Research Institute at Virginia Tech, on 3rd March, 2015.
- iv) Wind Power Integration Seminar, 27th April 2009, KTH, Sweden.
- v) Short-term training course on “*Best Practices in Transmission and Distribution of Power*”, 27-29, November, 2007, IIT Kanpur.
- vi) Short-term QIP course on “*Power System Operation and Control*”, IIT Kanpur, August 2006.
- vii) National Workshop on "Electric Power Quality" during Nov. 9-10, 2004.
- viii) Training workshop on “*Electric Power Distribution: Reforms, Automation and Management*”, EE Dept. IIT Kanpur, May 10-14, 2004.

III. Student Research Supervision

A. **Theses supervised.** Number of master and doctoral students graduated each year, on which the faculty served as committee chair or co-chair.

3.A.1 Summary of student research supervision (2008 – 2020)

STUDENTS	COMPLETED			IN-PROGRESS		
	Chair of the Committee	Co-Chair of the Committee	Member of the Committee	Chair of the Committee	Co-Chair of the Committee	Member of the Committee
Doctoral	4	2	6	6	1	3
Master’s	56	4	150	5	0	10

Note: In above table, two master supervision and one co-supervision at KTH, Stockholm are also included.

B. **Doctoral students.** For each student who obtained/pursuing the doctoral degree under your supervision, provide the following:

Summary of Doctoral Research Supervisions as Chairperson:

(Name, Nationalities, Status/Year of Completion, Dissertation title)

In progress:

1. Mr. Shubham Tiwari (**Indian**, pursuing)
2. Mr. N. Krishna Prakash (**Indian**, pursuing)
3. Mr. Firuz Ahamed Nahid (Bangladeshi, Co-chair, pursuing)
4. Mr. Trung Quang Nguyen (**Vietnamese**, Pursuing): Optimization of the renewable energy sources into the distribution expansion planning in term of demand response
5. Miss Panaya Sudta (**Thai**, Pursuing): Economic and Technical affectation of Prosumer Model and Disruptive Energy Technologies (**Publication:** One paper in international conference)
6. Mr. Pornchai Chaweewat (**Thai**, Pursuing): Electricity Pricing Forecasting in Smart Grid by using Python based Machine Learning tools (**Publication:** Two paper in international conference)
7. Ms. Raja Nivedha (**Indian**, Pursuing): Dynamic performance analysis of power system with low rotational inertia equipment (**Publication:** Two paper in international conference)

Completed:

8. Ms. Anongpun Man-Im (**Thai**, Co-chair, 2019): Multi-objective OPF using Stochastic Weight Trade-off NSPSO (**Publication:** Two papers in international conference and another one in international journal, and one book chapter) (**working in public company, i.e. Electricity Generating Authority of Thailand (EGAT)**)
9. Mr. Nimal Madhu M (**Indian**, 2016): Power Flow and ATC Estimation in Modern Power Systems (**Publication:** 5 articles in journal and 5 international conference papers are published) (**working as a postdoctoral fellow in AIT**)
10. Mr. Nikhil Sasidharan (**Indian**, 2016): Renewable Powered Hybrid AC/DC Home Community Grid (**Publication:** 5 articles in journal and 5 international conference articles are published and another one journal article is revised and resubmitted submitted) (**working as an Assistant Professor in NIT Kochi, India**)
11. Mr. Vivek Mohan (**Indian**, 2016): Stochastic Optimal Energy, Reserve and Risk Management in Microgrid (**Publication:** 6 articles in journals and 7 papers in international conference are published) (**working as an Assistant Professor in NIT Trichy, India**)
12. Mr. I Made Wartana (**Indonesian**, 2012): Optimal Placement of Multiple FACTS Devices for Maximizing Loadability by PSO (**Publication:** Published two journal and four conference articles) (**working as a Professor in Institut Teknologi Nasional (ITN) Malang, Indonesia**)
13. Mr. Sasidharan Sreedharan (**Indian**, Co-chair, 2010): Development of the PSO Based Robust Controller for Maximizing Wind Energy Penetration in Power Systems (**Publication:** Three journals and five conference articles) (**working as a Professor and Head in MES, Kerala, India**)

Summary of Doctoral Research Supervisions as Member:

(Name, Nationalities, Status/Year of Completion, Dissertation title)

In progress:

1. Mr. Ankit Bhatt (**Indian**, Pursuing): Machine Learning Based Health Estimation of Second Life Batteries in Micro-Grid Storage Application
2. Mr. Patiphan Thupphae (**Thai**, Pursuing): Blockchain based energy scheduling in residential solar rooftop PV system
3. Mr. Vatee Laoharajanaphand (**Thai**, Pursuing): Optimal Generation Scheduling of Hybrid Solar

Photovoltaic-Wind-Hydro-Energy Storage under Thailand's National Energy Trading Platform

Completed:

4. Mr. Sheraz (**Pakistani, TC/SET**, December 2020): Modeling and Analysis of Delay Performance for Wireless Regional Area Networks in the Joint Scenario of Self-Coexistence and Incumbent Coexistence
5. Mr. Titipong Samakpong (**Thai**, May 2020): Optimal Power Flow Incorporating Wind and Solar Power Uncertainty Cost Using Particle Swarm Optimization with Mutation (**working Provincial Electricity Authority (PEA), Thailand**)
6. Mr. Sittichoke Pookpunt (**Thai**, 2017): Optimal Placement of Wind Turbine Using a Discrete Particle Swarm Optimization with Time-Varying Acceleration Coefficients (**working as an Assistant Professor in Narsuan University, Thailand**)
7. Mr. Minn Thu Aung (**Burmese, WEM/SET**, 2016): Assessment of Climate Change Impacts on Hydrology and Hydropower Generation in Belu Chaung Basin of Myanmar
8. Ms. Jirawadee Polprasert (**Thai**, 2016): Security Constrained Optimal Power Flow Using Self-Organizing Hierarchical Particle Swarm Optimization (**working as an Assistant Professor in Narsuan University, Thailand**)
9. Mr. Saksorn Chalermchaiarbha (**Thai**, 2012): Multi-Objective Economic Dispatch by Stochastic Weight Trade-Off Particle Swarm Optimization

C. **Master students.** For each student who obtained/pursuing the master degree under your supervision, provide the following:

Master Thesis Supervisions as Chairperson:

(Name, Nationality, Graduation Year, Thesis/Research/Project titles)

In progress

1. Ms. Nopparada Sutthichackr (**Thai**, May 2021): Power Asset Management by using Statistical Analysis and Artificial Neural Network Technique: A Case Study of AIT
2. Mr. Nuttakan Likitpolchaloon (**Thai**, May 2021): Power Sector Modeling with Variable Renewable Energy Sources
3. Mr. Apichok Boutcomekong (**Thai**, May 2021): Estimation of EV's Daily Load Profile in Bangkok Metropolitan Areas of Thailand
4. Ms. Sadiksha Neupane Sharma (Nepalese, May 2021): Smart Charging Strategies for Electric Vehicle Aggregators Considering Users Preferences
5. Ms. Yin Min Khin (**Burmese**, May 2021): Peak Load Management by using the Conservation Voltage Reduction and Demand Response in AIT

Completed

6. Ms. Wanwisa Peanpitak (**Thai**, May 2020): Potential and Financial Analysis of the Floating PV in Hydropower Dams of Thailand (**Publication:** One chapter in book titled 'Recent Trends and Innovation in Solar Energy' is published by Springer Nature India Pvt. Ltd.) (**working in Electricity Generating Authority of Thailand**)
7. Mr. Kaung Myat San (**Burmese**, May 2020): Development of Deep Learning Based Methods for Short-Term Wind Speed Forecasting for Meiktila in Myanmar
8. Mr. Sathi Manikanteswara Reddy (**Indian**, Research study, May 2019): An Electric Vehicles Battery Swapping Service
9. Mr. Malisetty Revanth (**Indian**, December 2019): Determination of Optimal Demand Response Incentive in Smart Grid

10. Mr. Ugyen Tempa (**Bhutanese**, Research study, December 2019): Assessment of Solar Energy Potential using GIS and Multi Criteria Decision Making-AHP Approach: A Case Study of Bumthang Valley (**Publication**: One article published in international conference) (**working in Bhutan Power Corporation**)
11. Mr. Sonam Tobgay (**Bhutanese**, Research study, December 2019): Power Flow Tracing and Loss Allocation Methods: A Case Study of Bhutan Power System (**working in Bhutan Power Corporation**)
12. Mr. Shubham Tiwari (**Indian**, December 2019): A Decentralized Primary Frequency Response and Inertia Control of Energy Storage Units for Hybrid Renewable Energy Microgrid Systems (**Publication**: one book chapter published by John Wiley) (**pursuing doctorate in AIT**)
13. Mr. Lim Pila (**Cambodian**, December 2019): Optimal Protection Coordination by Modifying the Back-up Relay Characteristics in Active Distribution Systems (**working in Electricite du Cambodge, EDC, Cambodia**)
14. Mr. Manish Kumar (**Indian**, December 2019): Transmission Congestion Management by Using Generation Shift Factors and Machine Learning Approach (**Publication**: One article submitted in international conference) (**working in a startup company**)
15. Mr. Meas Nimol (**Cambodian**, December 2019): Transmission Expansion Planning by Using Deterministic and Stochastic Approaches: A Case Study of Cambodian Transmission System (**working in Electricite du Cambodge, EDC, Cambodia**)
16. Mr. Prachya Laochoo (**Thai**, Research Study, June 2019): Impact and Mitigation Analysis of EV Charging System on Transformer Loading and Sizing of the Solar PV Rooftop System and Battery Storage in Commercial Buildings (**working in Provincial Electricity Authority Thailand**)
17. Mr. Srinivas Akasapu (**Indian**, Research study, May 2019): An Approach to Minimize the Range Anxiety of Electric Vehicles with Different State-of-Charge of the Battery
18. Mr. Pham Xuan Dien (**Vietnamese**, May 2019): A Probabilistic Approach to Short-term Solar-Wind-Hydro-Thermal Coordination by using Cumulants and Modified Clustering-based Scenario Reduction Technique (**Publication**: Two paper submitted in international journal) (**working in Vietnam Electricity, EVN**)
19. Mr. Tanit Chanraksa (**Thai**, May 2019): Benefits of Demand Response with Controllable Loads in Smart Grid: A Case Study of Pattaya City, Thailand (**Publication**: One paper ready to submit in international journal) (**working in Provincial Electricity Authority Thailand**)
20. Mr. Tong Megnhour (**Cambodian**, May 2019): A Multi-Objective Approach to Allocate Distributed Generations in Balanced and Unbalanced Distribution Networks by Using Ant Lion Optimizer (**Publication**: One paper submitted in international journal)
21. Ms. Aagya Niraula (**Nepalese**, May 2019): Deep Learning-Based Approach for State-of-Health Estimation of Lithium-Ion Battery in Electric Vehicle (**Publication**: One paper ready to submit in international journal)
22. Md. Ariful Islam (**Bangladeshi**, May 2019): Duck Curve Problem Solving Strategies with Neuro-Fuzzy Control Method by Using Solar PV, PEVs and Load Shifting (**working as faculty in Ahsanullah University of Science and Technology, Bangladesh**)
23. Mr. Pullagura Syam Sundar (**Indian**, Research study, May 2019): An Approach to Optimal DG Placement and Network Reconfiguration for Active Power Loss Minimization in a Distribution System using PSO and Tabu Search Algorithms (**working in AIT Thailand**)
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26. Mr. Swejan Rangishetti (**Indian**, December 2018): Analysis of a Three Phase Electric Spring in Solar PV Connected Power Networks

27. Mr. Hruday Vemuri (**Indian**, Research study, May 2018): Smoothing the Load Profile by Using a Fuzzy Control Strategy of Plug-in Electric Vehicles (PEVs) in Smart Grids (**working as a Senior Electrical Engineer in Hyderabad, Telangana**)
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- conference and then same selected for publication in international journal) (**working in Provincial Electricity Authority Thailand**)
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136. Mr. Bancha Rangsakorn (**Thai**, 2010): Multi-Objective Distributed Generation Optimal Placement in Distribution System using Nondominated Sorting Particle Swarm Optimization
137. Mr. Yusak Tanoto (**Indonesian**, 2010): Long Term Peak Load Forecasting Using Artificial Neural Networks: The Case of Java-Madura-Bali Interconnection, Indonesia
138. Mr. Nuttawich Khamsawasd (**Thai**, 2010): Optimal Bidding Strategy in LMP-Based Electricity Market Considering Demand Elasticity by Particle Swarm Optimization with Time-Varying Acceleration Coefficients
139. Mr. Apinat Saksinchai (**Thai**, 2010): Multi-objective Bidding Strategy for Generation Company using Non-Dominated Sorting Particle Swarm Optimization
140. Ms. Cherry Myo Lwin (**Burmese**, 2010): Greenhouse Gas Mitigation by Hydropower Trading from Myanmar to Thailand
141. Ms. Seema Thakur (**Nepalese**, 2010): Optimal Generation Scheduling of Cascaded Hydro-Thermal and Wind Power Generation by Particle Swarm Optimization
142. Ms. Yada Rungreang (**Thai**, 2010): Financial Transmission Right Bidding Strategy in Competitive Power Market Using Particle Swarm Optimization
143. Mr. Nitipong Thipwiang (**Thai**, 2010): Wind Power Bidding Strategy in Short-Term Power Market Based on Particle Swarm Optimization
144. Mr. Mom Kirivathanak (**Thai**, 2010): Optimal DG Placement in a Nodal Price Based Electricity Market: The Case of Cambodia
145. Mr. Dinesh Rangana Gurusinghe (**Sri Lankan**, 2010): Saddle Node Bifurcation and Voltage Stability Analysis by Particle Swarm Optimization
146. Ms. Arisa Sumthong (**Thai**, 2010): Long-term Co2 Emission Reductions Target and Scenario for the Industrial Sector of Thailand
147. Mr. Agapol Pukprayura (**Thai**, 2010): Optimal Under-Voltage Load Shedding for Northeastern EGAT System
148. Mr. Purna Bdr Rai (**Bhutanese**, 2010): Total Transfer Capability Enhancement using FACTS Devices: A Case Study of Bhutan Power System
149. Mr. Arshad Mahmood (**Pakistani**, 2010, Research study): Energy Consumption and Economic Growth in Pakistan: A Causality Analysis
150. Mr. Ngo Dang Chien (**Vietnamese**, 2010): Integrated Resources Planning Considering Demand Side Management: A Case Study of Vietnam
151. Mr. Natthakich Assanee (**Thai**, 2010, Research study): The Transition to a Hydrogen Economy in Thailand
152. Ms. Tran Thi Kieu Ngoc (**Vietnamese**, 2010, Research study): Analysis of a Micro Combined Heat Power as a Clean Development Mechanism Project in Residential Area, Hanoi, Vietnam

Member of Special Study Committee:

1. Ms. Chanatta Chaipakdee (**Thai**, May 2019): An AMI system designed for implementing in MEA areas
2. Mr. Sittinan Muanchaona (**Thai**, May 2019): Technical Issues Concerning in Microgrid Technology
3. Ms. Phusanisa Jaichaiyaphum (**Thai**, May 2019):
4. Mr. Puminut Rugthong (**Thai**, May 2019): A Study on Ethanol Production from Sujarcane Bagasse

IV. Research

A. Publications

Publications must be listed with complete citations in the categories indicated below. Include all names of authors in the order in which they appear. List the number of the first page and last page of the paper. If papers are submitted or accepted for publication, copies of the letter of receipt or acceptance must be provided. Manuscripts in preparation should not be listed. Papers of a principally pedagogical nature must be listed in Section II, C.

1. Books and Monographs:

- i) Hassan Qazi Wazhat, Jai Govind Singh, Mehrdad Ghandhari. *Development of Sensitivity Based Indices for Optimal Placement of UPFC to Minimize Load Curtailment Requirements*. XR-EE-ES-2009:006. Master Thesis, KTH, School of Electrical Engineering (EES), Electric Power Systems, Stockholm, Sweden.
- ii) Umair Mahmud Sheikh, Hector Latorre, Jai Govind Singh, Mehrdad Ghandhari. *Analysis of Power System Stability by Using Optimally Located SVC and STATCOM*. XR-EE-ES 2009:010. Master Thesis, KTH, School of Electrical Engineering (EES), Electric Power Systems, Stockholm, Sweden.
- iii) Priyanko Guha Thakurta, Jai Govind Singh, Lennart Soder. *An Approach for Optimal Placement of SVC to Minimize Load Curtailment*. Master Thesis, KTH, School of Electrical Engineering (EES), Electric Power Systems, Stockholm, Sweden.

2. Book Chapters:

- i) Wanwisa Peanpitak and **Jai Govind Singh** (2020). *Potential and Financial Analysis of the Floating PV in Hydropower Dams of Thailand*. Springer book on ‘Fundamentals and Innovations in Solar Energy,’ **Springer Singapore**. DOI: 10.1007/978-981-33-6456-1
- ii) Shubham Tiwari, **Jai Govind Singh**, Weerakorn Ongsakul (2020). *A Numerical Approach for Estimating Emulated Inertia with Decentralized Frequency Control of Energy Storage Units for Hybrid Renewable Energy Microgrid System*. A book on ‘Microgrid Technologies’ published by **John Wiley & Sons, Inc., and Scrivener Publishing LLC**.
- iii) Madhu M., N., Singh, J. G., Mohan, V., & Ongsakul, W. (2021). *Transmission Risk Optimization in Interconnected Systems: Risk-Adjusted Available Transfer Capability*. In Vasant, P., Weber, G., & Punurai, W. (Ed.), *Research Advancements in Smart Technology, Optimization, and Renewable Energy* (pp. 183-199). IGI Global. <http://doi:10.4018/978-1-7998-3970-5.ch010>
- iv) Anongpun Man-Im, Weerakorn Ongsakul, **Jai Govind Singh** (2018). *Multi-objective Optimal Power Flow of Wind-Thermal Considering Cosr and Emission by Stochastic Weight Trade-off Chaotic Mutation Based NSPSO*. Springer Book on “Unconventional Modeling, Simulation and Optimization of Geo Science and Petroleum Engineering”.

3. Refereed journal articles: international, regional, national. For each article, indicate the publisher of the journal and the number of SCOPUS citations.

3.A Summary of journal articles published

Published					
Refereed Journals	International	Refereed Journals	Regional	Refereed Journals	National
(28)					

In Progress		
Refereed International Journals	Refereed Regional Journals	Refereed National Journals
5 manuscripts are communicated 3 manuscripts under preparation		

3.B Articles in Refereed **International Journals**

- i) Chaweewat, P., Singh, J.G. (2020). An electricity price interval forecasting by using residual neural network. *International Transactions on Electrical Energy Systems*, 2020, 30(9), e12506. (Thomson Reuters IF=1.619)
- ii) Md. Ariful Islam and Jai Govind Singh (2020). Duck Curve Problem Formulation and Solving Strategies by Utilizing PVr, PEVs, Load Shifting and ANFIS for Greening Bangladesh. *International Energy Journal 20 Special Issue 3A*, 453 – 470. (SCOPUS Indexed)
- i) Anongpun Man-Im, Weerakorn Ongsakul, **Jai Govind Singh**, Madhu M. N. (2019). Multi-objective optimal power flow considering wind power cost functions using enhanced PSO with chaotic mutation and stochastic weights. *Electrical Engineering*, 101(3), pp. 699–718, Springer Verlag. (Thomson Reuters IF=1.296)
- ii) Pham Tuan Ngoc and **Jai Govind Singh** (2017). Short Circuit Current Level Reduction in Power System by Optimal Placement of Fault Current Limiter. *International Transactions on Electrical Energy Systems*, 27(12). <https://doi.org/10.1002/etep.2457> (Thomson Reuters IF=1.619)
- iii) Anongpun Man-Im, Weerakorn Ongsakul, **Jai Govind Singh**, Chanwit Boonchuy (2017). Multi-objective Economic Dispatch Considering Wind Power Penetration Using Stochastic Weight Trade-off Chaotic NSPSO. *Electric Power Component and Systems*, 45(14), pp. 1525–1542. (Scopus cited)
- iv) Vivek Mohan, Reshma Suresh, Jai Govind Singh, Weerakorn Ongsakul, Nimal Madhu M (2017). 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(2), pp. 262 - 270. (Thomson Reuters IF=3.218)
- v) Nikhil Sasidharan, **Jai Govind Singh** (2017). A Novel Single Stage Single Phase Reconfigurable Inverter Topology for a Solar Powered Hybrid AC/DC Home in Smart Grid. *IEEE Transactions on Industrial Electronics*, 64(4), pp 2820-2828. (Thomson Reuters IF=7.05)
- vi) Nikhil Sasidharan, **Jai Govind Singh** (2017). A Resilient DC Community Grid with Real Time Ancillary Services Management. *Sustainable Cities and Society*, 28, pp. 367–386. (Thomson Reuters IF=3.073)
- vii) Vivek Mohan, **Jai Govind Singh**, and Weerakorn Ongsakul (2017). Sortino Ratio Based Portfolio Optimization Considering PHEVs and Renewable Energy in Microgrid Power Market. *IEEE Transactions on Sustainable Energy*, 8(1), pp. 219-229. (Thomson Reuters IF=6.235)
- viii) I Made Wartana, Ni Putu Agustini, Jai Govind Singh (2017). Optimal Integration of the Renewable Energy to the Grid by Considering Small Signal Stability Constraint. *International Journal of Electrical and Computer Engineering (IJECE)*, 7(5), pp. 2329-2337. (SJR=0.280 & SNIP=1.090)
- ix) Subas Ratna Tuladhar, **Jai Govind Singh**, Weerakorn Ongsakul (2016). Multi-Objective Approach for Distribution Network Reconfiguration with Optimal DG Power Factor using NSPSO. *IET Generation, Transmission & Distribution*, 10(12), pp. 2842 - 2851. (Thomson Reuters IF=2.618)

- x) **Jai Govind Singh**, Hassan Wajahat Qazi, and Mehrdad Ghandhari (2016). Load Curtailment Minimization by Optimal Placement of Unified Power Flow Controller. *International Transactions on Electrical Energy Systems*. 26(10), pp. 2272–2284. doi:10.1002/etep.2209. (Thomson Reuters IF= 1.619)
- xi) Vivek Mohan, **Jai Govind Singh**, Weerakorn Ongsakul and Reshma Suresh M P (2016). Economic and Network Feasible Online Power Management for Renewable Energy Integrated Smart Microgrid with Improved DER Dynamics. *Sustainable Energy, Grids and Networks*, 7(1), pp. 13-24. (SNIP=0.841)
- xii) Vivek Mohan, **Jai Govind Singh**, Weerakorn Ongsakul, Reshma Suresh M P (2016). Performance Enhancement of Online Energy Scheduling in a Radial Utility Distribution Microgrid. *International Journal of Electric Power and Energy Systems*, 79, pp. 98–107. (Thomson Reuters IF =3.610)
- xiii) Nimal Madhu M, Nikhil Sasidharan and **Jai Govind Singh** (2016). A Droop Control Based DC Equivalent Power Flow Method for Low and Medium Voltage Distribution Systems. *Electric Power System Research*, 134, pp. 56–65. (Thomson Reuters IF=2.856)
- xiv) Sachin Muralee Krishna, Nimal Madhu M, Vivek Mohan, Reshma Suresh M P and **Jai Govind Singh** (2015). A Generalized Approach for Enhanced Solar Energy Harvesting Using Stochastic Estimation of Optimum Tilt Angles: A Case Study of Bangkok City. *GREEN - a systemic approach to energy, DE GRUYTER*, 5(1-6), pp. 95-107. (SNIP=0.939, SJR=0.402)
- xv) Vivek Mohan, **Jai Govind Singh**, Weerakorn Ongsakul (2015). An Efficient Two Stage Stochastic Optimal Energy and Reserve Management in a Microgrid. *Applied Energy*, 160, pp. 28–38. (Thomson Reuters IF=7.900)
- xvi) Nikhil Sasidharan, Nimal Madhu M, **Jai Govind Singh** and Weerakorn Ongsakul (2015). An Approach for Efficient Hybrid AC/DC Solar Powered Homegrid System based on Load Characteristics of Home Appliances. *Energy and Buildings*, 108, pp. 23–35. (Thomson Reuters IF=4.457)
- xvii) Somticha Panich and **Jai Govind Singh** (2015). Impact of Plug-in Electric Vehicles on Voltage Unbalance in Distribution Systems. *International Journal of Engineering, Science and Technology*, 7(3), pp. 76-93.
- xviii) Nimal Madhu M, S Nikhil, Anand M.P., **J. G. Singh** (2015). Distributed AC power flow method for AC and AC-DC hybrid autonomous microgrids with droop control. *International Journal of Engineering, Science and Technology*, 7(3), pp. 58-64.
- xix) Jai Govind Singh, Priyanko Guha Thakurta and Lennart Soder (2014). Load Curtailment Minimization by Optimal Placement of SVC. *International Transactions on Electrical Energy Systems*, doi: 10.1002/etep.1990. (Thomson Reuters IF= 1.619)
- xx) I Made Wartana, **Jai Govind Singh**, Weerakorn Ongsakul, and Sasidharan Sreedharan (2013). Optimal Placement of FACTS Controllers for Maximizing System Loadability by PSO. *Int. J. of Power and Energy Conversion*, 4(1), pp. 9 – 33. (Scopus)
- xxi) Sachin K. Jain, S. N. Singh, and **J. G. Singh** (2013). An Adaptive Time-Efficient Technique for Harmonics Estimation of Non-stationary Signals. *IEEE Transactions on Industrial Electronics*, 60(8), pp. 3295-3303. (Thomson Reuters IF=7.900)
- xxii) Sasidharan Sreedharan, Weerakorn Ongsakul, **Jai Govind Singh**, Mahapatra S. S. (2012). Development of PSO based Robust Controller for Maximizing Wind Penetration. *International Journal of Renewable Energy Technology*, 3(1), pp. 58-78.
- xxiii) Sasidharan Sreedharan, Weerakorn Ongsakul, and **J. G. Singh** (2010). Maximization of Instantaneous Penetration using Particle Swarm Optimization. *International Journal of Engineering, Science and Technology*, 2(5), pp. 39-50.

- xxiv) J G Singh, S N Singh and S C Srivastava (2009). Optimal Placement of UPFC based on System Loading Distribution Factors. *Electric Power Components and Systems*, 37(4), pp. 441-463. (Scopus)
- xxv) J G Singh, P Tripathy, S N Singh, S C Srivastava (2009). Development of a Fuzzy Rule Based Generalized Unified Power Flow Controller. *International Transactions on Electrical Energy Systems*, 19(6), pp. 702–717. doi: 10.1002/etep.250 (Thomson Reuters IF=1.619)
- xxvi) J G Singh, S N Singh and S C Srivastava (2007). An Approach for Optimal Placement of Static VAr Compensators based on Reactive Power Spot Price, *IEEE Transactions on Power Systems*, 22(4), pp. 2021-2029. (Thomson Reuters IF=5.255)
- xxvii) J G Singh, S N Singh and S C Srivastava (2006). A Sensitivity Based Approach for Optimal Location of Multi-Converter Unified Power Flow Controller Considering Its Impact on Generation and Wheeling Costs. *International Journal of Energy Technology and Policy*, 4(3), pp. 394 - 409.
- xxviii) J G Singh, S N Singh and V Pant (2004). Modelling of Generalized Unified Power Flow Controller for Suitable Location and Power Flow Controller. *Iranian Journal of Electrical and Computer Engineering*, 3(2), pp. 103-110.

4. Papers in Refereed Conference Proceedings

- i) Shubham Tiwari, Weerakorn Ongsakul, Jai Govind Singh (2020). Design and Simulation of an Islanded Hybrid Microgrid for Remote Off-Grid Communities. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, Department of Energy, Environment and Climate Change, School of Environment Resources and Development, Asian Institute of Technology, Pathum Thani, Thailand, 20-22 October 2020.
- ii) H Vemuri, J G Singh (2020). Smoothing the Load Profile by using a Charging Control Strategy of Plug-In Electric Vehicles. *2020 IEEE Students Conference on Engineering & Systems (SCES)*, MNNIT Allahabad, India, 2020, 1-6.
- iii) K Somalaraju, J G Singh (2020). Enhancement of Power Generation from Electromagnetic Scavenging Tile. *2020 International Conference on Power Electronics & IoT Applications in Renewable Energy and its Control (PARC)* GLA University, Mathura, UP, India. Feb 28-29, 2020.
- iv) Shubham Tiwari, Arjun C Unni, R Rajanivedha, J G Singh, W Ongsakul (2019). Harmonic Analysis of Separately Excited DC Motor Drive. *2019 Innovations in Power and Advanced Computing Technologies (i-PACT)*, India, 1, 1-7.
- v) Rachawadee Puangsukra, J G Singh, W Ongsakul, FM Gonzalez-Longatt (2018). Multi-Objective Optimization for Enhancing System Coordination Restoration by Placement of Fault Current Limiters on an Active Distribution System with System Reliability Considerations. *2018 International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*,
- vi) Menaka Karki and Jai Govind Singh (2018). An Approach to Enhance the Life of Transformer and the Battery of Gridable Vehicles. *5th IEEE Uttar Pradesh Section International Conference*, 2-4 Nov 2018 MMMUT Gorakhpur, UP, India.
- vii) Mukkamalla Srikanth Reddy, Jai Govind Singh (2018). Optimal Scheduling of Customers' Demand based upon Power Availability and its Price in Smart Grid. *5th IEEE Uttar Pradesh Section International Conference*, 2-4 Nov 2018 MMMUT Gorakhpur, UP, India.
- viii) S.M.G. Mostafa and Jai Govind Singh (2018). A Probabilistic Approach for Power Loss Minimization in Distribution Systems. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 24-26 October 2018, Phuket, Thailand.

- ix) Md. Ariful Islam, Israt Jahan, Md. Jakaria Rahimi, and **Jai Govind Singh** (2018). Performance Analysis of LTE in Rich Multipath and Rural Environments for Wireless Communication in Smart Grid. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 24-26 October 2018, Phuket, Thailand.
- x) Shubham Tiwari, Ankit Bhatt, Arjun C. Unni, **Jai Govind Singh**, and Weerakorn Ongsakul (2018). Control of DC Motor using Genetic Algorithm based PID Controller. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 24-26 October 2018, Phuket, Thailand.
- xi) Panaya Sudta, Nathakornphong Veerachayapornkul, Weerakorn Ongsakul, Nikhil Sasidharan, and **Jai Govind Singh** (2018). Optimal Placement and Sizing of DG Based on Single Phase Wind Turbine Generator in Distribution System. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 24-26 October 2018, Phuket, Thailand.
- xii) Nikhil Sasidharan, **Jai Govind Singh**, Weerakorn Ongsakul (2018). Static ZIP Load Modelling of Microwave Ovens and its Impact on Distribution System. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 24-26 October 2018, Phuket, Thailand.
- xiii) Raja Nivedha Ramakrishnan Aruswamy, Jai Govind Singh, Weerakorn Ongsakul (2018). PSO based Unit Commitment of a Hybrid Microgrid System. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 24-26 October 2018, Phuket, Thailand.
- x) Nimal Madhu, Vivek Mohan and Jai Govind Singh (2018). Risk Adjusted Co-optimization of ATC in High-Low Voltage Interconnected Power System. **2018 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)**. IIT Madras, Chennai from 18 – 21, December 2018.
- xi) Raja Nivedha Ramakrishnan Aruswamy, Jai Govind Singh, Weerakorn Ongsakul (2018). PSO based Economic Dispatch of a Hybrid Microgrid System. *4th International Conference on Power, Signals, Controls and Computation (EPSCICON 2018)*, 6-10th January 2018, Vidya Academy of Science & Technology, Thrissur, Kerala, India.
- xii) Pornchai Chaweewat, Jai Govind Singh (2017). Effects of high penetration of solar rooftop PV on short-term electricity pricing forecasting by using ANN-ABC hybrid model; case study of South Australia. *1st International Conference on Large-Scale Grid Integration of Renewable Energy in India*, 6 - 8 September, 2017, New Delhi, India.
- xiii) Nachapol Wongwantanee, **Jai Govind Singh** and Bharat Singh Rajpurohit (2016). Load Curtailment Minimization in Intentional Islanded Networks and its Restoration Strategy Considering Voltage Stability Issues. *PEA Conference*, 19-20 December 2016, Thailand.
- xiv) Happy Aprillia, Jai Govind Singh, Ontoseno Penangsang, Adi Soeprijanto (2016). Optimal Placement of Capacitor on Three Phase Radial Distribution System Using Direct Search Algorithm. *IEEE Region 10 Humanitarian Technology Conference (R10-HTC-2016)*, 21-23 December 2016, Agra, India.
- xv) Jai Govind Singh, S N Singh, S C Srivastava (2016). Congestion Management by using FACTS Controller in Power System. *IEEE Region 10 Humanitarian Technology Conference (R10-HTC-2016)*, 21-23 December 2016, Agra, India.
- xvi) Pornchai Chaweewat, Jai Govind Singh, Weerakorn Ongsakul, Anurag K. Srivastava (2016). Economic and Environmental Impact Assessment with Network Reconfiguration in Microgrid by using Artificial Bee Colony. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 14-16 September 2016, Bangkok, Thailand.

- xvii) S. M. G. Mostafa, Jai Govind Singh, H. Masrur, Md. Shahid Ullah (2016). A Prospective Model of Bangladesh Electricity Market. *International Conference on Innovations in Science, Engineering and Technology (ICISSET 2016)*, 28-29 October 2016, IIUC, Kumira, Chittagong, Bangladesh.
- xviii) Tristan G. Magallones Jr., Jai Govind Singh and Watcharakorn Pinthurat (2016). Small Signal Stability and Transient Stability Analysis on the Philippine-Sabah Power Interconnection. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 14-16 September 2016, Bangkok, Thailand.
- xix) Watcharakorn Pinthurat, Jai Govind Singh and Tristan G. Magallones Jr. (2016). Modeling and Performance Assessment of the Thai National Power Grid Considering Wind Farms Integration. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 14-16 September 2016, Bangkok, Thailand.
- xx) Tristan G. Magallones Jr., **Jai Govind Singh** and Watcharakorn Pinthurat (2016). Power Flow and Small Signal Stability Analysis on the Interconnected Three Isolated Philippine Power Grid. *International Conference on Recent Trends in Engineering and Material Sciences, Elsevier Perspective in Science*, 17-19 March, Jaipur, India.
- xxi) Watcharakorn Pinthurat, **Jai Govind Singh** and Tristan G. Magallones Jr. (2016). Assessment of Fault Ride-Through Capability in Thailand Power Grid Interconnection. *International Conference on Recent Trends in Engineering and Material Sciences, Elsevier Perspective in Science*, 17-19 March, Jaipur, India.
- xxii) Vivek Mohan, Nimal Madhu, Jai Govind Singh, Reshma Suresh M P, Arjun C Unni. (2016). Optimal prioritization of reactive power ancillary service utilizing electric vehicles in an autonomous microgrid. *International Conference on Recent Trends in Engineering and Material Sciences, Elsevier Perspective in Science*, 17-19 March, Jaipur, India.
- xxiii) Nimal Madhu, Vivek Mohan, Jai Govind Singh, Reshma Suresh M P, Sreehari G Nair. (2016). Interval effects of different load models on microgrid optimization. *International Conference on Recent Trends in Engineering and Material Sciences, Elsevier Perspective in Science*, 17-19 March, Jaipur, India.
- xxiv) Nimal Madhu M, Nikhil Sasidharan, **Jai Govind Singh** (2015). Droop Control Incorporated Power Flow Method for Distribution and Microgrid Systems. *IEEE PES Innovative Smart Grid Technologies in Asia 2015, Bangkok International Conference*.
- xxv) Anongpun Man-Im, Weerakorn Ongsakul, **Jai Govind Singh**, Chanwit Boonchuay (2015). Multi-objective Optimal Power Flow Using Stochastic Weight Trade-off Chaotic NSPSO. *IEEE PES Innovative Smart Grid Technologies in Asia 2015, Bangkok International Conference*.
- xxvi) Vivek Mohan, Reshma Suresh M P, **Jai Govind Singh**, Weerakorn Ongsakul and Boddeti Kalyan Kumar (2015). Online Optimal Power Management Considering Electric Vehicles, Load Curtailment and Grid Trade in a Microgrid Energy Market. *IEEE PES Innovative Smart Grid Technologies in Asia 2015, Bangkok International Conference*.
- xxvii) Sasidharan Sreedharan, Reza Ghorbani, Saeed Sepasi, Weerakorn Ongsakul and **Jai Govind Singh** (2015). Simultaneous Optimization of Renewable Power at Transmission and Distribution Grid. **International Conference on SMART GRID Technologies, August 6-8, 2015, Amrita School of Engineering, Coimbatore, India.**
- xxviii) Vivek Mohan, **Jai Govind Singh**, Weerakorn Ongsakul, Nikhil Sasidharan (2015). Stochastic Effects of Renewable Energy and Loads on Optimizing Microgrid Market

- Benefits. *International Conference on SMART GRID Technologies*, August 6-8, 2015, Amrita School of Engineering, Coimbatore, India.
- xxix) Nikhil Sasidharan, Nimal Madhu M, **Jai govind Singh**, Weerakorn Ongaskul (2015). Real Time Active Power Ancillary Service using DC Community Grid with Electric vehicles and Demand Response. *International Conference on SMART GRID Technologies*, August 6-8, 2015, Amrita School of Engineering, Coimbatore, India.
- xxx) Anand M.P, Weerakorn Ongsakul, **Jai Govind Singh**, Sajjad Golshannavaz (2015). Economic operational planning of a Smart distribution network considering demand response, Electric vehicles and Network reconfiguration. *PowerTech Eindhoven 2015 conference, 29 June - 2 July 2015, Netherlands*.
- xxxi) Vivek Mohan, **Jai Govind Singh**, Weerakorn Ongsakul (2015). Online Benefit Optimization in a Liberalized/Free Microgrid Market Model. *IEEE International Conference TAP Energy*, 24-26th June 2015, Amrita Vishwa Vidya Peetham, Amritapuri, Kerala, India.
- xxxii) Anand M.P., Weerakorn Ongsakul, **Jai Govind Singh** and Sudhesh K.M. (2015). Optimal Allocation and Sizing of Distributed Generators in Autonomous Microgrids based on LSF and PSO. *International Conference on Energy, Economics and Environment (1st UPCON-ICEEE2015)*, 27-28 March, 2015, Greater Noida, India.
- xxxiii) Anand M.P., Weerakorn Ongsakul, **Jai Govind Singh Singh** and Sudhesh K.M. (2015). Impact of Economic Dispatch in a Smart Distribution Network considering Demand Response and Power Market. *International Conference on Energy, Economics and Environment (1st UPCON-ICEEE2015)*, 27-28 March, 2015, Greater Noida, India.
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- xxxv) Taskin Jamal, Weerakorn Ongsakul, Jai Govind Singh, Sayedus Salehin, S.M. Ferdous (2014). Potential Rooftop Distribution Mapping using Geographic Information Systems (GIS) for Solar PV Installation: A Case Study for Dhaka, Bangladesh. *3rd International Conference on the Developments in Renewable Energy Technology (ICDRET)*, Dhaka, Bangladesh, May 29-31, 2014.
- xxxvi) Nachapol Wongwantanee, **Jai Govind Singh** and Bharat Singh Rajpurohit (2014). Generation Cost and Loss Power Minimization in Intentional Islanded Networks Based on BPSO. *6th IEEE Power India International Conference*, 5-7 December 2014, New Delhi, India.
- xxxvii) Grewal, G.S.; Rajpurohit, B.S.; **Singh, J.G.** (2014). Energy management in Steel rolling plant. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 19-21 March 2014, Pattaya, Thailand.
- xxxviii) Man-Im, A; Ongsakul, W.; **Singh, J.G.** Boonchuay, C. (2014). Multi-objective economic dispatch considering wind generation uncertainty using non-dominated sorting particle swarm optimization. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 19-21 March 2014, Pattaya, Thailand.
- xxxix) Tuladhar, S.R.; **Singh, J.G.**; Ongsakul, W. (2014). A multi-objective network reconfiguration of distribution network with solar and wind distributed generation using NSPSO. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 19-21 March 2014, Pattaya, Thailand.
- xl) Mohan, V.; Madhu, N.; Ongsakul, W.; **Singh, J.G.**, Reshma Suresh, M.P. (2014). Design of strategic information in the deregulated Indian power market: An agent-based approach. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 19-21 March 2014, Pattaya, Thailand.

- xli) Pisanupoj, S.; Ongsakul, W.; **Singh, J.G.** (2014). Potential of smart grid in Thailand: A development of WADE smart grid model. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 19-21 March 2014, Pattaya, Thailand.
- xlii) Chaweewat, P.; **Singh, J.G.**; Ongsakul, W.; Srivastava, A.K. (2014). Synchronization control and droop control of microgrid operation. *International Conference and Utility Exhibition on Green Energy for Sustainable Development (ICUE)*, 19-21 March 2014, Pattaya, Thailand.
- xliii) I. M. Wartana, **J. G. Singh**, W. Ongsakul, and N. P. Agustini (2012). Optimal Placement of A Series FACTS Controller in Java-Bali 24-bus Indonesian System for Maximizing System Loadability by Evolutionary Optimization Technique. *Third International Conference on Intelligent System, Modelling and Simulation (ISMS2012)*, Kinabalu-Malaysia, 2012.
- xliv) Maya B, Sasidharan Sreedharan, **J G Singh** (2012). An Integrated Approach for the Voltage Stability Enhancement of Large Wind Integrated Power Systems. *IEEE PES International Conference, Epsicon 2012*, India.
- xlv) Sasidharan Sreedharan, Weerakorn Ongsakul, **Jai Govind Singh**, I Made Wartana and Kittavit Buayai (2011). PSO Based Tuning of FACTS Controllers for Maximizing the Wind Energy Penetration in Power Systems. *IEEE-PES, ISGT International Conference*, Kollam, Kerala India, 2011.
- xlvi) Sasidharan Sreedharan, Weerakorn Ongsakul, **J G Singh** and I Made Wartana (2011). Development of PSO based Control algorithms for maximum wind penetration. *IEEE PES General Meeting*, Detroit, Michigan, USA, 26–29 July, 2011.
- xlvii) D. X. Duc, **Jai Govind Singh**, Weerakorn Ongsakul (2011). Water Valuation in Vietnamese Electricity Generation Market. *International Conference and Utility Exhibition 2011 on Power and Energy Systems: Issues and Prospects for Asia (ICUE 2011)*, 28-30 September, 2011, Pattaya, Thailand.
- xlviii) I Made Wartana, **Jai Govind Singh**, Weerakorn Ongsakul, Kittavit Buayai, and Sasidharan Sreedharan (2011). Optimal Placement of UPFC for Maximizing System Loadability and Minimize Active Power Losses by NSGA-II. *International Conference and Utility Exhibition 2011 on Power and Energy Systems: Issues and Prospects for Asia (ICUE 2011)*, 28-30 September, 2011, Pattaya, Thailand.
- xliv) J. G. Singh, S. N. Singh, S. C. Srivastava, and Lennart Söder (2010). Power System Security Enhancement by Optimal Placement of UPFC. *The Fourth IASTED Asian Conference on Power and Energy Systems, AsiaPES 2010*.
- l) J. G. Singh, S. N. Singh, S. C. Srivastava (2007). Reactive Power Spot Price Based Optimal SVC Placement Considering Opportunity Cost. *International Conference on Power System 2007, CPRI, Bangalore*, India, 12-14 December 2007.
- li) J. G. Singh, S. N. Singh, S. C. Srivastava (2007). Enhancement of Power System Security through Optimal Placement of TCSC and UPFC. *IEEE PES General Meeting*, Florida, USA, 24-28 Jun 2007.
- lii) J. G. Singh, S. N. Singh, S. C. Srivastava (2006). Placement of FACTS Controllers for Enhancement of Power System Loadability. *PES, 2006 IEEE Power India Conference*, New Delhi, April 10-12, pp. 89-96.
- liii) J. G. Singh, S. N. Singh, S. C. Srivastava (2006). Optimal Placement of TCPAR for Enhancement of Power System Loadability. *National conference on Technical Challenge in Power Systems*, KNIT Sultanpur, India, 24-25 March 2006, pp. 207-211.
- liv) J. G. Singh, S. N. Singh, S. C. Srivastava (2006). Optimal Placement of TCSC for Enhancement of Power System Loadability. *National conference on Modern Aspects of FACTS and its application*, MMMEC Gorakhpur, India, 17-18 February 2006, pp. 89-96.

- lv) O. P. Dwivedi, **J. G. Singh** and S. N. Singh (2004). Simulation and Analysis of Multi-converter Unified Power Flow Controller Using SIMULINK. *National Power System Conference*, IIT, Madras, India, 27-30 December, 2004, pp. 1048-1054.
- lvi) O. P. Dwivedi, **J. G. Singh** and S. N. Singh (2004). Power Flow Control Using Multi-Converter FACTS Controller. *International Conference on Power System*, IE, Tribhuvan University, Nepal and IIT Mumbai, India Kathmandu, Nepal, 3-5 November, 2004, pp. 711-718.
- lvii) J. G. Singh, S. N. Singh (2003). Optimal Power Flow Control Using Generalized Unified Power Flow Controller. *National conference on Modern Aspects of FACTS and its application*, Coimbatore, India, 29 & 30 August 2003, pp. 89-96.

5. Papers in Workshops:

- i) J. G. Singh and S. N. Singh. Enhancing Power Systems' Security Using FACTS Controllers, *National Seminar on Voltage Stability (SVC'06)*, at Arulmigu Kalasalingam College of Engineering, Tamil Nadu, October 13-14, 2006.

6. Development Project Reports

S. Kumar, P. Abdul Salam, C.O.P. Marpaung, J.G. Singh and B. Sireesha: AIT-EHMF Collaborative Project Report on *Micro-Hydro Generation System*. It was submitted to EBARA foundation in November 2012.

7. Non-refereed Publications

- i) Smart Grid: A Vision of Future Energy by Jai Govind Singh and Weerakorn Ongsakul, Technology Magazine, AIT Consulting, 2014.
- ii) Hybrid AC/DC Net Zero Electric Energy Status Solar Home by Nikhil Sasidharan and Jai Govind Singh, Chulachomkiao Royal Military Academy (CRMA), 2014, pp. 128-129.
- iii) An eight minutes interview on 'Distributed Power Grids: A Future Energy Systems of Asia' at link <http://energy.ait.asia/news-a-events/38-news/341--dr-jai-govind-singhinterview-at-asian-utility-week>.

8. Invited Lectures and Keynote Addresses

Invited keynote address/speeches:

- i) Delivered an invited keynote speech on '**Optimal Speed Determination of Electric Vehicles at Different SOC Level**' in 'International Conference on Power Electronics & IoT Applications in Renewable Energy and its Control (PARC 2020), 28-29 February 2020, Department of Electrical Engineering, GLA University, Mathura, India.
- ii) Delivered an invited keynote speech on '**An Approach to Minimize the Range Anxiety of Electric Vehicles at Different SoC level of the Battery**' in 'International Conference on Smart Energy Systems and Electric Vehicles (ICSESEV-2020), 8-10 February 2020, Department of Electrical and Electronics Engineering, Siddhartha Academy of General and Technical Education, Vijayawada, India.
- iii) Delivered an invited keynote speech on '**Smart Grid for Green Energy and Transport Sectors**' in an International Conference on "**Sustainable Development**" ICSD – 2019, February 14-15, 2019 at STES', Sinhgad College of Engineering, Vadgaon (Bk), Pune.
- iv) Delivered an invited keynote speech on '**Electric Vehicles and Renewable Integration in Smart Grid**' in '**International Conference on Artificial**

- Intelligence, Smart Grid and Smart City Applications,' 4-5, January, 2019, PSG College of Technology, Coimbatore, India.**
- v) Delivered an invited keynote speech on '**Electric Vehicles and Future Prospective**' in '**1st International Conference on Mechanical Innovative and Emerging Trends (MIET)**, Department of Mechanical Engineering, MIET, Meerut, India, 4-5, December, 2018.
 - vi) Delivered an invited **keynote speech** on '**Smart Grid and ICT**' in 'International Conference on Emerging Trends in Computing & Communication Technology,' organized by Department of Computer Science & Engineering, Graphic Era Hill University, Dehradun, India, 17-18th November 2017.
 - vii) Delivered an invited **keynote speech** on 'Economic and Environmental Assessment of Microgrid: A Case study of Mai Sarieng, Thailand' in 'International Conference on Control Computing Communication and Materials (ICCCCM-2016),' organized by United College of Engineering & Research, Allahabad, UP, India, 22nd October 2016.
 - viii) Delivered an invited **keynote address** on 'Scope and Challenges of Smart Grid in Renewable Energy Integration' in 'International Conference on Smart Grid Technology (INCETS'16)', organized by College of Engineering Trikaripur, Kasaragod, Kerala, India, 23rd April 2016.
 - ix) Delivered an invited **keynote address** on 'Distributed Power Grids: A Future Energy Systems of Asia' at International Conference on SMART GRID Technologies, August 6-8, 2015, Amrita School of Engineering, Coimbatore, India.
 - x) Delivered an invited **keynote speech** on 'Smart Grid for Low Carbon Society' in International Conference on Energy, Economics and Environment, 27-28th March, 2015, Noida, India.
 - xi) Delivered an invited **keynote speech** on 'Homegrids to the Smart Grid: A Sustainable Energy Expressway for Green Future' in 'International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE-2015)', 12-13th March, 2015, Noida, India.

Invited expert talks/lectures:

- i) Delivered online an invited **expert talk** entitled 'Smart Grid for Variable Renewable Energy Integration' in a ATAL-FDP (Faculty Development Program) on "Renewable Energy Sources: Challenges, Opportunities and Applications" organized by Department of Electrical Engineering National Institute of Technology Agartala, Tripura, India, 23-27 November 2020.
- ii) Delivered online an invited **expert talk** entitled 'Generation and Transmission Investment Practices in Open Market' in a Short-Term Training Program on '**Recent Trends and Challenges in Power Market with Smart Grid Technology**' at EEE Department, V R Siddhartha Engineering College, Vijayawada, India, 5th November 2020.
- iii) Delivered online an invited **expert talk** entitled 'Financial and Physical Power Trading Mechanism in Open Market' in a Short-Term Training Program on '**Recent Trends and Challenges in Power Market with Smart Grid Technology**' at EEE Department, V R Siddhartha Engineering College, Vijayawada, India, 2nd November 2020.
- iv) Delivered online an invited **expert talk** entitled 'Power System Restructuring Process & Economics' in a Short-Term Training Program (under Faculty Development Program) on **Recent Trends in Power System**

- (RTPS-2020) at Department of Electrical Engineering, GLA University Mathura, India, 13th October 2020.
- v) Delivered an invited **UG lecture** on ‘Recent Trends in Electromagnetic Field and Energy to Industrial Applications’, organized by School of Electrical Engineering, Dept. of Energy & Power Electronics, VIT, Vellore, Tamilnadu, India, 28th January 2020.
 - vi) Delivered full **training course lectures** on “**Smart Grid Commercial, Technical and Market Drivers**” in a training program organized by AIT Extension for personnel from **Power Utilities of Bangladesh**, 17-28 January 2020.
 - vii) Delivered an invited **seminar** on ‘Electric Vehicles and its Performance Improvement’, organized by Electrical and Electronics Engineering, K.L. University, Vaddeswaram, Vijayawada, India, 11th January 2020.
 - viii) Delivered an invited **expert talk** on ‘Impacts of Electric Vehicles on Power Grid Infrastructure’, in a short term course on ‘**Power Converters for e-Mobility**’ organized by Department of Electrical & Electronics Engineering, PSG College of Technology, Coimbatore, 6-10 January 2020.
 - ix) Delivered an invited **UG lecture** on ‘Electric and Magnetic Field Concepts used in Electric Vehicles’, organized by School of Electrical Engineering, Dept. of Energy & Power Electronics, VIT, Vellore, Tamilnadu, India, 1st March 2019.
 - x) Delivered an invited **lecture** on ‘Smart Grid and Renewable Energy Integration’, organized by School of Electrical Engineering, Dept. of Energy & Power Electronics, VIT, Vellore, Tamilnadu, India, 18th July 2018.
 - xi) Delivered an invited **expert talk** on ‘Load Management in Smart Grid’ in ‘Malaviya Research Conclave 2018 (MRC-2018)’, organized by MMMUT Gorakhpur, UP, India, 6–8 July 2018.
 - xii) Delivered an invited **expert talk** on ‘Research Methodology: A Case of AIT’s Practice’ in ‘Malaviya Research Conclave 2017 (MRC-2018)’, organized by MMMUT Gorakhpur, UP, India, 6–8 July 2018.
 - xiii) Delivered an invited **expert talk** on ‘Scope and Challenges of Smart Grid in Renewable Energy Integration’ in ‘Malaviya Research Conclave 2017 (MRC-2017)’, organized by MMMUT Gorakhpur, UP, India during 9–11 July 2017.
 - xiv) Delivered two and half day invited lectures on ‘**Smart Grid**’ in a training program organized by AITE for personnel from Bangladesh Power Utility from 13th to 15th November 2017.
 - xv) Delivered one day invited lectures on ‘**Gas Insulated Substations, Substation Automation and SCADA**’ in a training program organized by AITE for personnel from **Power Grid Company of Bangladesh Ltd. (PGCB)** 21st September 2017.
 - xvi) Delivered an **expert talk** on ‘Distributed Power Grids: A Future Energy Systems’ at Asian Utility Week 2015, 9-10 June, Bangkok, Thailand.
 - xvii) Delivered a talk on ‘**ICT for Smart Grid**’ in ICUE2014 Pre-Conference Training Workshop on Smart Grid and Renewable Energy, 18th March 2014.
 - xviii) I have been invited to deliver several lectures on various power system topics in different trainings program organized by AIT Extension.
 - xix) An electricity seminar on “An Electrical Infrastructure for Sustainable Development in THAILAND”, FRENCH-THAI ELECTRICITY FORUM, 2012, organized by The Trade Commission of French Embassy, Thailand.
 - xx) Sequential M. Tech. Program of Uttar Pradesh Technical University, Lucknow, UP, India, on “Economic operation and control of power systems”.

9. Total number of citations to the faculty member's published work, as shown by SCOPUS.

SCOPUS			Researchgate			Google Scholar		
Citations	h-index	i10-index	Citations	h-index	RG Score	Citations	h-index	i10-index
602	12	17	754	14	22.39	963	16	22

(Scopus link: <http://www.scopus.com/authid/detail.url?authorId=37462123800&origin=cto>)

(Researchgate link: https://www.researchgate.net/profile/Jai_Govind_Singh)

(Google scholar link: <http://scholar.google.co.th/citations?user=yeX22UYAAAAJ&hl=en>)

B. Research grants and sponsored projects

1. List of research grants and sponsored projects. For each grant and project specify the project duration, overhead and faculty time income to the institute.

For each grant and project specify the project duration, overhead and faculty time income to the institute.

Sl. no.	Project Title	Duration	Sponsor	Budget (in THB) (US\$ 1=33.17 THB)	Role
1	Adult Learning Methods for Training, Distance Learning Approaches (in collaboration of TetraTech)	2020-2023	TetraTech / USAID	US\$128270.40	PI
2	International Conference (ICUE 2020)	2019 –2021	Registration revenues, sponsorships and grants	2,075,560 THB	Co-PI
3	Mastering Energy Supply in Isolated Areas	2019-2021	ERASMUS+	3,404,263 THB	Co-PI
4	Smart Solar PV Inverter (part of Bangchak's main project)	2018-2019	BICC@AIT	2,000,000 THB	Co-PI
5	Design and Development of Smart Grid Test Bed for Experimental Verification of Synchrophasor based Algorithms for Wide Area Monitoring, Protection and Control (WAMPAC) for Power Grids with Large Penetration of Renewable Energy Resources	Jan. 2018 to Dec. 2020	DST, India	4.46 Million THB	PI (Thailand side)

6	Bangchak Initiative and Innovation Center at AIT	25 th July 2017 to 24 th July 2022	Bangchak Petroleum Company	50,000,000 THB	Co-PI
7	International Conference (ICUE 2018)	October 2017 – March 2019	Registration revenues, sponsorships and grants	1,909,080 THB	PI
8	USAID Clean Power Asia Program	Oct/2016 to Sept/2021	USAID	-	PI
9	A Project for Sunny Bangchak to Improve the Efficiency of Solar Photovoltaic System	29 Feb – 30 June 2016	Bangchak Solar Energy Company Limited (Sunny Bangchak)	130,625 THB	Co-PI
10	Smart Solar Home Demonstration Project	Sept 1, 2014 – Aug 30, 2015	Industrial Technology Assistance Program (iTap), National Science and Technology Development Agency (NSTDA)	3kW solar panel equipment 500,000 THB	Co-PI
11	Service Providing for Local Arrangement and Meeting Support Services to IEEE PES ISGT 2015	Sept 1, 2014 – May 31, 2016	IEEE PES Thailand Chapter	799,817 THB	Co-PI
12	ICUE 2016 Cogeneration, Small Power Plants and District	Feb 1, 2016 to June 30, 2017	Registration revenues, sponsorships and grants	1,670,000 THB	Co-PI
13	Renewable Powered micro-/mini-grid generation	December 2012 – December 2014	IRENA, Abu Dhabi	241,939 THB	PI
14	Capacity development of the Assam power utilities	October 2012 – December 2013	South Energy Department ADB	294,900 THB	PI

15	Gender inclusive Capacity development	July 2012 - February 2013	South Energy Department ADB	244,285 THB	PI
16	Energy Publications project	January 2014 - December	Subscription, registration etc.	4,185,824 THB	Co-PI
19	AIT GCI Support Electrical Energy	March 2014 – December 2014	ADEME/ France	100,000 THB	PI
20	International Conference (ICUE 2104)	January 2013 – December 2014	Registration revenues, sponsorships and grants	2,210,999 THB	Co-PI
21	PEA-AIT Scholarship 2011	2011-2015	PEA, Thailand	3,548,533 THB	Co-PI
22	Micro-Hydro Solar PV Hybrid System	February 2010 - April 2012	EBARA, Japan	1,786,222 THB	Co-PI

V. Service/Outreach

A. Professional Service

1. Leadership in policy and program development in professional organizations.
Senior Member of *Institution of Electrical and Electronics Engineers (IEEE) Power and Energy System*
2. Participation in organizational responses to policy, practice, or structural issues, which affect the field.
 - i) Track Chair and Member of Technical Program Committee of ‘International Conference on Control, Automation, Power and Signal Processing (CAPS-2021)’ during 10-12 December 2021 at PDPM IIITDM Jabalpur (An Institute of National Importance), India.
 - ii) Panelist Member of International Conference on ‘Recent Challenges and Opportunity in Engineering’ during March 13-14, 2021 at EED, College of Technology & Engineering, Maharana Pratap University of Agriculture & Technology Udaipur-313001(Rajasthan), India.
 - iii) Member of Advisory Board of ‘International Conference on Electrical and Electronics Engineering (ICEEE 2020),’ 14-15 February, 2020 at MMMUT Gorakhpur (UP), India.
 - iv) Member of Technical Program Committee of ‘International Conference on Power Electronics & IoT Applications in Renewable Energy and its Control (PARC 2020),’ 28-29 February, 2020 at GLA University, Mathura, India.
 - v) Member of Technical/Advisory Program Committee of ‘4th International Conference on Information Systems & Computer Networks,’ 21-22 November, 2019 at GLA University, Mathura, India.
 - vi) General co-chair of “5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering UPCON 2018” is jointly organized by Madan Mohan Malaviya University of Technology (MMMUT),

- Gorakhpur (UP) India & University of Ryukyus, Okinawa, Japan from 2-4 November 2018 in MMMUT, Gorakhpur (UP) India.
- vii) Member of International Advisory Committee of ‘International Conference on Artificial Intelligence, Smart Grid and Smart City Applications,’ 3-5 January, 2019 at PSG College of Technology, Coimbatore, Tamil Nadu, India
 - viii) Member of Organizing Committee of ‘4th IEEE Uttar Pradesh Section International Conference on Electrical, Computer & Electronics’ 26-28 October, 2017 at GLA University Mathura, India.
 - ix) ADB through its energy for All Initiative is invited to the Bali Clean Energy Forum on 11-12 February 2016 and related Global Knowledge Partnership Group Workout meeting on 13 February 2016 to be held in Nusa Dua, Bali, Indonesia.
 - x) ADB invited and I attended ‘Global Knowledge Partnership Group Workout for Center of Excellence on Clean Energy Indonesia and beyond’ in Jakarta during 16-18 December 2015.
 - xi) I have attended AIT Retreat meeting held during May 16-18, 2015.
 - xii) I have been invited from Murdoch University, South St, Murdoch, Western AUSTRALIA (January 2014) to provide feedback and suggestion to assist in the development of the curriculum frameworks, to provide advice in how best to offer the programs/degrees developed, as well as in related reports and academic papers/publications.
 - xiii) I have been invited to participate and deliver an electricity seminar on “An Electrical Infrastructure for Sustainable Development in THAILAND”, FRENCH-THAI ELECTRICITY FORUM, 2012, organized by The Trade Commission of French Embassy, Thailand.
 - xiv) I have been invited to participate in a panel discussion on Renewable Energy activities of International Renewable Energy Agency (IRENA), Abu Dhabi, UAE in a workshop of ‘Indo-ASEAN cooperation in Renewable Energy’ organized by India in New Delhi from 5-6th November 2012. Moreover, this workshop’s outcomes were presented to ASEAN–India Ministerial Meeting on Renewable Energy on 7th November for cooperation on renewable energy.
 - xv) I have delivered several talks to personnel of power utilities of India, Pakistan, Bangladesh, and African countries.
3. Organization of training courses, conferences, seminars, and workshops.
- i) Coordinated and delivered a talk in **Webinar on ‘Ensuring Quality and Reliability of Electricity with best practices in Distribution Network’** on 14th July 2020, AIT Extension, Thailand. Around 100 participants attended from the globe but mostly from Bangladesh Power Utilities.
 - ii) Member of the technical organizing committee of the “International Conference and Utility Exhibition on: Energy, Environment and Climate Change (ICUE 2020)”, 20-22 October, 2020, AIT, Thailand.
 - iii) Director of the “**International Conference and Utility Exhibition on: Green Energy for Sustainable Development (ICUE 2018)**”, 24-26 October, 2018, Phuket, Thailand.
 - iv) Organized a training program on ‘**Pre-Conference Training Workshop on Smart Grid and Renewable Energy**’ on 18th March, 2014, Pattaya, Thailand.
 - v) Organized a training program on ‘**Capacity Development Program on New Trends in Power Transmission Planning, Operation and Maintenance in Assam, India**’ during 3 - 7th December, 2012, AIT, Bangkok, Thailand sponsored by Energy Division, South Asia Department, ADB.
 - vi) Organized a training program on ‘**New Trends in Power Distribution Planning and Loss Reduction Strategies for Rural Areas of Assam**’ during 26 - 30th

- November, 2012, AIT, Bangkok, Thailand sponsored by Energy Division, South Asia Department, ADB.
- vii) Organized a training program on ‘**Power Distribution Planning and Loss Reduction Strategies for Rural Areas of Madhya Pradesh, India**’ during 20 - 24th August, 2012, AIT, Bangkok, Thailand sponsored by Energy Division, South Asia Department, ADB.
 - viii) Member of the technical organizing committee of the “International Conference and Utility Exhibition on: Green Energy for Sustainable Development (ICUE 2014)”, 19-21 March, 2014, Pattaya, Thailand.
 - ix) Member of the technical organizing committee of the “2nd AIT-PEA International Conference and Utility Exhibition on Power and Energy Systems: Issues and Prospects for Asia (ICUE 2011)”, 28-30 September 2011, Pattaya city, Thailand.
 - x) Member of the technical organizing committee of the “International Conference on Sustainable Energy Development: Issues and Strategy”, 2-4 June 2010, Chiang Mai, Thailand.
4. Editing or serving on advisory boards of journals
- i) Reviewer of several international journals, e.g.
 - a) Institute of Electrical and Electronic Engineers (IEEE)
 - b) Institution of Engineering and Technology (IET)
 - c) Electric Power Component and Systems (EPCS)
 - d) Taylor and Francis
 - e) Wiley
 - f) Elsevier
 - g) Springer
 - h) Inderscience
5. Government or international organization panels, expert witness, reports to government or international agencies
- i) I have been invited and attended as an expert of Focus Group on ‘Developing the full analytic potential from your Smart Grid program to accelerate innovation and operational excellence’ lead by **SAS Software (Thailand)** in Asian Utility Week 2015, 9-10 June, Bangkok.
 - ii) A peer reviewed study report on ‘Rural electrification using renewable-powered micro/mini grid system: A scenario of Thailand’ and prepared by Jai Govind Singh and, P. Abdul Salam was submitted to **IRENA, Abu Dhabi** in 2014.
 - iii) A peer reviewed study report on ‘Micro-grids in rural areas: Case Study of Indonesia’ and prepared by Maxensius Tri Sambodo, Jai Govind Singh and, P. Abdul Salam was submitted to **IRENA, Abu Dhabi** in 2014.
 - iv) A peer reviewed study report on ‘Expanding Energy Access through Renewable Energy based Mini/Micro Grids Lessons from India’ and prepared by Rohit Kansal, Jai Govind Singh and, P. Abdul Salam was submitted to **IRENA, Abu Dhabi** in 2014.
 - v) A peer reviewed study report on ‘Renewable-powered micro/mini-grid systems: Philippine Experience’ and prepared by Rene Barruela, Jai Govind Singh and, P. Abdul Salam was submitted to **IRENA, Abu Dhabi** in 2014.
 - vi) I was involved in a panel discussion on **Renewable Energy activities of International Renewable Energy Agency (IRENA), Abu Dhabi, UAE** in a workshop of ‘Indo-ASEAN cooperation in Renewable Energy’ organized by India in New Delhi from 5-6th November 2012. Moreover, this workshop’s outcomes were presented to ASEAN–India Ministerial Meeting on Renewable Energy on 7th November for cooperation on renewable energy.

- vii) Participated in a Field trip organized by ‘International Renewable Energy Agency, Abu Dhabi’ in India during November, 2012. The objective of field trip was to study the ‘renewable-powered micro/mini grid system’ for rural electrification and formulate issues papers for the developing countries.

6. Participation in development projects

- i) I am involved in a project “3 kW solar PV installation and testing” at AIT in partnership of NSTDA and IHEM Thailand.
- ii) I worked in implementation of online electrical energy footprint monitoring in in Energy buildings under project ‘AIT GCI SUPPORT ELECTRICAL ENERGY’.
- iii) I was involved in a project “Micro Hydro and PV Hybrid Generation System” implementation at AIT in partnership of EBARA foundation, Japan.

B. Significant Institute Committee Service (Indicate the period of service)

1. Department/Program

- i) Head of Department of Energy, Environment and Climate Change, AIT (January 2021 – December 2022)
- ii) Member of recruitment panel for Lab Technician in Energy (August 2019).
- iii) Member of recruitment panel for Program Officer in EECC (2019).
- iv) Member of recruitment panel for Lab Technician in Energy (December 2018).
- v) Member of promotional committee (November – December 2018).
- vi) Member of recruitment panel for Lab Supervisor in EEM (November 2017).
- vii) Member of recruitment panel for Program Officer in CCSD (May – June 2017).
- viii) Member and Coordinator of the selection committee for the Energy FoS administrative secretary recruitment (December 2013-March 2014).
- ix) Member and Coordinator of the selection committee for the Energy FoS administrative secretary recruitment (March 2014-July 2014).
- x) Member and Coordinator of the selection committee for the Energy FoS administrative lab technician recruitment (2014).
- xi) Member of the selection committee for the PEA scholarship recipients (2010-2012).
- xii) Member of the selection committee for the Energy FoS faculty recruitment (2011).
- xiii) Member of the selection committee for the Energy FoS Laboratory supervisor (2010).

2. School

- i) SERD Faculty representative in the recruitment committee for the technician in SERD office (November 2016-December 2016).
- ii) Member, Task Force for Development of Master Program on Energy and Environment, 2015.
- iii) Member of the selection committee for the AARM FoS administrative secretary recruitment (November 2014-January 2015).
- iv) Member, School Academic Matter Committee (SAMC), 2014-2015.
- v) Member of the joint program development on Energy Business Management (EBM) with SOM, 2012.
- vi) Member of SERD Under Graduate Task Force (UG Task Force) in 2010.

3. Institute

- i) Member, Task Force for Development of One Year Master Program October 2020 - present.
- ii) Member of Faculty Evaluation Panel (FEP) (September 2020 – August 2022)

- iii) Member of Academic Development Review Committee (ADRC) (July 2019 – July 2021)
- iv) Chair of AIT Library Committee (November 2018 – October 2020).
- v) Member of AIT Library Committee (July 2018 – June 2020).
- vi) Member, Under Graduate Program and Review Committee (UGPRC) (November 2016 – 2019)
- vii) Member, Doctoral Program and Review Committee (DPRC) (September 2012 – December 2014)
- viii) Member of Standing Committee on Management of Assets and Facilities (SCOMAF) constituted by AIT President with ToR to review current AIT-Sodexo scope and propose, implement and monitor new structure to manage AIT assets and facilities from July 2014.
- ix) Member of Bid Evaluation Committee on Technical Maintenance Outsourcing Project constituted by AIT President with ToR to analyze and recommend suitable bid for technical maintenance, April 2014.
- x) Member of Bid evaluation committee for ARUC approved project, viz., “Main Distribution Board at Substation No.14”, 2013.
- xi) Member of Task Force constituted by VPA for proposing revised/new electricity tariff for AIT residents, 2013.
- xii) Member of Bid evaluation committee for ARUC approved project, viz., “Main Distribution Board at Substation No.14”, 2013.
- xiii) Member of Bid evaluation committee for ARUC approved project, viz., “Distribution Board at SV3 Area”, 2013.
- xiv) Member of selection committee of Energy faculty recruitment, 2011.
- xv) Member of Research Infrastructure Task Force committee during 2011.

C. Administrative Service (Indicate the period of service)

1. Academic Program

- i) Head of Department of Energy, Environment and Climate Change, AIT (January 2021 – December 2022)
- ii) Chair of Energy Academic Program from January 2019 to December 2020.
- iii) Coordinator of Energy FoS from November, 2013 to December 2015.
- iv) Coordinator of MBA in Energy Business program from November, 2013 to December 2015.
- v) Director of Regional Energy Resources Information Centre, AIT from November, 2013 to December 2015.
- vi) Acting FoS coordinator several times for short periods.

D. Community Service

1. Serving on program committees

- i) Technical committee of the **IEEE ISGT Asia 2021, Brisbane, Australia**, during 5-8 December 2021.
- ii) Track chair and Technical program committee member of the IEEE sponsored International conference CAPS-2021, 10-12 December 2021 at **PDPM IITDM Jabalpur, India**.
- iii) Member, International Advisory Board of International Conference on "Recent Challenges and Opportunity in Engineering" organized by **College of Technology and Engineering, Udaipur, Rajasthan, India**, March 13-14, 2021.
- iv) General co-chair (10th Feb to 4th November 2018), 5th **IEEE** Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (**UPCON-2018**), jointly organized by MMMMUT Gorakhpur India and University of Ryukyus Okinawa, Japan, during 2–4 November, 2018 in MMMUT Gorakhpur India.

- v) Member, International Advisory Committee of International Conference on Computing, Communication and Security, December 4-5, 2015, Pamplermousses, Mauritius.
- vi) Member, Advisory Committee of International Conference on Creativity & Innovations in Technology Development, 1-2nd April 2015.
- vii) Member, Advisory Committee of International Conference on Energy, Economics and Environment, 27-28th March 2015.
- viii) Member, International Program Committee for 2nd International Conference on Green Energy and Technology (ICGET) 5~6 September 2014, Dhaka, Bangladesh.
- ix) Member of SERD Under Graduate Task Force during 2010 (UG Task Force).
- x) Member of India Task Force.
- xi) Member of Research Infrastructure Task Force committee during 2011.

2. Serving as external examiner for doctoral dissertations

- i) Mr. Shaikh Mohammed Suhel's PhD Dissertation on 'Performance Investigation on Six-Phase Induction Motor Drive', **Sardar Vallabhbhai National Institute of Technology, Surat, Gujrat, India, 2020.**
- ii) Ms. Jyothi Varanasi's PhD Dissertation on 'Forecasting of Wind and Solar Power Generations for Enhancing Their Penetrations in Smart Grid', **Delhi Technological University (DTU), New Delhi, India, 2020.**
- iii) Ms. Neethu Mohan's PhD Thesis on 'Parameter Estimation and Forecasting Methods for Emerging Power Grids Using Data-Adaptive Techniques' from Amrita School of Engineering, **Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu, India, 2019.**
- iv) Mr Taskin Jamal's PhD Thesis on 'An Innovative Planning Approach to Improve PV Integration into Remote Electricity Networks' from **Murdoch University, Australia, 2018/2019.**
- v) Ms. R. Meenal's PhD Dissertation on 'Soft Computing Techniques for the Prediction of Global Solar Radiation,' School of Engineering and Technology, **Karunya Institute of Technology and Sciences, Karunya Nagar, Coimbatore, Tamil Nadu, India, 2018.**
- vi) Ms. Mandadi Kalyani's PhD Thesis on 'Measured Signal Based Identification of Inter-Area Oscillations for Generator Coherency and Controlled Islanding in Power Systems' from **Indian Institute of Technology Madras, India, 2018.**
- vii) Mr. Hemang S Pandya's PhD thesis entitled 'Optimized Microgrid Demand Response Management in Smart Grid Paradigm' from **Sardar Vallabhbhai National Institute of Technology, Surat, Gujrat, India, 2017.**
- viii) Mr. Satyendra Singh's PhD thesis entitled 'Optimal Power Flow Using Artificial Intelligence Techniques Incorporating FACTS Devices' from **Dr. APJ Abdul Kalam University, UP, India, 2017.**
- ix) Mr. Shabbiruddin's PhD thesis entitled 'An Exploratory Analysis of Planning and Operation for Power Distribution System' from **Sikkim Manipal University, India, 2017.**
- x) Mr. Sachin Tiwari's PhD thesis entitled 'Series Compensation of Self Excited Induction Generator for Distributed Power Generation' from **Maulana Azad National Institute of Technology, Bhopal, MP, India, 2016.**
- xi) Ms. Pallavee Bhatnagar's PhD thesis entitled 'Linear Current Controlled Maximum Power Point Tracking using DSP Controller' from **Maulana Azad National Institute of Technology, Bhopal, MP, India, 2015.**
- xii) Mr. S.B. Karajgi's PhD thesis entitled 'PV & MSW as Distributed Generation Resources: Modeling, Analysis & Benefit Quantification' from **National Institute of Technology Surathkal, Mangalore, Karnataka, India, 2013.**

- xiii)** Ms. Smita Srivastava's PhD thesis entitled 'Development of Improved Islanding Detection Schemes in Distributed Generation Environment' from **MANIT, Bhopal, India**, 2012.
- xiv)** Mr. Anwar Ahmed Ansari's PhD entitled 'Optimization of Asynchronous Machine Performance Using Fuzzy Voltage Controller' from **MANIT, Bhopal, India**, 2012.
- xv)** Ms. Shafali Jain's PhD thesis entitled 'Productivity and Efficiency Analysis of Electricity Generating Companies in Emerging Indian Scenario' from **MANIT, Bhopal, India**, 2012.

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