

Prof. V. B. Sawant

E-mail: vbsawant@ybit.ac.in

Head and

Associate Professor in Mechanical Engineering



RESEARCH AREAS:

RF-MEMS, RF-NEMS, Multi attribute decision making.

ACADEMIC CAREER

Associate Professor, Department of Mechanical Engineering, Yashwantrao Bhonsale Institute of technology, from 09/04/2026.

Assistant Professor (Senior Scale), Department of Mechanical Engineering, Rajiv Gandhi Institute of Technology, from 1/9/2006.

Lecturer, Department of Mechanical Engineering, Rajiv Gandhi Institute of Technology, 1/8/2003 to 30/8/2006.

Lecturer, Department of Mechanical Engineering, Fr. C. Rodrigues Institute of Technology, Vashi - Navi Mumbai-23/07/2000 to 31/7/2003.

Doctoral Research Scholar, Department of Mechanical Engineering, Government College of Engineering, Karad, Maharashtra. (Supervisor: Professor Dr.Suhas S. Mohite)

Post-Graduate Researcher, Department of Mechanical Engineering, Government College of Engineering, Karad, Maharashtra, June 1999 to April 2002. (Supervisor: Professor Dr.Suhas S. Mohite)

OTHER APPOINTMENTS- Visiting faculty

Mukesh Patel School of Technology Management & Engineering, Vile Parle Mumbai, Mechanical Engineering Department, , for MMC, FEA, CAD/CAM, Operation Research etc for B. Tech. (Mechanical) - July 2009 – Nov 2016. (<https://engineering.nmims.edu/>)

Production Engineering Department, **Veer mata Jijabai Technological Institute**, (V. J. T. I.) Matunga, Mumbai, Mumbai for Advance in Supply Chain Management – B.Tech (Production)-SEM-VIII-Jan 2009-April 2009. (www.vjti.ac.in)

Mechanical Engineering Department, **Vidyavardhini's College of Engineering and Technology, Vasai**, Thane, for CAD/CAM and FEA – B. E. (Mechanical) - SEM-VII – July 2009 – Nov 2009. (www.vcet.edu.in)

EDUCATION

Doctor of Philosophy – Mechanical Engineering in 2025.

“Some investigations in multi-attribute decision making (MADM) models and development of a decision support system”.

Experimental Validation at NATIONAL FACILITIES located at Centre for Nano Science and Engineering-IISc- Bengaluru, For Fabrication of MEMS chips (<https://www.cense.iisc.ac.in/>)

Research Centre: Department of Mechanical Engineering, Government College of Engineering, Karad, Maharashtra, (Supervisor: Professor Dr.Suhas S. Mohite, M. Tech (IIT Madras), Ph D (IISc-Bangalore).

Master of Engineering (First Class) in Mechanical-Production

Department of Mechanical Engineering, Government College of Engineering, Karad, Maharashtra, June 1999 to April 2002.
(Supervisor: Professor Dr. Suhas S. Mohite)

Bachelor of Engineering (First Class with Honors) in Mechanical

Department of Mechanical Engineering, Government College of Engineering, Farmagudi, Goa, June 1994 to June 1998.

AWARDS

Best Paper award, for paper entitled, “Numerical Modeling and Analytical verification for evaluating Performance of RF Micro-electromechanical switches” at Government College of Engineering, Karad, Maharashtra, at NC-MEND 2017 on March 10-11, 2017.

GATE Scholarship GATE 98 (Mechanical Engineering), AICTE-New Delhi, Government of India 1999-2001.

MEMBERSHIP OF COMMITTEES

Member of Vigilance Committee, Mumbai University.

Faculty Advisors- Student Section/s in department

Senior Supervisor in Mumbai University Exam

Approved M. E. teacher in Mechanical Engineering Subjects

Below students completed PG degree

1. **Laukik Cheulkar**, “Numerical Modeling and Analytical verification for temperature dependent Performance parameters of cantilever type RF Microelectromechanical switches,” 2017.
2. **Abhay bendekar**, “Designing and Performance Evaluation of Shell and Tube Heat Exchanger Using Computational Fluid Dynamics,” 2017.
3. **Shaikh Ovais Isak**, “Experimental investigation with Numerical modeling to enhance performance of Fuel cell,” 2022
4. **Manish Gaikwad**, “Numerical studies and experimental verification to evaluate thermal contact resistance in RF MEMS switches, 2020

TEACHING COURSES till date

Under Graduate Teaching

- **Production Process related all courses**
- **Mechatronics**
- **Mechanical measurement Control**
- **Metrology and Quality Engineering**

- Supply Chain Mangement
- CAD/CAM
- Finite Element Analysis
- Advanced Finite Element Analysis

Post Graduate Teaching

- Advance instrumentation Systems for ME- Heat Power
- Advance Supply Chain Mangement- for MMS/ MBA
- Operations Management- for MMS/ MBA
- Financial Management - for MMS/ MBA

LIST OF PUBLICATIONS

- Publications in Peer Reviewed Journals

1. V. B. Sawant and S. S. Mohite. A Composite Weight based Multiple Attribute Decision support system for the selection of automated guided vehicles. *International Journal of Computer applications, Vol 70(19)- 2013. 8-16*
<http://www.ijcaonline.org/archives/volume70/number19/12173-8222>
ISSN 0975 - 8887.
DOI: 10.5120/12173-8222.
2. V. B. Sawant and S. S. Mohite., Investigations on benefits generated by using fuzzy numbers in a TOPSIS model developed for automated guided vehicle selection problem, *Part of the Springer's Lecture Notes in Computer Science book series (LNCS, volume 5908) 2009, pp 295-302. ISSN Number: 03029743*
UGC Journal Number: 4520
https://link.springer.com/chapter/10.1007/978-3-642-10646-0_36
3. V. B. Sawant, Aakif Anjum, and S. S. Mohite, Graphene/MoS2 based fix-fix type RF-NEMS switches-A simulation study, *Advances in Engineering Design, Part of the Springer Lecture Notes in Mechanical Engineering, 2019, pp 117-129. ISSN Number: 21954364.*
UGC Journal Number: 4527
https://link.springer.com/chapter/10.1007/978-981-13-6469-3_11
4. V B Sawant, Ramesh More, Suhas Mohite, Numerical Modeling and Analytical Verification for evaluating Performance RF Micro-electromechanical switches, *Journal of Advances in Science and Technology (JAST) Special Issue Vol.13 (1) pp. 1-7.*

5. V. B. Sawant, Aakif Anjum, and S. S. Mohite, Analytical and Numerical Modeling of Graphene based RF-NEMS Switch, *IOP Conference Series: Materials Science and Engineering, Volume 455 (2018)*
<https://iopscience.iop.org/article/10.1088/1757-899X/455/1/012110/meta>
6. V B Sawant, Suhas Mohite, Fabrication and characterization of low actuation voltage capacitive type RF MEMS switches, *Microelectronic Engineering - Elsevier (Under Review)*.
7. V B Sawant, Suhas Mohite, Design, simulation and Optimization approach for novel low actuation voltage RF MEMS capacitive type switch for Ka-band application, *Microsystem Technologies – Springer (Under Review)*.

- **Publications in Peer Reviewed Conferences:**

8. V. B. Sawant, S. S. Mohite and Laukik Cheulkar, Evaluating Performance of Thermally Curled Micro-cantilever RF MEMS Switches, *International Multi-Conference on Computing, Communication, Electrical & Nanotechnology (I2CN-2K19) held on 25th & 26th April, 2019*
<https://doi.org/10.1016/j.matpr.2019.08.114>
9. V. B. Sawant, S. S. Mohite and Manish Gaikwad, Evaluating Thermal Contact Resistance for Ohmic type RF MEMS switch, *3rd Biennial International Conference on Nascent Technologies in Engineering, January 04-05, 2019, (To appear in IEEE- Explore)*
10. V. B. Sawant, Mukesh Madhewar, and S. S. Mohite, Modeling and Validation of Capacitive type RF MEMS switches for low actuation voltage and high isolation, *Proceedings of the ASME 2018 Dynamic Systems and Control Conference, September 30 - October 3, 2018, Georgia, USA.*
<https://doi.org/10.1115/DSCC2018-8939>
11. V. B. Sawant, Aakif Anjum, and S. S. Mohite, Graphene/MoS₂ based RF-NEMS Switches for Low Actuation Voltage and Enhanced RF-Performance, *9th International Conference on Computing, Communication and Networking technologies (ICCCNT), 10-12th July 2018, IISc Bangalore*
<https://ieeexplore.ieee.org/abstract/document/8494166>
12. V. B. Sawant, Mukesh Madhewar, and S. S. Mohite, Modeling and Analysis of Low Voltage, High Isolation Capacitive type RF-MEMS Switches, *9th International*

Conference on Computing, Communication and Networking technologies (ICCCNT), 10-12th July 2018, IISc Bangalore
<https://ieeexplore.ieee.org/abstract/document/8493891>

13. V. B. Sawant, S. S. Mohite and Laukik Cheulkar, Comprehensive Contact Material Selection Approach for RF MEMS Switch, *Elsevier- Materials Today procedia*.
<https://www.sciencedirect.com/science/article/pii/S2214785317333588>
14. V. B. Sawant, S. S. Mohite and Laukik Cheulkar, Evaluating performance of RF MEMS switch at different temperatures, in *proceedings of 3rd International Conference on Emerging Electronics, December 27-30, 2016, IIT Bombay*.
<http://iceconf.org/>
15. V. B. Sawant, S. S. Mohite and Laukik Cheulkar, Effect of geometrical parameters on performance of RF MEMS switch at different temperatures, in *proceedings of 2017 International Conference on [Nascent Technologies in Engineering \(ICNTE\)](#), 27-28 Jan. 2017, Fr. CRIT- Vashi, Navi Mumbai*.
<http://ieeexplore.ieee.org/document/7947911/>
16. V. B. Sawant and S. S. Mohite, Comprehensive Bridge Material Selection Approach for RF MEMS Switch, *6th International and 27th AIMTDR conference proceedings, College of Engineering, Pune, 14- 16th December 2016. pp 1454-1457*.
<http://www.aimtdr2010.info/index.php>
17. V. B. Sawant and S. S. Mohite. A decision-making framework for simulation software selection problem using a preference selection index method. *1st International conference on Simulation, Indian Institute of Technology, Bombay, 2nd - 4th February 2012*.
18. V. B. Sawant and S. S. Mohite. A decision-making methodology for Automated Guided Vehicle Selection problem using a preference selection index method, *Springer's Communications in Computer and Information Science (CCIS) series, CCIS 145, pp. 176–181, 2011. Springer-Verlag Berlin / Heidelberg 2011*.
<http://www.springerlink.com/content/p117516818341k15/>
19. V. B. Sawant and S. S. Mohite. The Effect of Normalization Norms in Multiple Attribute Decision Making Model in Automated Guided Vehicle Selection. *3rd International Conference on Global Interdependence and Decision Sciences, Administrative Staff College of India, Hyderabad, 28- 30th December 2009, 365-372*.
Published by: MacMillan Advanced Research Series 2009
20. V. B. Sawant and S. S. Mohite. Multiple Attribute Decision Making Approach to select Machining Centre in Manufacturing Environment. *3rd International*

Conference on Global Interdependence and Decision Sciences, Administrative Staff College of India, Hyderabad, 28- 30th December 2009, 373-378.

Published by: MacMillan Advanced Research Series 2009

21. V. B. Sawant and S. S. Mohite. Multiple Attribute Decision Making Approach to Select Automated Guided Vehicle In Flexible Manufacturing Environment. *2nd International conference on Decision Sciences in Global Enterprise Management, Indian Institute of Technology, Bombay, 3- 5th January 2009. 340-352.*
Published by: MacMillan Advanced Research Series 2009
22. V. B. Sawant and S. S. Mohite. A Decision Support System for Fuzzy Multi-Attribute Selection of Automated Guided Vehicle. *12th International Conference of Operations Management, Indian Institute of Technology, Kanpur on 19- 21th December 2008.*
23. V. B. Sawant and S. S. Mohite. A novel support system for the selection of a Rapid Prototyping machine using multiple attribute decision making approach. to be presented in the *4th International conference (AIMTDR), College of Engineering, Andhra University, Visakhapatnam from 13- 15th December 2010.*
24. **V. B. Sawant and S. S. Mohite.** A decision-making framework for simulation software selection problem using a preference selection index method. 1st International conference on Simulation, Indian Institute of Technology, Bombay, **2nd - 4th February 2012.**
25. **V. B. Sawant and S. S. Mohite.** The Effect of Normalization Norms in Multiple Attribute Decision Making Model in Automated Guided Vehicle Selection. 3rd International Conference on Global Interdependence and Decision Sciences, Administrative Staff College of India, Hyderabad, 28- 30th December 2009, 365-372. **Published by: MacMillan Advanced Research Series 2009**
26. **V. B. Sawant and S. S. Mohite.** Multiple Attribute Decision Making Approach to select Machining Centre in Manufacturing Environment. 3rd International Conference on Global Interdependence and Decision Sciences, Administrative Staff College of India, Hyderabad, 28- 30th December 2009, 373-378. **Published by: MacMillan Advanced Research Series 2009**
27. **V. B. Sawant and S. S. Mohite.** A Decision Support System for Fuzzy Multi-Attribute Selection of Automated Guided Vehicle. *12th International Conference of Operations Management, Indian Institute of Technology, Kanpur on 19- 21th December 2008.*

28. **V. B. Sawant and S. S. Mohite.** Loading And Scheduling in Three Machine Flexible Manufacturing System. Presented in the 11th International Conference of Operations Management held on 21- 23rd December 2007 at Symbiosis Institute of operations Management, Nasik
29. **V. B. Sawant and S. S. Mohite.** A novel support system for the selection of a Rapid Prototyping machine using multiple attribute decision making approach. to be presented in the 4th International conference (AIMTDR), **College of Engineering, Andhra University, Visakhapatnam from** 13- 15th December 2010.
30. **V. B. Sawant and S. S. Mohite..** “Scheduling And Simulation Decisions in Two Machine Flexible Manufacturing Cell (FMC)” Presented in SYMAX (Manufacturing Engg. Conference) held on 7-8th January 2002 at Indian Institute of Technology –Madras. 173-174.
31. **V. B. Sawant and S. S. Mohite.** “Scheduling Decisions in Two Machine Flexible Manufacturing Cell: Simulation Modeling and Analysis” Presented in the 20th All India Manufacturing Technology, Design and Research Conference, (20th AIMTDR) held on 13 - 15th December 2002 at Birla Institute of Technology, Mesra, Ranchi. pp 496-500.
32. **V. B. Sawant and S. S. Mohite.** “Loading And Scheduling in Three Machine Flexible Manufacturing System: A Simulation Study” in Proceedings of The National Conference on Recent Trends in Mechanical Engineering Sciences on 21 – 22nd February 2008 at Sri Siddhartha Institute of Technology, Tumkur-Karnataka 572105. pp 268-273.
33. **V. B. Sawant, S. S. Mohite, A. G. Londhekar.** “Recent Trends in Virtual Manufacturing” in Proceedings of the National Conference on Computer Applications in manufacturing processes on 13 – 14th March 2008 at Sinhgad Institute of Technology, Lonavala, Pune. pp 39-42.
34. **V. B. Sawant, S. S. Mohite, S. N. Takalikar.** Investigations in Time Series Forecasting Using Neural Networks” in Proceedings of the National Conference on Computer Applications in manufacturing processes on 13 – 14th March 2008 at Sinhgad Institute of Technology, Lonavala, Pune. pp 35-38.
35. **V. B. Sawant and S. S. Mohite.** “Multi Attribute Decision Making Approach for the Justification of Advanced Manufacturing Systems” in Proceedings of the National Conference on Advances in Mechanical Engineering (NCAME-09) held on 15 – 16th Jan 2009 at Rajiv Gandhi Institute of Technology, Andheri (W) in association with Bhabha Atomic Research Centre – Mumbai- pp 08-16.

TRAINING PROGRAMMES ATTENDED

S. T. T. P. Attended (One Week or more): Total 32 Weeks

1. QIP Programme on “**Introduction to Mechatronics and Robotics**” in IIT-Bombay during 9th July to 13th July 07. (One Week)
2. Attended QIP Programme at S. V. NIT, Surat on “**Advanced Engineering Optimisation through Intelligent Techniques**” during 16th June 2008 to 20th June 2008. (One week)
3. Attended STTP at VJTI- Mumbai on a topic “**Modern Trends in Machining and Materials**” during 16th Feb 2009 to 20th Feb 2009. (One week)
4. Attended STTP at RGIT- REL Dahanu on a topic “**Advances in Thermal Engineering**” during 21st June 2010 to 25th June 2010. (One week)
5. INUP Hands-on Training on a topic “**Introduction to Nanofabrication Technologies**” during **April 18-22, 2016 has been attended at IIT Bombay.** (One week)
6. ISTE Course on “**MECHATRONICS**” in VCET- Vasai, during 29th Dec03 to 2nd Jan04. (One Week)
7. Attended STTP sponsored by AICTE – ISTE & organized by staff development cell, Canada – India institute industry linkage project, at Govt. College of Engg. Amravati on “**Dacum – Designing A Curriculum**” during 28th June 04 to 2 July 04 (One Week).
8. QIP Programme on “**Recent Developments in OR & its Applications**” in IIT-Bombay during 5th July to 9th July 04. (One Week)
9. QIP Programme on “**Innovative Tribo Design**” in IIT- Bombay during 15th Nov to 19th Nov 04. (One Week)
10. QIP Programme on “**Analysis of Modern Manufacturing Processes**” in IIT-Bombay during 5th Jan to 17th Jan 06. (Two Week).
11. INUP Hands-on Training on a topic “**Introduction to Nanofabrication Technologies**” during April 18-22, 2016 has been attended at IIT Bombay. (One week)
12. INUP Hands-on Training workshop on a topic “**MEMS cantilever and Micro-Nano characterization Techniques**” during November 14-24, 2017 has been attended at IISc Bangalore. (Two week)
13. 19 STTP from December 2017 till date.

CONFERENCES & SEMINARS ATTENDED:

1. Above mentioned in Conference Publications
2. EDS-PLM Users conference 2002 held in Hotel Le-Meridien, Bangalore on 21st and 22nd October 2002.
3. 3rd International Symposium on “**Rapid Prototyping and Rapid Tooling**” organized by Rapid Prototyping Society of India held at **Hindustan Aeronautics Limited**, Bangalore on 6th and 7th June 2003.

4. One day seminar on “**Introduction to FEM and its Applications**” by ISTE Chapter KJSCOE, Vidyavihar, Mumbai on 6th August 2004.
5. EDS-PLM Users conference 2004 held in Hotel Grand Maratha Sheraton on 21st and 22nd October 2004.
6. Two day workshop on “**Renewable Energy Community Development and Showcase Workshops-2006**” by Energy Systems Engineering Group- IIT Bombay on 21-22 September 2006.
7. EDS-PLM Users conference 2006 held in Hotel The Leela- Andheri Mumbai on 7-8 October 2007.

Membership of Professional bodies: LM – ISTE (39340)

Google Scholar citations till date

Cited by	All since 2020	
	Citations	151
h-index	7	5
i10-index	6	2

The information provided here is true to the best of my knowledge.

Prof. V. B. Sawant

Head and

Associate Professor in Mechanical Engineering

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