CURRICULUM VITAE

Archana Sharma
PhD IIT Mandi

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Objective:

Seeking for a career to make engineers, who are unbounded in terms of knowledge and passionate about doing some contribution in their field . I am ready to share my knowledge and experiences with my students as to teach them and guide them to choose right path in their journey of learning.

Areas of Interests:

- Power Quality
- Power Electronics
- Electrical Machines
- Control System (both Linear and Non-Linear)
- Computationally Intelligent Techniques

Qualification:

- Pursuing PhD from IIT Mandi, Himachal Pradesh, India.
- M.Tech. (CGPA-8.72) from Delhi Technological University (formerly Delhi college of engineering), Delhi, India.
- (2008-2012) B. Tech. in Electrical and Electronics Engineering (80.36%) from Uttar Pradesh Technical University, Lucknow, Uttar Pradesh, India.
- (2008) SSC (64.4%) from a government school of Delhi, India.
- (2006) HSC (79.4%) from a government school of Delhi, India.

Papers and Articles:

- Archana Sharma, B. S. Rajpurohit, Samar Agnihotri, and S. N. Singh, " *Evaluation of New Power Quality Indices Proposed for Estimation of Economic Loss Due to Poor Power Quality*", 2016 IEEE Region 10 Conference (TENCON) — Proceedings of the International Conference, 978-1-5090-2597-8/1, pp. 3631-34. (Published)
- Archana Sharma, Bharat Singh Rajpurohit, and Lingfeng Wang, "DG Integration with Power Quality Improvement Feature for Smart Grid" Proceedings of Fifth International Conference on Soft Computing for Problem Solving, 978-981-10-0451-3_80, pp 901-913. (Published)
- Archana Sharma, B. S. Rajpurohit, Samar Agnihotri, Naran Pindoriya, and S. N. Singh, "*A Review on Power Quality Compatibility of Renewable Energy Sources in Smart Grid*

Environment in Indian Power System ", Renewable and sustainable energy reviews, Elsevier Journal. (Communicated)

- Archana Sharma, B. S. Rajpurohit, S. Agnihotri, and S. N. Singh, " A Review on Economics of Power Quality : Impact, Assessment and Mitigation", Renewable and Sustainable Energy Reviews, Elsevier Journal. (Published)

Technical and Computational Skills:

- MATLAB/SIMULINK
- National Instrument's Labview
- P-spice
- Excel Solver
- Origin
- Operating Systems:- MS DOS, Windows
- RTDS
- OPAL-RT
- LABVIEW

Courses Assisted:

- Machine Laboratory
- DSP Laboratory
- Linear Integrated Circuit Laboratory
- Power System Laboratory
- Research Laboratory for B.Tech and M.Tech students

Instruments Exposures:

- DSP kit
- DSPACE
- RTDS
- OPAL-RT
- LABVIEW

Project Profile:

1. **PhD Dissertation:** In PhD, I am working in *Smart Multi-dimensational Smart Energy Grid for Indian Scenario* Project (Funded by DST). In this project, my task is to design an algorithm for the optimization of the Performance of DSTATCOM; by including, switching frequency, harmonic elimination and rating of DSTATCOM. In other part, I am trying to develop an control algorithm based on Sparse Representation to analyze the magnitude and type of harmonics present in the power network due to any kind of load.
2. **M. Tech Major Project :** In M.Tech, I work for the Hardware Implementation of Active Power Filter (DSTATCOM based). Due to the advancements in power electronic

technologies there is a boost in power electronics in each area of electrical and electronics engineering. As power Electronics Comes into picture, one always worried about Power Quality problems. Harmonics are one of the prime reasons of concern. My Project work deals with Elimination of these harmonics in currents using STATCOM as Active power Filter with computational intelligence techniques as control strategies.

3. **Fuzzy Logic Based Differential protection Schemes of Transformer (B. Tech. Project):** The power system protection is the most important part of power system. Transformer is one of the critical members of power system. So its protection always should be ensured for proper functioning of power system. More Accurate and fast functioning of relays was achieved in the project.

Workshops and conferences:

- Participated in Research Fair Anusandhan, 2017 in IIT Mandi and presented a poster.
- Participated in "Next Generation Active Distribution Networks to Empower Future Low Carbon India Society" 3 days workshop in IIT Mandi.
- Participated in "6th IEEE India International Conference on Power Electronics" 3 day conference in NIT Kurukshetra.
- Participated in " Smart micro grid for autonomous zero net energy buildings" 3 days workshop in IIT Mandi.
- Attended three days IEEE conference on Solar energy organized by ITS engg. College in Greater Noida.

Training:

- Attended 1 week GIAN course for Adjustable Speed Drives: Problem, Solution and Application.
- Attended 1 week training for RTDS.
- 30 days training on Power Monitoring & Controlling Thorough PLC SCADA in Bhushan Steel Ltd.

Achievements:

- Each year stood first position in B.Tech and got reward of Rs. 10,000.
- Qualified GATE 2 times with GATE score 623 and 514 in year 2012 and 2014.

Personal profile:

Name: Archana Sharma
Sex: Female
Languages: English, Hindi
Nationality: Indian

Current Address: 80/21, Rajendra Nagar, Industri Area , Mohan Nagar Ghaziabad, 201007
Date Of Birth: January 14th, 1991

References:

Prof. Madhusudan Singh
HOD Electrical Engg. Deptt.
DTU, Delhi
Email: madhusudan@dce.ac.in

Dr. Bharat Singh Rajpurohit
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(Chairperson),
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Date: 23th July, 2017

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