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# Dr. Manish kumar

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## CURRICULUM VITAE

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[Google Research Scholar Citations](#)

## CURRICULUM VITAE



**Dr. Manish kumar**

**Asstt. Professor**

**Electrical Engineering Department**

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### Area of Specialization

- Renewable Energy Sources
- Optimization Techniques
- Deregulated Electricity Markets
- Congestion Management of Transmission and Distribution System
- Nodal price Management of Transmission and Distribution System

### Academic

**From March 2012 to 9 August 2018:**

**Ph.D:** **Electrical Engineering**  
Institute: - NIT Kurukshetra

**From July 2009 to June 2011:**

**M.Tech:** **Electrical Engineering** with specialization in Power system  
Institute: - NIT Kurukshetra

**From July 2004 to June 2008:**

**B.E:** **Instrumentation Engineering**  
Institute: - SLIET Longowal, sangrur, punjab  
University: - PTU

**From July 2001 to June 2004:**

**Diploma:** **Electrical Engineering**  
Institute: - Govt. poly. Sirsa  
Board: - Technical Board Haryana

**From July 2000 to June 2001:**

**Matriculation:** - Common Subjects  
School: - R.K.P Nehru park Sr. School Sirsa  
Board: - H.B.S.E

### Thesis/ Project Under-taken in College

- During Ph.D my research topic is **“Some aspects of renewable energy source integration in deregulated electricity market”**.
- During M. Tech my thesis topic is **“Fault on HVDC Transmission line”**.
- Simulation and Implementation of PWM triggering for thyristor using Microcontroller B.E. final year.

### Experience

- Work as a Asstt. Professor (Regular) in Electrical Engg. Deptt. SOE&T, CUH on 10/01/2020 to till.
- One year nine month as a Asstt. Professor (Contractual) in Electrical Engg. Deptt. SOE&T, CUH.
- Five year four month research as a Senior Research Fellow in NIT Kurukshetra.
- Two month teaching as a Asstt. Professor in Doon Vally Engg. College, Karnal.
- One year teaching as a guest Lect. in CDLM Engg.College Paniwala mota Sirsa.

### Achievements

- 15 International journals, 8 international conferences and 6 under review/communicated in Journals have been published. Also to attended the five workshops (list enclosed).
- Gate 2011 Qualified in 73.67% .
- Represented SLIET in inter College Athletics conducted by PTU (2004).
- Participated in paper presentation in Techfest 2001.
- Participated in SLIET open Chess competition.

Achievements in CUH	
Research Paper Published:	<ul style="list-style-type: none"> <li>➤ 2-Scopus index journal with final year B.tech students 1 published / 1 accepted.</li> <li>➤ 4- Scopus index journal accepted.</li> </ul>
Workshop Organized :	<b>Three workshop organized as a coordinator :</b> <ol style="list-style-type: none"> <li>1. 5day workshop on MATLAB (8- 12<sup>th</sup> March,2019)</li> <li>2. 5 Day workshop on Arduino software (26-30<sup>th</sup> April 2019)</li> <li>3. 5Day workshop on Application of Optimization Techniques in power system using GAMS &amp; MATLAB software.</li> </ol>
Event Organized:	<ul style="list-style-type: none"> <li>➤ V.C Trophy organized on 3<sup>rd</sup> May, 2019 as a Coordinator</li> <li>➤ Induction Program of B.Tech 1<sup>st</sup> year students 2019</li> </ul>
Labs Established :	<ol style="list-style-type: none"> <li>1. Control system Engineering Lab</li> </ol>

	<p>2. Analog Electronic Lab</p> <p>3. Microprocessor &amp; interfacing Lab</p>
Under Establishment labs	<p>4. Workshop Lab</p> <p>a. Machine shop</p> <p>b. Carpentry shop</p> <p>c. Fitting shop</p> <p>d. Welding shop</p> <p>e. Foundry shop</p>
➤ Member of BOS in Departmental committee in Electrical Engineering department, SOET.	
➤ Member of administration committee in TCCE conference SOET.	
➤ Member of admission committee in SOET.	
➤ Advisor of B.Tech 1 <sup>st</sup> year in SOET.	
➤ Teacher in- charge of Machine Lab and BEE Lab.	
➤ Member of Medals, Gown committee in Convocation 2020.	
➤ Departmental Coordinator of “Science Day 2020”.	

<b>Reviewer</b>
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- Journal of the Institution of Engineers (India), Springer B
- International Journal of Energy Sector Management
- IEEE Delhi Section

### List of Publications

#### Published in Journals:

1. Manish Kumar, K. S. Sandhu, Ashwani Kumar, “Wind speed variation impact on transmission loss reduction in electricity market”, **Procedia computer science, vol.70, pp-526-537, 2015. (Index in SCOPUS)**
2. Manish Kumar, Ashwani Kumar, K.S. Sandhu, “Optimal Location of WT based Distributed Generation in Pool based Electricity Market using Mixed Integer Non Linear Elsevier **Materials Today: Proceedings, vol.5, pp.445-457, 2018. (Index in SCOPUS):**
3. Manish Kumar, Ashwani Kumar, K.S. Sandhu, “Impact of distributed generation on nodal prices in hybrid electricity market”, **Elsevier Materials Today: Proceedings, vol.5, pp.830-840, 2018. (Index in SCOPUS)**
4. Manish Kumar, Karimula Polliseti, Ashwani Kumar, K.S. Sandhu, “Nodal Prices determination for Radial Distribution System with PV Power Integration using Optimal

Power Flow Approach”, **accepted in Elsevier Materials Today: Proceedings (Index in SCOPUS)**.

5. Manish Kumar, Karimula Pollisetti, Ashwani Kumar, K.S. Sandhu, “Nodal Prices Determination with Wind Integration for Radial Distribution System”, **International Journal of Engineering, Science and Technology, vol.9,no.3,pp.11-21,2017 (Open access/ Non-Paid)**
6. Manish Kumar, Ashwani Kumar, K.S. Sandhu, “Optimal Location of PV based Distributed Generation in Pool based Electricity Market using Mixed Integer Non Linear Programming”, **International Journal of Hybrid information Technology, vol. 9, no-10, pp-335-352, 2016. (Index in SCOPUS)**
7. Manish Kumar, Harish Kumar, Narveer “Impact of Wind Units in Congestion Management for Hybrid Electricity Market”, **Proceedings of International Conference on Advancements in Computing & Management (ICACM) 2019. <http://dx.doi.org/10.2139/ssrn.3462577>(Index in SCOPUS)**
8. Manish Kumar and Nalin Chaudhary “ Saving of Fuel Cost by using Wind + PV based DG in Pool Electricity Market”, **accepted in (TCCE-2019) organized from 28/11/2019 to 30/11/2019 at Central University of Haryana, Mahendergarh. (Index in SCOPUS)**
9. Manish Kumar, Harish Kumar, Narveer, “Congestion Management for Hybrid Electricity Market by using Wind Energy Source”, **accepted in (TCCE-2019) organized from 28/11/2019 to 30/11/2019 at Central University of Haryana, Mahendergarh. (Index in SCOPUS)**

#### **Book Chapter (Index in SCOPUS):**

1. Manish Kumar, Ashwani Kumar, K. S. Sandhu, “ WT based distributed generation location minimizing transmission loss using mixed integer non-linear programming in deregulated electrical market”, **proceedings of the International congress on information and communication technology ICICT-2015, Advances in intelligent system and computing,vol.438, pp.443-358, 9-10 Oct,2015.**
2. Manish Kumar, Ashwani Kumar, K. S. Sandhu, “ PV-based distributed generation location using mixed integer non-linear programming in deregulated electricity market”, **Advanced computing & communication technology ICACCT 2015, Advances in intelligent system and computing,vol.452, pp.535-547,Nov, 2015.**

#### **International Journal**

1. Manish Kumar, Manjeet , Pooja Khatri, “Study of faults on HVDC transmission lines”, **Golden Research Thought, Volume3, Issue-8, Feb-2014.**

2. Manish Kumar, “Transient Stability Enhancement of Two Area System using FACTS Controller”, Golden Research Thought, Volume3, Issue-9, March-2014.
3. Manish Kumar, “Comparative study and applications of FACTS devices in power system”, Indian Streams Research Journal ISSN 2230-7850) Volume-4 | Issue-2 | March-2014.
4. Manish Kumar, “Power quality improvements using DSTATCOM”, Research Directions Volume 1, Issue 10,PP-1-8, April 2014

#### **International conference:**

1. Ashwani Kumar, Manish Kumar and K. S. Sandhu, “Optimal DFIG Location and Impact of Load Model in Pool Electricity Market”, **Proceedings of the 2014 International Conference on Power Systems, Energy, Environment (PSEE 2014), Interlaken, Switzerland, pp.149-156, Feb. 2014.**
2. Manish Kumar, Ashwani Kumar, K. S. Sandhu, “Optimal Location and Sizing of Distributed Generation Sources considering Voltage Control Areas”, **International Conference on Emerging Trends in Electrical, Electronics, Instrumentation & Computer Engineering (ETEICE), Bhilai Institute of Technology, Raipur & Institute for Research and Development India, Bhubaneswar, 27<sup>th</sup> march, 2014.**
3. Manish Kumar, K. S. Sandhu, Ashwani Kumar, “Wind generation integration impact on fuel cost saving in pool based electricity market”, **5<sup>th</sup> international conference on advance in energy research (ICAER) held at IIT Bombay , 15-17 Dec 2015.**
4. Manish Kumar, Manjeet, “Comparative analysis of STATCOM and UPFC device in power system”, **International conference on advances in Computing & Communication Engineering 22-23 Feb. 2014.**
5. Manish kumar, K.S Sandhu, Ashwani Kumar, “Simulation analysis and THD Measurements of Integrated PV and Wind as Hybrid System Connected in Grid ”, **6<sup>th</sup> IEEE India International Conference on Power Electronics(IICPE-2014), National Institute of Technology, Kurukshetra, 8-10 dec, 2014.**
6. Manish Kumar, Ashwani Kumar, K.S. Sandhu, “PV-WT based distribution generator location minimizing transmission loss in Pool/Bilateral electricity market model”, **RAEREST 2016, Procedia Technology, vol.25, pp-692-701, 2016. Elsevier**

#### **Under review/communicated in Journals (SCI/SCIE)**

1. Manish Kumar, Ashwani Kumar, K.S. Sandhu, “Hydro and Wind Units participation for Congestion Management in Deregulated Electricity Market” **International Journal of Energy Sector Management (revision submitted).**

2. Manish Kumar, Ashwani Kumar, K.S. Sandhu, "Impact of harmonic load on the nodal prices in the distribution system with renewable energy sources", **Journal of the Institution of Engineers (India), Springer: Series B (revision submitted)**.
3. Manish Kumar, Ashwani Kumar, K.S. Sandhu, "Wind and PV Units participation for Congestion Management in Deregulated Electricity Markets", **Journal of the Institution of Engineers (India), Springer: Series B**.
4. Manish Kumar, Ashwani Kumar, K.S. Sandhu, "Optimal Power flow model for nodal prices determination of Radial and Mesh Distribution system with wind based distributed generation", **Journal of the Indian Academy of Sciences, SADHANA, Springer**.
5. Manish Kumar, Ashwani Kumar, K.S. Sandhu, "Nodal Price determination of solar power integrated Radial and Mesh Distribution system Using Optimal Power Flow model", **AIP Journal of Renewable and Sustainable Energy**.
6. Manish Kumar, Ashwani Kumar, K.S. Sandhu, "Impact of D-STATCOM on Nodal Prices in Distribution System with Harmonic Load", **AIP Journal of Renewable and Sustainable Energy**.

#### Workshop attended

S.NO	Title	Held on	Place
1.	Society of Instrumentation Technocrats, MATLAB	17 <sup>TH</sup> March-11 <sup>th</sup> April 2006	SLIET Longowal
2.	Introduction to Research Methodologies conducted by IIT Bombay & MHRD	25 <sup>th</sup> June to 04 <sup>th</sup> July, 2012	NIT Kurukshetra
3.	Aakash for education conducted by IIT Bombay & MHRD	10-11 Nov, 2012	NIT Kurukshetra
4.	Short term course on Wind energy conversion system conducted by NIT Kurukshetra	07-09 Sept, 2012	NIT Kurukshetra
5.	Short term course on Economic operation of power systems with MATLAB and GAMS conducted by NIT Kurukshetra	6-10 <sup>TH</sup> July, 2015	NIT Kurukshetra
6.	One day multidisciplinary national seminar on new frontiers and emerging issues of research conducted by National college of education, sirsa	06 <sup>th</sup> April, 2016	National college of education, sirsa
7.	Signal Processing in Power System Protection & Control conducted by NIT Kurukshetra	17-22 July, 2017	NIT Kurukshetra