Dr. Vasundhara Mahajan, Assistant professor,

Department of Electrical Engineering, Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat – 395007

Contact: +91-261-2201670
vmahajan@eed.svnit.ac.in
vasu.daygood@gmail.com

Experience:

- 1. From Sept. 2000- Oct. 2007 (07years) at MP Christian College of Engineering and Technology, Bhilai, Chhattisgarh.
- 2. From Oct. 2007 onwards at SVNIT Surat, Gujarat.

M. Tech. Guidance:

02 completed and 02 ongoing.

Academics:

- 1. Bachelor of Electrical Engineering from NIT Raipur (formerly GEC), Chhattisgarh in 1999.
- 2. M. Tech. in Power System Engineering from IIT Roorkee, Uttarakhand, in 2005.
- 3. Ph. D. from IIT Roorkee, Uttarakhand in 2014.

Thesis:

- M. Tech. dissertation on "Transient stability improvement of single machine infinite bus system and multi-machine system using FACTS controller", under the guidance of Prof. Vinay Pant and Dr. Ramnarayan Patel, at IIT Roorkee in 2005.
- 2. Ph. D. Thesis on "Power quality improvement using multilevel inverter based hybrid power filter", under the guidance of Prof. Pramod Agarwal and Prof. Hari Om Gupta, at IIT Roorkee from 2010-2013.

Short term courses attended:

S. N.	Title	Institute/Organization	Duration
1	VLSI & Embedded Systems	Central Institute of Tool Design, Hyderabad	17-22 Dec. 2007
2	Recent Trends in Industrial Automation	EED, SVNIT Surat	02-04 Jan. 2008
3	Induction Training	EQUATE New Delhi, SVNIT Surat, Gujarat	15-17 Jan. 2008
4	Practical Variable Speed Drives for Instrumentation & Control	IDC Technologies, Pune	10-11 Mar. 2008

5	Electric Power Quality: Monitoring, analysis & Mitigation	IIT Kanpur, Kanpur	07-11 Apr. 2008
6	Pedagogy Training, Training on Research Methodology in Engineering	EQUATE New Delhi, SVNIT Surat, Gujarat	12-17 May 2008
7	FACTS Devices and Applications	EED, MANIT Bhopal	22-27 Jun. 2008
8	Recent Trends in Power Electronics	EED, SVNIT Surat	07-11 July 2008
9	Mulitlevel Inverter and its applications	IIT Roorkee	30 Dec03 Jan. 2014

Publications:

International Journal: (05)

- 1. Vasundhara Mahajan, Pramod Agarwal, Hari Om Gupta, "An Artificial Intelligence based Controller for Multilevel Harmonic Filter," International Journal of Electrical Power & Energy Systems, *Elsevier, Volume 58, June 2014, Pages 170–180.*
- 2. Vasundhara Mahajan, Pramod Agarwal, Hari Om Gupta, "Implementation of High Voltage Multilevel Harmonic Filter based on Rotated Carrier Modulation and Artificial Intelligence based Controllers", The Arabian Journal for Science and Engineering, *Springer*. (Accepted for publication)
- 3. Vasundhara Mahajan, Pramod Agarwal, Hari Om Gupta, "dSPACE Implementation of Cascaded H-bridge Inverter for Harmonics Minimization Using Artificial Intelligence," COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, *Emerald*. (Accepted for publication).
- 4. Vasundhara Mahajan, Pramod Agarwal, Hari Om Gupta, "Rotated Carrier Level Shifted Modulation for Multilevel Inverter and its Implementation through dSPACE," *IEEE* Journal of Emerging and Selected Topics in Power Electronics. (Resubmitted after review) (March 2014).
- 5. Ramnarayan Patel, Vasundhara Mahajan, Vinay Pant, "Modeling of TCSC controller for transient stability improvement", International Journal of Emerging Power Systems, Vol. 7, Issue 1, 2006, Article 6, pp1-17.

International Conference: (05)

- 6. Vasundhara Mahajan, P. Agarwal, and H. O. Gupta, "Simulation of instantaneous power theory for active power filter," in 2012 *IEEE* 2nd International Conference on Power, Control and Embedded Systems (ICPCES), MNIT Allahabad, India, pp. 1-4.
- 7. Vasundhara Mahajan, P. Agarwal, and H. O. Gupta, "Simulation of shunt active power filter using instantaneous power theory," in 2012 *IEEE* Fifth Power India Conference, DBCRUST, Murthal, India, pp. 1-5.

- 8. Vasundhara Mahajan, "Power System Stability Improvement with Flexible A.C. transmission Systems (FACTS) Controller", IEEE POWERCON 2008, Oct. 12-15, 2008, New Delhi, India.
- 9. Vasundhara Mahajan, "Thyristor controlled series compensator", IECON 2006, Mumbai, India.
- 10. Vasundhara Mahajan, "TCSC controller for transient stability enhancement", CERA 2005, IIT Roorkee, India.

National Conference: (06)

- 11. Vasundhara Mahajan, "Multi-machine power system modeling with TCSC controller for transient stability improvement", Nucone Dec. 2007, Nirma Institute of Technology, Ahmedabad, India.
- 12. Vasundhara Mahajan, "Recent trends for transient stability enhancement: An overview", Technologia 2007, MPCCET Bhilai, Chhattisgarh, India.
- 13. Vasundhara Mahajan, "Automatic generation control and simulation", Technologia 2007, MPCCET, Bhilai, Chhattisgarh, India.
- 14. Vasundhara Mahajan, "Modeling of thyristor controlled series compensator", Nucone Dec. 2006, Nirma Institute of Technology, Ahmedabad, India.
- 15. Vasundhara Mahajan, "Artificial intelligence and power systems: A detailed study", AEE Nov. 2006, MITS Gwalior, Madhya Pradesh, India.
- 16. Vasundhara Mahajan, "FACTs controller for transient stability improvement of single machine infinite bus system", Technologia 2005, MPCCET Bhilai, Chhattisgarh, India.