

## **RESUME**

Prof. Dr. D. M. Sonje  
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Electrical Engineering Department  
GES'S R H Sapat College of Engg. Nashik, Maharashtra,  
India.  
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1. **Full Name** : Prof. Dr. Deepak Murlidhar Sonje
2. **Present Position** : Associate Professor  
Department of Electrical Engineering  
Gokhale Education Society's R. H. Sapat College of  
Engineering, Management Studies and Research, Nashik-09.
3. **Date of Birth** : 1<sup>st</sup> June, 1976
4. **Educational Qualifications**

### **Education**

- Passed High School (10<sup>th</sup>) certificate examination with first class and distinction (79.81%)
- Passed Higher Secondary School (12<sup>th</sup>) examination with first class and distinction (80.83%)
- Graduated in Electrical Engineering (BE) in the year 1999 with first class and distinction (70.07%) from Government College of Engineering Karad, Shivaji University, Kolhapur, Maharashtra.
- Postgraduate (ME) in Electrical Engineering (Control System) in 2009 with First class (64%) from KKWIEER, Nashik, Savitribai Phule Pune University, Pune.
- Ph.D awarded in Electrical Engineering with thesis titled, "Advanced Techniques for Fault Detection and Classification in Induction Motor", from Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat, Gujarat in June-2019.

## 5. Teaching Experience: 22 Years

Designation	Employer	From	To
Associate Professor	GES's RHSCOEMS&R, Nashik	05/09/2019	Continuing
Assistant Professor	GES's RHSCOEMS&R, Nashik	08/08/2010	04/09/2019
Senior Lecturer	N.D.M.V.P's College of Engineering, Nashik	26/07/2007	07/08/2010
Lecturer	N.D.M.V.P's College of Engineering, Nashik	23/06/2005	25/06/2006
Lecturer	S.N.J.B. College of Engineering, Chandwad, Nashik	June 2004	May 2005
Lecturer	K. K. W. College of Engineering, Nashik	10/09/2001	31/05/2004
Lecturer	V.V. Patil Polytechnic, Loni	01/11/1999	13/09/ 2001

## 6. Industrial Experience: 1.1 Year

Worked as a Junior Engineer in Maharashtra State Electricity Distribution Company Limited (MSEDCL) from June 2006 to July 2007.

### Job Profile:

- To give uninterrupted power supply and best service to the consumer.
- To maintain LT line, HT line and transformer, reduce the breakdown and reduce the failure rate of distribution transformer.
- To recover the arrears from the consumer and increase the collection efficiency.

## 7. Administrative Experience

Post Held	From	To
Assistant Warden in boys hostel at Pravara Polytechnic, Loni.	September 1999	August 2001
NSS Program Officer	July 2011	June 2014
Committee Member of Central Assessment program (CAP)	April 2012	
Internal Senior Supervisor	May-June 2012, Oct-Nov 2018	
External Senior Supervisor	GG COE and PVG COE, Nashik	
ARC Coordinator	For lateral entry admissions	
NAAC Criteria-V Coordinator	RHSCOEMS&R, Nashik	

NBA Criterion- IV Coordinator	RHSCOEMS&R, Nashik
PG Coordinator	Since 2014
EPSA- Departmental Chapter Coordinator	Since 2011

## 8. Memberships of Professional Bodies

Associate member of Institute of Engineering and Technology (IET)

## 9. Other Activities and Achievements

- Reviewer of the international journal for “**Computation and Mathematics in Electrical and Electronic Engineering (COMPEL)**” (SCIE and Scopus Indexed - Emerald Publication).
- Reviewer of the international journal for “**Journal of Operation and Automation in Power Engineering (JOAPE)**” (Scopus Indexed - University of Mohagheh Ardabili).
- TPC member of the IEEE International Conference and Workshops on Recent Advances and Innovation in Engineering (ICRAIE 2021) organized by Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA (UiTM) Kedah Branch, Kedah, Malaysia, in collaboration with Poornima College of Engineering, Rajasthan Jaipur, India and IEEE Chapters of Poland as well as Malaysia.
- Invited as a reviewer in IEEE International Conference on Smart Technologies for Power, Energy and Control (IEEE STPEC 2021).
- Completed the course on the self-paced training course MATLAB Onramp.
- Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Control Techniques in Electric Vehicles and Battery Management" from 04/10/2021 to 08/10/2021 at VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY.
- Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Recent Advances in Control Systems-2021" from 18/10/2021 to 22/10/2021 at Madan Mohan Malaviya University of Technology Gorakhpur.
- Reviewer for **MVP Journal of Engineering Sciences**.
- Reviewer for papers in electrical engineering in international conference organized by SITRC, Nashik.
- Session chair & reviewer for papers in electrical engineering in international conference “ICCCC-2017” organized by Matoshri College of Engineering, Nashik.

- Judge in National conference on “Power System & Renewable Energy System” organized by KKWIEER, Nashik.
- External Subject Expert of University Staff Selection Committee at SITRC, Nashik.
- Internal Subject Expert University Staff Selection Committee at RHSCOEMSR, Nashik.
- External Subject Expert in Electrical Engineering for local selection committee at Logmieer, Nashik, 2019.
- External Subject Expert in Electrical Engineering for local selection committee at Logmieer, Nashik, 2021.
- External Subject Expert in Electrical Engineering for local selection committee at KKWIEER, Nashik, 2021.
- External Subject Expert in Electrical Engineering for local selection committee at Sanjeevani College of Engineering, Kopargaon, 2021.
- Invited as external examiner for M. Tech Dissertation at KCE Society’s College of Engineering & Information Technology, Jalgaon.
- PG Teacher recognition by Savitribai Phule Pune University, Pune.
- Cracked the Ph. D entrance of SPPU Pune, Amravati and Nagpur University.
- Recipient of Middle school and high school scholarships.
- Felicitation for award of Ph.D degree on the behalf of the Gokhale Education Society.
- The Silver certificate is awarded for successfully completing the one week FDP in “Advanced Linear Continuous Control System: Applications with MATLAB Programming and Simulink” in NPTEL Online Certification.
- Awarded the Second Prize in Technical Test Competition at GCOE, Karad.

#### **10. Research Interest**

Digital Signal Processing

Fault Detection and Diagnosis in induction motor

Machine learning techniques

#### **11. Research Guidance**

##### **Dissertations/Projects**

- ME Dissertations
 

Completed	:	4
In Progress	:	2

- B.E. Projects
- Completed : 10
- In Progress : 2

## 12. Research Papers

Research Papers published in National/International Journals or presented in National/International Conferences: 15

### Sponsored Research Projects and Grants

Project Title/National Seminar	Sponsoring Organization	Duration	Principal Investigator	Amount (Rs. In lacs)
Fault Diagnosis of Induction Motor	SPPU, Pune	2014-2016	Prof. Sonje D. M.	2.10
Energy Storage System: Design and Challenges	SPPU, Pune	2019-20	Prof. Sonje D. M.	2.00

## 13. Courses Taught at UG level

- Control System I                      Control System II
- Basic Electrical Engg.              Electrical Technology
- Network Analysis                      Material Science

## 14. Courses Taught at PG level

- Digital Signal processing and its applications
- Advanced Control System
- Modeling and Analysis of Electrical Machines

## 15. Research Publications

### List of papers published/accepted/communicated

#### Journal papers:

1. Deepak M. Sonje, P. Kundu, and A. Chowdhury, "A Novel Approach for Sensitive Inter turn Fault Detection in Induction Machine under Various Operating Conditions", published in *Arabian Journal of Science and Engineering (AJSE), Springer (SCIE and Scopus Indexed Journal)*. vol. 44, pp- 6887-6900, 2019.
2. Deepak M. Sonje, P. Kundu, and A. Chowdhury, "An Innovative Approach for Multiple

- Faults Detection in Induction Motor Using Statistical Time Measures and Random Forest Classifier”, *International Journal of Control Theory and Applications (Scopus Indexed Journal)*, vol.10, pp.317-325, 2017.
3. Deepak M. Sonje, P. Kundu, and A. Chowdhury, “Intelligent Approach for Multiple Bearing Fault Detection in Three Phase Induction Motor using Random Forest Algorithm”, published in *Journal of Interdisciplinary and Multidisciplinary Research (Scopus Indexed Journal)*.
  4. Deepak M. Sonje, P. Kundu, and A. Chowdhury, “A Novel Approach for Multi-Class Fault Diagnosis in Induction Machine Based on Statistical Time Features and Random Forest Classifier”, is published in *Material Science and Engineering(Scopus Indexed Journal) Institute of Physics (IOP publishing)*.
  5. MVR Megha Dokale, Deepak Sonje, “Different MPPT Controlling Techniques for Standalone Solar System for Improvement in Power Generation”, published in **International Journal of Engineering and Advanced Technology (IJEAT)**.
  6. Ghule Sachin, Mushir Uddin, Sonje Deepak, “Use of Modular Multilevel Cascade Inverter as a Method to Speed-Sensorless Start of an Induction Motor Drive”, published in **International Research Journal of Engineering and Technology(IRJET)**.
  7. Adapa Saikiran S. and Deepak M. Sonje, “Stator Inter-turn Short Circuit Fault Diagnosis by Current Concordia Pattern Using Fuzzy for Decision Evaluation”, published in **International Journal of Control Theory and Applications (IJCTA)**.
  8. Deepak Sonje, Yash Bangali, “Design and analysis of 3 phase induction motor using Ansys Maxwell” published in **Journal of Science and Technology**, vol.6 , pp.318-324, 2021.
  9. Deepak Sonje, Alpana Sonje, Harsha Patil, “Bank Note Authentication And Classification Using Advanced Machine Algorithms” published in **Journal of Science and Technology**, vol.6 , pp.285-290, 2021.
  10. Gaurav Shinde, Deepak Sonje, “ A Consequence of partial shading on the attribute curves of a photovoltaic panel”, Publishing Services by **Elsevier B.V. on behalf of KeAi Communications Co. Ltd.**

#### **Conference papers:**

1. Deepak M. Sonje, P. Kundu, and A. Chowdhury, “Fault Diagnosis of Induction Motor Using Parks Vector approach”, in **IEEE International Conference on Advances in Electrical Engineering (ICAEE-2014), held at VIT Vellore, India**, pp.1-4, December 2014.
2. Deepak M. Sonje, P. Kundu and A. Chowdhury, “Detection and Discrimination of

Simultaneous Stator Inter-Turn and Broken Rotor Bar Faults in Induction Motor”, in **IEEE International Conference on Condition Assessment (CATCON-2015) at CPRI Bangalore, December 2015 .**

3. Deepak M. Sonje, P. Kundu and A. Chowdhury, “ A Novel Approach for Multi Class fault Detection in Induction Motor Based on Statistical Time Features and Random Forest Classifier ”, in **International Conference on Advanced Material Technologies (ICAMT-2016)** held at Visakhapatnam, India.
4. Deepak M. Sonje, P. Kundu and A. Chowdhury, “An Innovative Approach for Multiple Faults Detection in Induction Motor Using Statistical Time Measures and Random Forest Classifier ”, in **International Conference on Sustainable Computing Techniques in Engineering, Science and Management (SCESM -2017)** held at Belgavi, India.
5. Deepak M. Sonje , “Energy Conservation in Educational Institute” in National Conference in **Power System & Energy Management** at IETE, Bhaddal, Punjab.
6. Deepak M Sonje, Dr. R. K. Munje, “Rotor Fault Diagnosis of Induction Motor using Motor Current Signature Analysis” in **International Conference on Computational Intelligence Applications ICCIA - 2012** at SIERT, Nashik.
7. Deepak Sonje, “ Fault Diagnostic methods of Induction Motor” in **regional research conference INNOVISION -2015** at Savitribai Phule Pune University, Pune.
8. Deepak Sonje, “ Fault Diagnostic methods of Induction Motor” in **regional research conference INNOVISION -2016** at Savitribai Phule Pune University, Pune.
9. Pratik Sarode, Venkateswara Reddy and Deepak Sonje, “A Modified Torque Control Technique for Load Sharing Application Using V/F Induction Motor Drives”, in **7th International Conference on Electrical Energy Systems-2021 (ICEES 2021), held at Chennai.**
10. Deepak Sonje, Yash Bangali, “Design and analysis of 3 phase induction motor using Ansys Maxwell” in **National Conference on Cognitive Computing 2021** organized by Sinhgad College of Engineering, Pune.
11. Deepak Sonje, Alpana Sonje, Harsha Patil, “Bank Note Authentication And Classification Using Advanced Machine Algorithms” in **National Conference on Cognitive Computing 2021** organized by Sinhgad College of Engineering, Pune.
12. Gaurav Shinde, Deepak Sonje, “ A Consequence of partial shading on the attribute curves of a photovoltaic panel”, in **International Conference on Computing Systems and Its Applications (ICCSA-2021)**, at AIT Bangalore.
13. Deepak Sonje, Yash Bangali, “ Efficiency Optimization of three phase Induction Motor using Response Surface Methodolgy”, in **3<sup>rd</sup> International Conference on Intelligent**

**Computing, Information and Control Systems (ICICCS-2021)**, Organized by CARE College of Engineering, Trichi, India. 21945357

## **16. Invited Talks**

- Invited to conduct **Academic Audit** at MET's College of Engineering, Nashik, March- 2019.
- Delivered expert talk on **Application of AI and ML in fault detection and classification in electrical machines** in National Level Virtual Students Conference on AI, ML and IoT Applications in Electrical Engineering on 20th – 21st November, 2020 at KKWIEER, Nashik.
- Expert lecture on “**Condition Monitoring of Electrical Machines using Soft Computing Approaches**” in AICTE approved FDP on “**Advances in Power Converters, Control of Renewable Energy Sources**” at KCE Jalgaon, Dec-2019.
- Expert lecture on “**Energy Saving and Awareness of Star Labeling**” at Katgara Polytechnic, Sep-2019.
- Invited to conduct **Academic Audit** at MET's College of Engineering, Nashik, Sep- 2019.
- Invited to conduct **Academic Audit** at MET's College of Engineering, Nashik, March- 2020.

## **17. List of Programs Coordinated**

- Organized Faculty Development Program on “**Energy, Power Quality Management and High Voltage Engineering**”, sponsored by IET Local Network , Nashik at R H Sapat College of Engineering, Management Studies and Research, Nashik.
- Organized three day workshop on “**Basics of Industrial Automation using PLC and SCADA**”, held during September 23-25, 2016 at R H Sapat College of Engineering, Management Studies and Research, Nashik..
- Organized two day workshop on “**Renewable Energy System : Design and Challenges** , held during August 09-10, 2019 at R H Sapat College of Engineering, Management Studies and Research, Nashik.
- Organized two day workshop on “**Energy Storage System: Design and Challenges**” , held during August 09-10, 2019 at R H Sapat College of Engineering, Management Studies and Research, Nashik.
- Organized Online Quiz on **Process Control and Instrumentation** at R H Sapat College of Engineering, Management Studies and Research, Nashik.

<h2><b>18. List of Programs attended</b></h2>
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<ul style="list-style-type: none"> <li>• Short term training program on “<b>Advances in High Voltage Technology</b>” at Sardar Vallabhbhai National Institute of Technology, Surat.</li> </ul>
<ul style="list-style-type: none"> <li>• Short term training program on “<b>Advances in Electrical Machines</b>” at Sardar Vallabhbhai National Institute of Technology, Surat.</li> </ul>
<ul style="list-style-type: none"> <li>• Short term training program on “<b>Recent Trends in Condition-Monitoring of Electrical Equipments</b>” at K. K. Wagh College of Engg Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• Short term training program on “<b>Intelligent Control and Automation</b>” at PIET Pune.</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on “<b>Switchgear &amp; Automation</b>” organized by IEE, IEEE and K.K. Wagh College of Engg at Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on “<b>Power Quality</b>” organized by IEE, IEEE and K.K.Wagh College of Engg at Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on “<b>Recent Trends in Electrical Power System</b>” at P.V.G. College of Engineering, Pune.</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on “<b>Basics of Industrial Automation using PLC and SCADA</b>” at R H Sapat College of Engineering, Management Studies and Research, Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on “<b>Basics of Industrial Automation using PLC and SCADA</b>” at R H Sapat College of Engineering, Management Studies and Research, Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• Faculty Development Program on <b>Energy, Power Quality Management and High Voltage Engineering</b> sponsored by IET local network Nashik, at R H Sapat College of Engineering, Management Studies and Research, Nashik..</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on “<b>Revision of Syllabus BE (Electrical)</b> ” at K.K. Wagh College of Engg at K. K. Wagh College of Engg Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on Introduction to “<b>PSCAD and ETAP</b>” software organized by university and K.K. Wagh institute of Engg at Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• Workshop on “<b>Disaster Management</b>” organized by Maharashtra University of Health Sciences, Nashik and Pune University at MUHS Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• National conference on “<b>Power System &amp; Energy Management</b>” at IETE, Bhaddal, Punjab.</li> </ul>
<ul style="list-style-type: none"> <li>• Seminar on <b>Electronics – Waste Management</b> at N.D.M.V.P.S College of Engg. Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>• National conference on “<b>Recent Trends in Instrumentation &amp; Control Engg</b>” at TIET Patiyala.</li> </ul>
<ul style="list-style-type: none"> <li>• National workshop on “ <b>Emerging Technologies in Smart Grid</b>”, at K.K. Wagh College of Engg at K. K. Wagh College of Engg Nashik.</li> </ul>

<ul style="list-style-type: none"> <li>National Seminar on “ <b>Emerging New Dimensions of Higher Education in India</b>, at R H Sapat College of Engineering, Management Studies and Research, Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>Workshop on <b>Central Audit Pre-planning – 2014</b>, organized by Board of Students Welfare, National Service Scheme &amp; Accounts &amp; Finance Department, University of Pune.</li> </ul>
<ul style="list-style-type: none"> <li>Workshop on <b>planning of Special Camp – 2013</b>, organized by Board of Students Welfare, National Service Scheme, University of Pune.</li> </ul>
<ul style="list-style-type: none"> <li>Workshop on <b>Central Audit – 2013</b>, organized by Board of Students Welfare, National Service Scheme &amp; Accounts &amp; Finance Department, University of Pune.</li> </ul>
<ul style="list-style-type: none"> <li><b>District Level workshop-2012 of NSS Program Officers</b> organized by Arts, Science and Commerce College, Nashik in joint with SPPU, Pune.</li> </ul>
<ul style="list-style-type: none"> <li><b>District Level workshop-2013 of NSS Program Officers</b> organized by Arts, Science and Commerce College, Nashik in joint with SPPU, Pune.</li> </ul>
<ul style="list-style-type: none"> <li>Workshop on <b>Annual Planning of NSS activities -2012</b>, organized by NSS, University of Pune.</li> </ul>
<ul style="list-style-type: none"> <li>Tata Steel Capability <b>Development Course on Induction Motor</b>.</li> </ul>
<ul style="list-style-type: none"> <li>Tata Steel Capability <b>Development Course on Transformer</b>.</li> </ul>
<ul style="list-style-type: none"> <li>Tata Steel Capability <b>Development Course on Power System Earthing</b>.</li> </ul>
<ul style="list-style-type: none"> <li>Two Day National Level Seminar on <b>Energy Storage Systems: Design and Challenges</b>.</li> </ul>
<ul style="list-style-type: none"> <li>Two Day Workshop on <b>Renewable Energy Systems: Design and Challenges</b>.</li> </ul>
<ul style="list-style-type: none"> <li>One Week FDP on "<b>Renewable energy sources and emerging technologies</b> " by NITTTR, Kolkata.</li> </ul>
<ul style="list-style-type: none"> <li>One Week FDP on "<b>Electricity Acts, Rules and Code of Practices</b> " by NITTTR, Kolkata</li> </ul>
<ul style="list-style-type: none"> <li>One Week FDP on "<b>NBA SAR preparation</b> " by NITTTR, Kolkata.</li> </ul>
<ul style="list-style-type: none"> <li>Webinar on "<b>Holistic Approach Towards RP &amp; HDM to avail benefits of kVAH billing</b>" By <b>KKWIEER</b>, Nashik.</li> </ul>
<ul style="list-style-type: none"> <li>Webinar Topic: <b>PV Solar Validation and Testing Capabilities in India</b>, Hioki, India.</li> </ul>
<ul style="list-style-type: none"> <li>Webinar on <b>Sliding Mode Controllers: Stages of Evolution</b> presented by Dr. Leonid Fridman</li> </ul>
<ul style="list-style-type: none"> <li>Webinar on <b>Power System and Components</b> organised by KKWIEE&amp;R.</li> </ul>
<ul style="list-style-type: none"> <li>One Week Online FDP on “<b>Effective Proposal Writing for Research and Funding</b>” organized by Sandip foundation</li> </ul>
<ul style="list-style-type: none"> <li>Online webinar on <b>Online Teaching-Learning and online Assessment platform</b>.</li> </ul>

<ul style="list-style-type: none"> <li>• Eight week <b>FDP on Advanced control system with Silver Elite Medal.</b></li> </ul>
<ul style="list-style-type: none"> <li>• Online webinar on <b>Teacher is a source and foundation of entrepreneur</b> organized by MUCTA.</li> </ul>
<ul style="list-style-type: none"> <li>• Online webinar on "<b>PV Solar validation and Testing Capabilities in India</b>" organized by HIOKI.</li> </ul>
<ul style="list-style-type: none"> <li>• Online State level workshop on <b>LATEX</b> organized by Matoshri College.</li> </ul>
<ul style="list-style-type: none"> <li>• National Level One Week Online Faculty Development Program on <b>Moodle Learning Management System</b> organized by PICT and IIT Bombay.</li> </ul>
<ul style="list-style-type: none"> <li>• AICTE sponsored Online FDP on “<b>Electric Vehicle Application, Control and Smart Charging using Artificial Intelligence</b>”, organized by Modern College of Engineering, Pune.</li> </ul>
<ul style="list-style-type: none"> <li>• Successfully completed faculty orientation program for SE Electrical Engineering 2019 pattern in association with SPPU dated on 27<sup>th</sup> March 2021.</li> </ul>
<ul style="list-style-type: none"> <li>• Participated in syllabus revision workshop for TE electrical course organized by AISSMS COE Pune on 2<sup>nd</sup> June 2021.</li> </ul>

**Prof. Dr. Sonje D. M.**