

Suhas S. Mohite

B.E. (WCE, Sangli),
M.Tech. (IIT-Madras)
Ph.D. (IISc-Bangalore)



Contact info

Professor in Mechanical Engineering,
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Courses / Research interests

Dynamics, Instrumentation and Control, Microsystems and MEMS, FEM, CFD, Modelling and Simulation, Condition monitoring, Mechatronics, Tool Engineering, Machine Tools, CAD/CAM/CAE,...

Education:

Sr. No.	School /Institute/University	Qualifying Exam	Year
1	Indian Institute of Science, Bangalore www.iisc.ernet.in	Ph.D. (Mech.)	2008
2	Indian Institute of Technology, Madras www.iitm.ac.in	M. Tech. (Mech)	1990
3	Walchand College of Engineering, Sangli www.walchandsangli.ac.in	B.E. (Mech.)	1988
4	Willingdon College, Sangli http://www.despune.org/willingdon-college	H.S.C.	1984
5	City High School, Sangli www.cityhighschoolsangli.com	S.S.C.	1982

Highlights/ References

IIT-JEE 1985: All India Rank: 1518
GATE-89: Percentile score: 97.05
Ph.D. Thesis title: "Study of Squeeze Film Effects in Modeling Dynamic MEMS Devices"
www.cense.iisc.ernet.in/
Advisors: Prof. Rudra Pratap <http://www.cense.iisc.ernet.in/people/faculty/RP.htm>
Prof. V. R. Sonti <http://www.mecheng.iisc.ernet.in/~sonti/>

Industrial Experience

Sr. No.	Designation	Name of the Organization	Duration	
			From	To
1*	Graduate Engineer	Bajaj Auto Ltd., Pune www.bajajauto.com	01/08/1988	22/07/1989
2#	Senior Engineer	Wipro Fluid Power Ltd., Bangalore www.wiproinfra.com/	10/02/1991	19/07/1991

*Additional job offer UG: Hindustan Organic Chemicals Ltd. (HOCL), Rasayani

Additional job offer PG: TELCO, Jamshedpur

Teaching Experience

Sr. No.	Designation	Name of the college/ institute	Duration	
			From	To
1	Professor	Government College of Engineering, Aurangabad www.gcekarad.ac.in	01/07/2018	Till date
2	Professor	Government College of Engineering, Karad www.gcekarad.ac.in	25/10/2004	30/06/2018
3	Asst. Professor	Government College of Engineering, Karad www.gcekarad.ac.in	09/07/1996	24/10/2004
4	Lecturer	D.Y. Patil College of Engg. & Tech., Kolhapur. http://www.dypkopeng.ac.in/	10/03/1993	08/07/1996
5	Lecturer	KIT's College of Engineering, Kolhapur http://kitcoek.in/	18/08/1992	09/03/1993
6	Lecturer	RIT's College of Engg., Sakharale http://www.ritindia.edu/	09/08/1991	06/07/1992

Invited talks/ Resource Person

- 1) The ISSS First Workshop on Micro and Smart Systems (for VTU Faculty) Visveswaraiya Technological University (VTU), Belgaum, March 10th –16th, 2006
- 2) The ISSS Second Workshop on Micro and Smart Systems, Golden Jubilee Seminar Hall, ECE Department, IISc., Bangalore, June 15-20, 2006
- 3) The ISSS Workshop on Micro and Smart Systems (for NIT Faculty), Golden Jubilee Seminar Hall, ECE Department, IISc., Bangalore. December 11th –17th, 2006
- 4) International Conference on Smart Materials, Structures and Systems, (ISSS), Bangalore. National Science Seminar Complex, IISc., Bangalore, 24-26 July 2008
- 5) Staff Development Programme on Recent Trends in Heat Exchanger Design, Mech. Engg. Dept., Govt. college of Engineering, Karad, 21 Dec-02Jan 2010
- 6) Nonlinear Finite Element Analysis -One week workshop under TEQIP on "Nonlinear Finite Element Analysis", RIT's CoE, Rajaramnagar, Sakharale, December 2011
- 7) One week workshop on research in Production and Industrial Engineering (RPIE-2012), Walchand College of Engineering Sangli, 10-14 Dec., 2012

- 8) Computational Fluid Dynamics(CFD), a one week STTP workshop under TEQIP_II at the Govt. College of Engineering, Karad, 28 March-1 April 2013
- 9) MATLAB Applications in Engineering and Science(MAES-2013), a one week STTP workshop under TEQIP_II at the Govt. college of Engineering, Karad, 20-24 May 2013
- 10) AICTE sponsored FDP on "Recent trends in Manufacturing Technology", Walchand College of Engineering, Sangli, 12-22 June 2013
- 11) MATLAB and Its Applications to Electrical Engineering, a one week STTP workshop under TEQIP_II at the RIT's CoE, Sakharale, 17-21 June 2013
- 12) Faculty Development Program on Micro & Nano Technology Workshop under TEQIP_II at the RIT's CoE, Sakharale, on 24- 28 June 2013
- 13) MATLAB and Its Applications, a one week STTP workshop under TEQIP_II at the Department of Mathematics, Govt. college of Engineering, Karad, 20-24 May 2013
- 14) Finite Element Method and its Application to Engineering, Department of Applied Mechanics, a one week STTP workshop under TEQIP_II at the Govt. college of Engineering, Karad, 20-24 March 2014
- 15) Research and development, various available grants, patenting at teacher orientation program, at the Govt. College of Engineering, Karad, 4th August 2014
- 16) Micro Fabrication" in TEQIP sponsored STTP on Advances in Manufacturing Technology organized by Mechanical Department, Rajarambapu Institute of Technology, Rajaramnagar, 2nd July 2014
- 17) Finite Element Analysis Theory and Application with ANSYS Multiphysics, a one week STTP workshop under TEQIP_II at the Department of Mechanical Engineering, Govt. College of Engineering, Karad, 23-27 June 2014
- 18) Modelling and Simulation of Engineering Systems, a one week STTP at the Govt. College of Engineering, Karad, 22-26 December 2014
- 19) "Best Practices in Curriculum Development of Mechanical Engineering" a one day state level workshop of at Walchand College of Engineering, Sangli, arranged by Government of Maharashtra and state project advisor, State Project Facilitation Unit (SPFU), DTE, Mumbai
- 20) Recent trends on Material Science for Engineering and Technology, a one week STTP under TEQIP-II, Department of Physics and Chemistry, at the Govt. college of Engineering, Karad, 11-15May, 2015
- 21) 43rd ISTE National Annual Convention on Empowering Technical Education to Address Sustainability and Global Competitiveness at TKIET, Warananagar during 19-21, December 2015
- 22) "Advanced Techniques in Research Methodology", an STTP workshop at SIT, Yadrav, Kolhapur, on 15th – 26th June 2015
- 23) "Recent Trends in Design, Failure Analysis and Maintenance of Bearings", an STTP workshop at JIMagdum College of Engineering, Jaysingpur, 22-26 June 2015

Patents (IPR)

1. Microchannel Heat-Exchanger based Natural Flow Patterns, inspired by leaf venation, for Electronic Cooling (filed/under process)

Reviewer

1. International Conference on Smart Materials, Structures and Systems ISSS, Bangalore
2. Journal of Shock & Vibration, IOS Press, Nieuwe Hemweg 6B, 1013 BG Amsterdam, Netherlands <http://www.saviac.org>

Sponsored Projects

1. Project coordinator, AICTE-MODROB scheme 8024/RID/MOD/693/9/10 dated 21/12/2009: Grant-in-aid of Rs. 14,00,000/- received from AICTE, New Delhi for Modernization of Mechatronics laboratory.
2. Project coordinator, AICTE-IIPC scheme 8024/RID/IIPC/8018/RDII/IIPC/2000/01 dated 12/03/2001, Grant-in-aid of Rs. 8,00,000/- and 2,50,000/- received from AICTE, New Delhi for Developing Industry Institute Partnership Cell.

Workshops Organized

1. Finite Element Method and its Application to Engineering, Department of Mechanical Engineering, a one week STTP workshop under TEQIP_II at the Govt. college of Engineering, Karad, 23-27 June 2014
2. "Modelling and Simulation of Mathematical Systems", a one week STTP at the Govt. College of Engineering, Karad, 22-26 December, 2014

Conferences Organized

National Conference on Mechanical Engineering in Next Decade, (NCMEND-2017), at the Department of Mechanical Engineering, Govt. College of Engineering, Karad, March 10-11, 2017

Publications in International Journals

1. Mohite, S. S., Kesari, H., Sonti, V. R., and Rudra Pratap, "Analytical Solutions for the Stiffness and Damping Coefficients of Squeeze films in MEMS Devices with Perforated Back plates", Journal of Micromechanics and Microengineering (UK), Vol. 15, 2005, pp 2083-2092. www.iop.org/EJ/article/0960-1317/15/11/013
2. S. S. Mohite, V. R. Sonti, and Rudra Pratap, "A comparative study of the equivalent circuits for MEMS capacitive microphones and a critical evaluation of the equivalent parameters", Advances in Vibration Engineering, The Scientific Journal of the Vibration Institute of India, Oct-Dec 2005 Vol. 4, pp 337-349.

3. Rudra Pratap, Suhas Mohite, Ashok Kumar Pandey, "Squeeze Film Effects in MEMS Devices", Journal of the Indian Institute of Science, Vol. 87:1, Jan-Mar 2007, pp 75-94.
<http://journal.library.iisc.ernet.in>
4. Suhas S. Mohite, Venkata R. Sonti and Rudra Pratap, "A compact squeeze-film model including inertia, compressibility and rarefaction effects for perforated 3D MEMS structures", Journal of Microelectromechanical Systems, A joint IEEE/ASME publication, VOL. 17, No.3, June 2008, pp 709-723
http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=4530851
5. S. S. Mohite, V. R. Sonti, and Rudra Pratap, "Analytical model for squeeze film effects in perforated MEMS structures including open border effects", Sensors & Actuators-A (under review).
6. Amruta Lomate, Suhas Mohite, Rahul Shinde, "Design and Development of Torque Testing Rig for a Gearbox", International Journal of Computer Communication and Information System (IJCCIS), Vol. 12 No. 1, ISSN: 0976-1349 July – Dec 2010. <http://www.ijccet.com/3.pdf>
7. 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, Published by: Springer-Verlag Berlin / Heidelberg 2011
<http://www.springerlink.com/content/p11751681834lk15/>
8. ManishaYadav and Suhas Mohite, "Development of Decision Support System for Fixture Design", Springer's Communications in Computer and Information Science (CCIS) series, CCIS 145, pp. 176-181, 2011. Published by: Springer-Verlag Berlin / Heidelberg 2011
http://link.springer.com/chapter/10.1007%2F978-3-642-20209-4_25?LI=true
9. Priya.P.Shreshtha Sushas S. Mohite "Design And Analysis of Rotation Rate Sensor-Modeling of vibratory MEMs Gyroscope " International Journal of Applied Research in Mechanical Engineering ISSN: 2231 -5950, Vol-2, Iss-2, 2012 pp(44-51)
http://interscience.in/IJARME_Vol2Iss2/09.pdf
10. N. M. Kumbhar, G. S. Patil, S. S. Mohite, M. A. Sutar, Finite Element Modelling of workpiece fixture system International Journal of Applied Research in Mechanical Engineering, ISSN: 2231 -5950, Vol-2, Iss-2, 2012 pp(60-65) http://interscience.in/IJARME_Vol2Iss2/11.pdf

Publications in International Conferences:

1. "Performance evaluation of an industrial goods supply chain", M. R. Dhanvijay, S. S. Mohite, International Conference on Logistics and Supply Chain Management (ILSCM) 2004 Conference held during 3-5 August 2004 at PSG College of Technology, Coimbatore, India.
2. "Vibration analysis of a collapsed MEMS microbeam for measuring the work of adhesion", Haneesh K., S. S. Mohite, MME-IV, 15th Micro Mechanics Europe Workshop, 5-7 September 2004, Leuven, Belgium pp (88-91)
3. "A comparative study of the equivalent circuits for MEMS capacitive microphones and a critical evaluation of the equivalent parameters", S.S.Mohite, V.R.Sonti and Rudra Pratap,

Vibration Engineering and Technology of Machinery (VETOMAC-3) and Asia-Pacific Conference on System integrity and Maintenance (ACSIM-2004), Jointly organized by Australian Cooperative Research Center for Integrated Engineering Asset Management (CIEAM), Dec.6-9, 2004, New Delhi. pp (893-903)

4. "Modelling and simulation of a MEMS microphone", S.S.Mohite, V.R.Sonti and Rudra Pratap, International Conference on MEMS and Semiconductor Nanotechnology (MEMSNANO), Dec. 20-22, 2005, IIT Kharagpur, India. Abstracts (pp 11), softproceedings\MemsNano\pdf\MEMS \TM1\TM1_6.pdf
5. "Analytical solution of squeeze film forces in perforated MEMS structures - including inertial, compressibility and gas rarefaction effects", S.S.Mohite, V.R.Sonti and Rudra Pratap, International Conference on MEMS and Semiconductor Nanotechnology (MEMSNANO), Dec. 20-22, 2005, IIT Kharagpur, India. Abstracts (pp128), soft proceedings\MemsNano\pdf\MEMS \TM7\TM7_1.pdf
6. "Design, Modelling and Simulation of Vibratory MEMS Gyroscope", Suhas Mohite, Nishad Patil and Rudra Pratap, International MEMS Conference (iMEMS-2006), Biopolis, Singapore, Journal of Physics: conference series 34 (2006) 757-763. www.iop.org/EJ/abstract/1742-6596/34/1/125
7. "Analytical model for squeeze-film effects in perforated MEMS structures including open border effects", S.S.Mohite, V.R.Sonti and Rudra Pratap, Proceedings of the Euroensors-XX conference, Gothenburg, Sweden, Sept. 2006
8. "Loading and Scheduling in three machine Flexible Manufacturing System" V. B. Sawant, S.S. Mohite, XI Annual International Conference of Society of Operations Management, December 2007
9. "Effect of geometry and perforations on squeeze film damping in MEMS devices", ISSS, International Conference on Smart Materials, Structures and Systems, 24-26 July 2008, Indian Institute of Science, Bangalore.
10. "Experimental and Computational Studies on the Effect of Complex Air Gap Geometry on Squeeze-film Damping in Perforated MEMS Devices" Venkatesh, KP and Mohite, SS and Pandey, AK and Pratap, R (2008) In: International Conference on Smart Materials, Structures and Systems, Indian Institute of Science, Bangalore
11. "Modelling and Simulation of a MEMS accelerometer", Avinash Kambale, Suhas Mohite ICONICS, Indian Institute of Science, Bangalore, 2-4 July 2008
12. "A Decision Support System for Fuzzy Multi-Attribute Selection of Automated Guided Vehicle" V. B. Sawant and S. S. Mohite, in the 12th International Conference of Operations Management, Indian Institute of Technology, Kanpur on 19- 21th December 2008
13. Multiple Attribute Decision Making Approach to select automated Guided Vehicle in Flexible manufacturing Environment V.B. Sawant, S.S. Mohite International Conference on Decision Sciences in Global Enterprise management, Indian Institute of Technology, Bombay, 3-5 January 2009 (pp 340352)
14. "Investigations on Benefits Generated By Using Fuzzy Numbers in A TOPSIS Model Developed For Automated Guided Vehicle Selection Problem" V. B. Sawant and S. S. Mohite, in the 12th International Conference on Rough Sets, Fuzzy Sets, Data Mining and Granular

Computing RSFDGrC'2009, Indian Institute of Technology, Delhi on 16-18th December 2009. (LNCS/LNAI Vol.5908)

15. "Multi Attribute Decision Making Approach for the Justification of Advanced Manufacturing Systems", V. B. Sawant and S. S. Mohite, 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
16. Estimation of Squeeze-film Damping in Perforated MEMS Structures Using Weighted Contribution of Perforation Cells with Arbitrary Venting Conditions, International Conference on MEMS and Optoelectronic Technology, ICMOT-2010
17. Investigations on Benefits Generated By Using Fuzzy Numbers in A TOPSIS Model Developed For Automated Guided Vehicle Selection Problem, V. B. Sawant and S. S. Mohite, Springer Berlin / Heidelberg, pp 295-302, Volume 5908/2009
18. "A decision support system for the selection of a Rapid Prototyping system using multiple attribute decision making approach", V. B. Sawant and S. S. Mohite, in the 3rd International conference and 24th AIMTDR, College of Engineering, Andhra University, Visakhapatnam held on 13- 15th December 2010. Vol. 2, 933-938. <http://www.aimtdr2010.info/index.php>
19. "Development of CAD-based Interactive Fixture Design System", Yadav M. H. and Mohite S. S., 24th AIMTDR Conference, Andhra University, Vishakhapatnam, December 2010, pp (101-106), <http://www.aimtdr2010.info/index.php>
20. "Design Modelling and Simulation of a 3-Axes Capacitive MEMS Accelerometer", Avinash Kamble, Suhas Mohite, International Conference on Sunrise Technologies, 13th – 15th Jan 2011
21. "Modelling and Analysis of Vehicle Suspension System with Skyhook and Fuzzy Logic Control" Deepak R. Unaune, Suhas S. Mohite, ICPQROM2011, International Congress on Productivity, Quality, Reliability, Optimization and Modelling, Indian Statistical institute, New Delhi, 7-8 February 2011
22. "Computer Integrated Fixture Design System", Yadav M. H. and Mohite S. S., International Conference and Workshop on Emerging Trends and Technology (ICWET) 2011, Mumbai, February 2011, <http://www.icwet.co.cc/>
23. "A decision-making methodology for Automated Guided Vehicle selection problem using a preference selection index method", V. B. Sawant and S. S. Mohite, in the International Conference on Technology Systems and Management, ICTSM 2011, at NMIMS University Mumbai from 25th - 27th Feb 2011, in Springer's Communications in Computer and Information Science (CCIS) series K. Shah, V.R. Lakshmi Gorty, and A. Phirke (Eds.): ICTSM 2011, CCIS 145, pp. 176–181, 2011. Published by: Springer-Verlag Berlin Heidelberg 2011
24. "A Decision Support System for Fixture Design", Yadav M. H. and Mohite S. S., International Conference on Technology, Systems and Management (ICTSM) 2011, Mumbai, February 2011, <https://www.e-proof.sps.co.in/lncs/ja.asp?rfp=eccfachfgbic>
25. "A Novel fixture Design with Embedded Hydraulic Piping and Manifold System" Yadav M. H. and Mohite S. S, COPEN-7: 2011, Precision, Meso, Micro and Nano Engineering, College of Engineering, Pune, December 2011

26. "Study of the effect of SIC, Al and mixture of SIC-Al powder mixed dielectric on metal removal rate, tool wear rate and RWR of AISI D3 die steel in roughing EDM", S. V. Janugade, M. V. Kavade, S. S. Mohite, Proceedings of international conference on advances in Mechanical Engineering, May 29-31 2013, CoE, Pune
27. "Condition Monitoring and Diagnosis of Gearbox Faults Using Acoustic Emissions (AE)" International Conference on Industrial Applications of signal processing ICIASP, November 2013
28. "Flow and Thermal Characteristics of Microchannels having natural Patterns" 22nd National and 11th International ISHMT-ASME Heat and Mass Transfer Conference, December 28-31, 2013, IIT Kharagpur, India
29. "Thermal and flow characteristics of microchannels having leaf venation patterns", International conference on MEMS and Sensors, Dec. 18-20 2014, IIT, Chennai
30. "Fabrication and Testing of Copper Based Leaf Pattern Microchannel Heat Exchanger for Electronic Cooling", N. B. Pujari, V. P. Gaikwad, S. S. Mohite, SSRG International Journal of Mechanical Engineering, (SSRG-IJME) – volume 2 Issue 5–May 2015
31. "Experimental and Numerical Study of Temperature Distribution in a Novel Microchannel Heat Sink having Leaf Venation Pattern", S. S. Mohite, V. P. Gaikwad, 26th Micromechanics and Microsystems Workshop MME, Toledo Spain, 2015 Sept. 20-23 <http://mme2015.manucodiata.org/index.php/downloads>
32. "Optimal Placement of Actuators and Sensor for Active Vibration Control", V. H. Karande, S. S. Mohite, 6th International and 27th AIMTDR Conference 2016, COE, Pune
32. "Study of Modal Properties of Fixture Workpiece System with Consideration of Material Removal" Rohit Kumar, M. H. Yadav, S. S. Mohite, 6th International and 27th AIMTDR Conference 2016, COE, Pune
33. "Fabrication and Testing of Silicon based microchannel heat exchanger inspired by leaf venation pattern for electronic cooling" S. P. Vartak, Shwetali Ghogare, V. P. Gaikwad, S. S. Mohite, 6th International and 27th AIMTDR Conference 2016, COE, Pune
34. "Comprehensive bridge material selection approach for RF MEMS switch" V. B. Sawant, S. S. Mohite, 6th International and 27th AIMTDR Conference 2016, COE, Pune
35. V. B. Sawant, Aakif Anjum, and S. S. Mohite, Graphene/MoS₂ based fix-fix type RF-NEMS switches-A simulation study, 1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018)-Amity University-Noida October 3rd – 5th, 2018. (accepted for publication in Springer's Lecture notes in Mechanical Engineering)
36. 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 (accepted for publication in IEEE explore proceedings)
37. 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 (accepted for publication in IEEE explore proceedings)
38. V. P. Gaikwad, S. S. Mohite, S. S. Shinde, M. L. Dherange, Abhinandan Kumar "Enhancement

in thermal performance of microchannel heat sink for electronics cooling using phase change material", ThermaComp2018, July 9-11, 2018, Indian Institute of Science, Bangalore, INDIA

39. V. P. Gaikwad, S. S. Mohite, S. S. Shinde, M. L. Dherange, "Numerical analysis of thermal performance in pin-fin enhanced microchannel heat sink", ThermaComp2018, July 9-11, 2018, Indian Institute of Science, Bangalore, INDIA
40. M. H. Yadav and S. S. Mohite, "Numerical and Experimental Studies on Fixture-Workpiece Contact and Structural Deformations in Pocket Milling" Proceedings of First International Conference on Materials, Manufacturing and Design Engineering (ICMMD) Dec 2016 at BATU Lonere, Raigad, MS pp 589 -597
41. M. H. Yadav and S. S. Mohite, "Comparison of Simulated and Measured Workpiece Deflection Profile Under Different Clamping Pressures", Proceedings of 3rd National Conference on Recent Trends in Mechanical Engineering (NCRTME – 2018) at WCRE, Sangli. Vol. 2, Pp. 291-296
42. M. H. Yadav and S. S. Mohite, "Tracking variations in the natural frequencies of fixture workpiece system during pocket milling", Nirma University International Conference on Engineering (NUiCONE) 2017 (In process with T& F)
43. M. H. Yadav and S. S. Mohite, "Numerical and experimental studies on fixture-workpiece contact and structural deformations in pocket milling" Proceedings of ICCASP/ICMMD-2016. Advances in Intelligent Systems Research, Vol 137 Pp. 212-219
44. Sanjay Kadam, Pratik Pishte, S. S. Mohite, "Numerical and Experimental Analysis of MgO Nanoparticles Suspension in Water on Convective Heat Transfer", Materials today proceeding (In Press)
45. Sanjay Kadam, Pratik Pishte, S. S. Mohite, "Numerical Investigation on Thermo-Hydraulic Performance of Tube with Wire Coil Inserts" 5th International Conference on Computational Methods for Thermal Problems Indian Institute of Science, Bangalore, India, July 9-11, 2018
46. Sanjay Kadam, S. S. Mohite, "Numerical Analysis and Optimization of Thermo-Hydraulic Performance in Tube Provided with Thin Wire Rib Roughness by Taguchi Approach" 5th International Conference on Computational Methods for Thermal Problems Indian Institute of Science, Bangalore, India, July 9-11, 2018

Publications in National Conferences:

1. "Computer Aided Analysis of Cam Profile And Graphical Simulation of 3- Axes Cam Milling Operation", Mohite, S. S., and Gujar, A. J., 19th AIMTDR Conference, I.I.T. Madras, December 2000, pp 373-376
2. "Computer Assisted Production Planning and Control for a Small Scale Fruit Processing Unit", Mohite, S. S., and Kavade, M. V., XVI National Convention of Mechanical Engineers University of Roorkee & The Institution of Engineering (India), September 2000, pp 585-590
3. "Computer Aided Analysis of CAM profile And Graphical Simulation of 3- Axes CAM Milling operation", Mohite, S. S., and Gujar, A. J., XVI National Convention of Mechanical Engineers University of Roorkee & The Institute of Engineers (India), Sept. 2000, pp 483-487

4. "Scheduling and Simulation Decisions in Two Machine Flexible Manufacturing Cell (FMC)", at SYMAX, Mohite, S. S., and Sawant, V. B., Manufacturing Engineering Conference, January 7-8, 2002, at Indian Institute of Technology, Madras pp 173-174
5. "Scheduling and Simulation Decisions in Two Machine Flexible Manufacturing Cell (FMC)", Mohite, S. S., and Sawant, V. B., 20th AIMTDR BITs MESRA, Dec. 2002, pp 496-500
6. "Optimization of Turning Process Parameters using ANN", Lakal, N. V., and Mohite, S. S., 20th AIMTDR, BIT's MESRA, Dec. 2002, pp 83-88
7. "Computer Aided Design of Blanking Dies with Optimization of Strip Layout using Simulated Annealing", Mohite, S. S., and Pawar, P. J., Symposium on Manufacturing Excellence, IIT Madras. Jan. 2002. pp 135-136
8. "Analysis of Squeeze-film Damping in Electro-statically Actuated MEMS Devices", Mohite, S. S., 2005 ANSYS (India) Conference, Nov. 29-30, 2005, at IISc, Bangalore, softproceedings\convergence-05\MBU\CoupledFieldAnalysis\IISC_MEMS_Presentation.pdf
9. "Analytical Model For Squeeze-Film Effects in Perforated MEMS Structures including open border effects", Mohite, S. S., 2006 ANSYS (India) Conference, Nov. 9-10, 2006, IISc, Bangalore, softproceedings\convergence-06\MBU\CoupledFieldAnalysis\ IISC_MEMS_Presentation.pdf
10. "Loading and Scheduling in Three Machine Flexible Manufacturing System: A Simulation Study", Mohite, S. S., and Sawant, V. B., Proceedings of The National Conference on Recent Trends in Mechanical Engineering Sciences, Feb. 21-22, 2008, at Sri Siddhartha Institute of Technology, Tumkur, Karnataka. pp 268-273
11. "Recent Trends in Virtual Manufacturing", Mohite, S. S., and Sawant, V. B., Proceedings of National Conference on Computer Applications in Manufacturing Processes, March 13-14, 2008 at Sinhgad Institute of Technology, Lonavala, Pune. pp 39-42
12. "Investigations in Time Series Forecasting using Neural Networks" Mohite, S. S., and Sawant, V. B., Proceedings of the National Conference on Computer Applications in Manufacturing Processes, March 3 – 14, 2008 at Sinhgad Institute of Technology, Lonavala, Pune. pp 35-38
13. "An Experimental Method for Identification of Stability Lobe Diagram using Vibration Signal Analysis for Chatter free Milling" R. A. Kandake, S. S. Mohite, Proceedings of 5th National Conference on Recent Advances in Manufacturing 15 – 17 May, 2015

Short-term Courses / Workshops attended:

1. Computer Aided Manufacturing, 2nd to 14th December 1996, organized by Government College of Engineering, Pune
2. Industrial Problems in Machines and Mechanisms (IPROMS), 15th and 16th March 1997, Walchand College of Engineering, Sangli
3. Role of Internet in Placement Activity, 9th July 2001, Government College of Engineering, Pune
4. One-day workshop on Research Methodologies, August 2002, Ferguson College, Pune
5. Short-term course on Engineering Pedagogy 30-31 July 2004 Sponsored by AICTE New Delhi, Organized by Centre for Continuing Education, IISc, Bangalore
6. National Symposium on Engineering Education (NSEE 05), Organized by Centre for

Continuing Education, IISc, Bangalore, 2005

7. Mission 10X workshop conducted at KBP CoE, Satara during 1-5 December, 2008
8. Mechatronics and Product Design, as a part of the 2010 Indo-US Engineering Faculty Leadership Institute course, RIT's CoE, Sangli, 11-16 July 2010
9. Vibration Analysis Level – 2, Reliability Maintenance Institute, SKF, India Ltd. 5-7 Dec 2012
10. Training and Identification of Master Trainers on Outcome Based Accreditation Process and Parameters, Feb. 3rd and 15-17, 2014, Walchand College of Engineering, Sangli

Past P.G. Students M.E. (Mech.) Dissertation Title/Student:

1. "Computer Aided Optimization of Cutting Parameters by Analysis of Metal Cutting data Acquired Experimentally", A. A. Mankapure, W/S Superintendent, GP, Karad (1997)
2. "Design, Development and Testing of Nitrogen Gas Spring for Die Cushioning Application", S. P. Langade, Sankul Industries, M.I.D.C., Satara. (1998).
3. "Failure Mode and Effects Analysis (FMEA) of RKB Pump", Birage, Asst. Manager, Kirloskar Brothers Ltd., Kirloskarwadi. (1999).
4. "Design and Development of Computer Integrated Production Management System", M. V. Kavade, RIT's COE, Sakharale. (2000).
5. "Deformation Zone Geometry Approach for Stage Reduction Calculation for Continuous Wire Drawing Process", V. B. Pathak, BVCOE, Pune. (2001).
6. "Computer Aided Design of Master with Graphical Simulation of Theoretically Expected Work piece Profile and Experimental Verification of the same for Hydraulic Copying Lathe", Y. B Kulkarni, Head (Mech.), GP, Karad. (2001).
7. "Computer Aided Simulation of 3- Axes Cam Milling Operation", Gujar A. J., TKIET, COE, Warnanagar. (2002).
8. "Simulation and Scheduling of Flexible Manufacturing Cell", V. B. Sawant, Rajiv Gandhi Institute of Technology, Mumbai. (2001).
9. "Design and Development of 3 Axes P.C. based Bench Drilling Machine", D. S. Patil, Engineering, L & T Mumbai. (2002).
10. "Computer Aided Design of Blanking Dies with Optimization of Strip Layout using Simulated Annealing Technique", Pawar P. J., Sr. Lecturer, K. K. Wagh CoE, Nasik. (2002).
11. "Optimization of Turning Process Parameters using Artificial Neural Network (ANN)", Lakal N. V., College of Engineering, Osmanabad, (2002) Shivaji University, Kolhapur, currently Research Scholar at IIT, Mumbai
12. "Condition Monitoring of Single Point Cutting Tool of CNC Lathe Machine", Jadhav A. V., Engineer, T. K. Cooperative Sugar Industry, Warananagar. (2002)
13. "Gear-box Vibration Analysis and Fault Diagnosis of Gear Teeth by Application of Condition Monitoring Technique", Salunke. S.Y., Lecturer, RITs CoE, Sakharale. (2003)
14. "Modelling and Simulation Automated Storage & Retrieval System (ASRS)", Sachin Shinde, KIT's College of Engineering & Technology, Kolhapur. (2003)
15. "Supply Chain Management: An Industrial Goods Perspective", Maneet Dhanvijay, Asst. Professor, Vishwakarma Institute of Technology, Pune. (2003)

16. "Tool Path Optimization and Automatic Cutter Selection on a Machining Center", Atul Kumbhar, Design Engineer, Gas Turbines Pvt. Ltd., Ahmednagar. (2003)
17. "Design and Development of Computer Assisted Heat Treatment Furnace", S. J. Mulani, Engineer Production, JCB Ltd., Pune. (2006)
18. "Modelling and Simulation of a 3-axes Capacitive MEMS Accelerometer", Avinash Kamble, Engineer, ISPAT, Alibaug. (2008)
19. "Analytical and Numerical Studies of Squeeze-film Effects in Dynamic MEMS Devices", Abhishek Chitwar, KSB Pumps, Pune. (2009)
20. "Development of an Expert System for Designing Fixtures for HMC and VMC", Mrs. Manisha Yadav, Asst. Prof., Govt. College of Engg., Karad. (2010)
21. "Design and Development of a Gear-box Test Rig", Amruta Lomate, BVCOE, Pune. (2010) .
22. "Analysis of semi-active automobile suspension system", Project sponsored by Automotive Research Association of India (ARAI), Pune, Unaune Deepak, RIT, Sakharale. (2011).
23. "Finite element modelling and experimental studies of effect of contact stiffness on position errors in work piece fixture assembly", Kumbhar Abhijeet (2011)
24. "Replacement of copper tube by Al alloy tube in an engine radiator with a special emphasis on Analysis of brazing joint dynamic performance", Mr. Mulik Prashant (2011)
25. "Investigation of some metallurgical issues in wire drawing process of brazing materials", S. M. Deshpande, RIT, Sakharale. (2012) Shivaji University, Kolhapur.
26. Khandekar Project sponsored by ERC Lab.,TATA MOTORS, Pune, (2012)
27. "Modelling and Simulation of MEMS Tuning Fork Gyroscope" Priya Kamble (2012)
28. "Improving Effectiveness of Plant and Equipment by Implementing Total Productive Maintenance (TPM) and Set up Reduction (SUR)", Miss Swati Gujar (2013)
29. "Condition monitoring of grinding process using acoustic emission technique", Sane (2013)
30. "Effect of water injection on a the performance of a 4-stroke petrol engine", Manish More (2013)
31. "Optimization of Clamping Force in a Fixture-Workpiece System" Hemant Shete, (2013)
32. "Modelling and Analysis of effect of metal removal on dynamic characteristic of fixture workpiece system", Padmini Pawar (2013)
33. "Implementation of KANBAN at Kirloskar Oil Engines Ltd. Kolhapur", Amol Chavan, (2014)
34. "Identification of Stability Lobe Diagram with the use of Acoustic Signal for Chatter free Milling" Gautam Kashyapi, (2014)
35. "An Experimental Method for Identifying Stability Lobe Diagram using Vibration Analysis", Nachiket Belwalkar, (2014)
36. "Modelling and Experimental Validation of Metal Removal Effect on Dynamic behaviour of Workpiece Fixture System", Sushant Nikam, (2014)
37. "Vibration based Condition Monitoring of Gear box", Madansing Dube, (2014)
38. "Fabrication and Testing of microchannels heat sink resembling leaf venation for electronic Cooling," N. B. Pujari, (2015)
39. "Analysis of dynamic stability of the fixture-workpiece system in milling process by numerical and experimental method," A. T. Sawant, (2015)
40. "An Experimental Method for Identifying Stability lobe diagram (SLD) of milling process,"

Kandake, (2015)

41. "Active vibration control using piezoelectric sensors and actuators," Karande V. H., (2015)
42. "Experimental validation of dynamical behaviour of fixture-workpiece system," Shital Mali, (2015)

Ongoing ME-Dissertations, Title and Research scholar

43. "Effect of clamping forces and metal removal on modal properties of fixture workpiece system under Hertzian contacts", Rohit Kumar
44. "Experimental and Numerical Studies of effect of metal removal on dynamic behavior of fixture workpiece system", Seema Jamdar
45. "Experimental investigation of influence of cutting parameters on turning of AISI D2 steel workpiece with Mitsubishi CBN cutting tool", Uday Panadare
46. "Design, fabrication and inspection of microchannel heat sinks, inspired by leaf venation structure, for electronic cooling", Sanket Varta
47. "Experimental and Numerical Study of heat transfer in micro-channel heat sink with leaf-like pattern for cooling of electronic component", Shwetal Ghogare

Ongoing Ph.D. - Thesis title, Research scholar and Affiliation (Under Shivaji University, Kolhapur)

1. "Development of an Intelligent Decision Support System" Sawant V. B. Rajiv Gandhi Institute of Technology, Mumbai.
2. "Investigations of In-process Dynamical behaviour of fixture workpiece system and implementation of adaptive clamping" M. H. Yadav, Govt. College of Engineering, Karad
3. "Study of fluid flow and heat transfer in microchannel heat sinks for monolithic chip cooling application" V. P. Gaikwad, TKIET, Ichalkaranji
4. "Phenomenological and Parametric studies of Electro Discharge Machining (EDM) with a special emphasis on Powder Mixed Dielectric", M.V. Kavade, RIT, Sakharale
5. "Experimental investigation on flow characteristics of nano fluids for forced convective heat transfer", S. V. Kadam, RIT, Sakharale

Portfolios held at the institute level and tasks accomplished:

Work-Shop Superintendent (from November 96 to July 2001, August 2007 till August 2014)

1. A systematic layout of the entire machinery and equipments was carried out
2. A scheme for providing workshop tools to the students was started
3. Provision of permanent drawing boards is made in the drawing halls
4. Worked as vehicle in-charge (from December 2000 to July 2003)

Training and Placement Officer (from June 2001 to July 2003)

- Organized lectures on personality development, communication skills, Aptitude tests, etc.,

Vice president Gymkhana (from March 99 to July 2003)

1. Set up a full-fledged gymnasium in the college premises
2. Organized and participated in blood donation camp in the college
3. Organized Zonal Sports Meet of Shivaji University, 2002-03
4. Started Aarogyadham, a medical facility in the campus 2000

Project Coordinator, Industry Institute Partnership Cell (IIPC)

(From June 2001 to July 2003 and from January 2008 to May 2014)

Rector Hostels (from July 2007 till February 2013)

Nodal Officer, Academic TEQIP-II

Dean, Research and Development

Institutional Procurement In-charge

TEQIP-III Coordinator, GCoE, Aurangabad

Memberships:

- Indian Society for Technical Education (ISTE), LM 18331
- Member, BoS Mechanical Engg, SU, Kolhapur
- Member, Academic Council SU, Kolhapur
- Shivaji university, VC's panel of experts
- Ex-Member, Board of Management, GCoE, Karad
- Member, BoS Mechatronics, University of Pune
- Member Academic Council and BoS WCE, COE, Sangli
- Member BoS RIT's COE, Sakharale and ADCET, Ashta
- Member Academic Council and BoS K. J. Somaiya COE, Mumbai
- Member Academic Council and SGU, Kolhapur
- Member, BoM, GCoE, Aurangabad
- Member, Academic Council and BoS (Mechanical), GCoE, Aurangabad
- Nominee, DTE, Mumbai
- Nominee , AICTE, New Delhi

Established Centre of Excellence in Computer Integrated Manufacturing CIM (2013-2015):

A Centre of Excellence in CIM is established in the Institute with latest equipment for research and development in following four areas:

- **Condition Monitoring** (Kistler-Dynamometer, SKF make-FFT Analyser, Accelerometers, Acoustic sensors, FRF and Bump-Test Module, Vibration Shaker, DEWESoft DAQS (32-channel and 8-channel Universal, etc.)
- **Flexible Manufacturing Cell** (VMC, CNC Milling, CNC Lathe, AGV, ROBOT, ASRS)
- **Precision Metrology** (CNC-CMM, Surface Roughness Tester)
- **Mechatronics** (Bosch PLC, Proportional Hydraulics, μ P, μ C, ADC, DAC, Arduino, Raspberry-Pi, etc.)

Citation Indices at Google Scholar based on my publications:

<https://scholar.google.co.in/citations?user=5XSX2yoAAAAJ&hl=en>

Dr Suhas Mohite
 Professor of Mechanical Engineering, Govt. College of Engineering, Karad
 Verified email at goekarad.ac.in - [Homepage](#)
 MEMS Condition Monitoring Mechanical Engineering Dynamics and Control

TITLE	CITED BY	YEAR
Analytical solutions for the stiffness and damping coefficients of squeeze films in MEMS devices with perforated back plates SS Mohite, H Kesari, VR Sonti, R Pratap Journal of Micromechanics and Microengineering 15 (11), 2083	71	2005
Squeeze film effects in MEMS devices R Pratap, S Mohite, AK Pandey Journal of the Indian Institute of science 87 (1), 75	63	2012
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Design, modelling and simulation of vibratory micromachined gyroscopes S Mohite, N Patil, R Pratap Journal of Physics: Conference Series 34 (1), 757	39	2006
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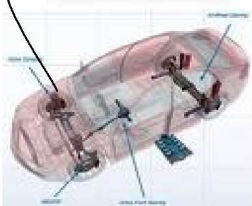
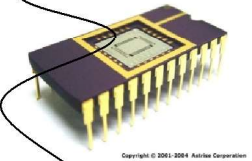
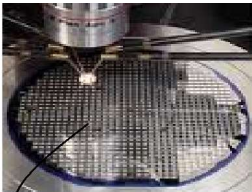
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Citations	287	184
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Co-authors

- Rudra Pratap
Professor of Centre for Nano Sci...
- V. B. Sawant
Mechanical Engineering departm...

I have interest in interdisciplinary research, Micro-Electro-Mechanical Systems (MEMS) is one such area, I happened to work for my PhD.....!



The visionaries who predicted Micro/Nano technology of today

"There's Plenty of Room at the Bottom"
 A talk given at American Physical Society meeting at Caltech
 December 29, 1959.
 By ...Physicist Richard Feynman

Feynman described a process by which the ability to manipulate individual atoms and molecules might be developed, using one set of precise tools to build and operate another proportionally smaller set, and so on down to the needed scale.

"The number of transistors on a chip will double about every two years"
 An article titled "Cramming more components onto integrated circuits",
Electronics Magazine, 19 April 1965.

By... Intel co-founder Gordon Moore
 Intel has kept that pace for over 50 years, providing more functionality of chips at significantly lower costs