

Dr. Suhas P. Deshmukh

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Education

2004-2010	PhD (IIT Bombay), Mechanical Engineering
2012	Certified Energy Auditor & Manager, Bureau of Energy Efficiency (BEE)
1999-2000	M.E. (Mechanical-Design Engineering), Walchand College of Engineering, Sangli
1994-1998	B.E. (Mechanical), Dr. JIMCOE, Jaysingpur, Shivaji University, Kolhapur

Honours & Awards

2012	Young Scientist, Fast Track Research Project, Department of Science & Technology, Govt of India, "Sensorless XY Flexural Mechanism for Precision Application",
2008	Best Research Project, Vaigyaniki, Radiance, IIT, Bombay for "Design and Development of 3D Microfabrication System"
2007	International Award at Bangalore Nano Conference, "A Novel Optomechatronic Focused Laser Spot Submicron Scanning System for Microstereolithography".
2007	Appreciated by Director, IIT Bombay, for "Development of Laser Scanner for 3D Micro-fabrication".

Grants & Research contracts

2019	AICTE Margdarshan Scheme 15 Lakhs, Govt College of Engg., Karad
2019	Consultant and Advisor for Irrigation department for Energy Audit and PG testing of Lift Irrigation Pumping stations at Takari & Mhaishal scheme Govt. of Maharashtra
2012	"Sensor-less XY Flexural Mechanism for Precision Application", (DST) Department of Science & Technology Young Scientist Fast Track 2012, Fund 14 Lakhs
2012	"Design and Development of Sensor-less Linear Compressor", Indian Space Research Organization – University of Pune Cell (ISRO-UoP Cell), Fund 15 Lakhs
2014	"High Speed, High Precision 3D Printer", SelectSys America, Jubille Hills, Hyderabad, Fund 5 Lakhs
2014	"Design and Development of LCD based Stereolithography for Micro-fabrication", BCUD, University of Pune, Fund 2.4 Lakhs
2013	"Design and development of portable high yield regenerative solar still with PCM", BCUD, University of Pune, Fund 1.8 Lakhs
2013	"Design and development of vibration energy harvesting device", BCUD, University of Pune, Fund 2.4 Lakhs
2008	"Sea Wave Energy Generation Pilot Power Plant", Rajiv Gandhi Technology Commission, Govt. of Maharashtra. Fund 50 Lakhs

Publications

Patent	Journals	Conferences	Citation Index
15 Published and 03 are in Process	50+ (15- Journals with Impact Factor More than 3.0)	30	Google Scholar H-index: 301

Patents Awarded and Published

1. HB Zambare, A Razban, SP Deshmukh, MS Shewale, SS Mulik, Position determining system, US Patent App. 16/226,055
2. Suhas Deshmukh, Prasanna Gandhi, T.Kundu, "A Method and an Optomechanical Scanner for Three Dimensional Focused Laser Beam Spot Scanning in Microstereolithography" Patent No: 270072 (1847/MUM/2007), Granted on Date 27/11/2011.

3. Suhas Deshmukh, Virendra Bhojwani, Madhura Sevekari, Amit Jomde, A Linear Compressor, Indian Patent Application No. 1928/MUM/2015, Filed on 16/05/2015
4. Suhas Deshmukh, Virendra Bhojwani, Pralhad Tipole, "A Mounting Structure for Magnet", Indian Patent Application No. 2573//MUM/2015, Filed on 17/07/2015
5. Suhas Deshmukh, Virendra Bhojwani, Amit Jomde, "Flexure spring", Indian Patent Application No. 3053/MUM/2015, Filed on 12/08/2015
6. Suhas Deshmukh, Virendra Bhojwani, V. Ramanathan, "Pyramidal Solar Still", Indian Patent Application No. 201621002282, Filed on 21/01/2016
7. Suhas Deshmukh, Virendra Bhojwani, Amit Jomde, "A Valved opposed piston linear compressor" Indian Patent Application No. 201623007432 Filed on 02/03/2016
8. Suhas Deshmukh, Virendra Bhojwani, Amit Jomde, "A Valved opposed piston linear compressor" Indian Patent Application No. 201623007432 Filed on 02/03/2016
9. Suhas Deshmukh, Virendra Bhojwani, Amit Jomde, "A mechanism to conveniently release footrest in vehicles" Filed on 27/07/2016
10. Suhas Deshmukh, Virendra Bhojwani, Amit Jomde, "Sensor less XYZ Scanner for precision application", Indian Patent Application No. 201621027261, Filed on 09/08/2016

Selected Journals & Conferences

1. M Shewale, A Razban, S Deshmukh, S Mulik, Design, Development and Implementation of the Position Estimator Algorithm for Harmonic Motion on the XY Flexural Mechanism for High Precision Positioning, *Sensors* 20 (3), 662
2. Suhas Deshmukh, SS Mulik, A Krishnamoorthy, MS Shewale, "Parametric Optimization and Stiffness Determination of XY Positioning Stage for High Precision Applications, *Journal of Experimental & Applied Mechanics* 7 (2), 66-73, 2016
3. Suhas Deshmukh, A Bhosale, A Anderson, M Shewale, "A Voltage Enhancing using Multipole Magnetic Generator for Low Frequency Vibrational Energy Harvesting", *Transylvanian Review*, 2016
4. Suhas Deshmukh, SS Mulik, A Krishnamoorthy, MS Shewale, "PID Control and System Identification of Flexural Bearing for Voice Coil Actuator", *Transylvanian Review*, 2016
5. Suhas Deshmukh, H Zambare, K Mate, MS Shewale, Z Khan, "System identification and PID implementation on Double Flexural Manipulator", *International Conference on Nascent Technologies in the Engineering Field (ICNTE)*, 1-5, 2015
6. Suhas Deshmukh, R Patil, YP Reddy, K Mate, "FEA analysis and experimental investigation of building blocks for flexural mechanism", *International Conference on Nascent Technologies in the Engineering Field (ICNTE)*, 1-5, 2015
7. Suhas P Deshmukh, Dhananjay M Bhoge, "Comparison of flexural joints used in precision scanning mechanism using FEA tool" *Int. J. Technol. Res. Eng* 3 (2), 2015
8. Pisolkar, Shilpa, and Suhas Deshmukh. "Modeling and Analysis of Flexural Bearing using FEA Tool." *International Journal of Engineering Research and Technology*. Vol. 3. No. 9 (September-2014). IJERT, 2014.
9. Khan, Zeba, Hrishikesh Zambare, and Abhijeet Shinde. "Parametric FEA Analysis of Double Flexural Manipulator for Precision Application." *Applied Mechanics & Materials* 612 (2014).
10. Suhas Deshmukh, Sevekari, M. G., Phadkule, S., Bhojwani, V., Jomde, A., (2014). "Modelling and Analysis of Linear Compressor". *IJMCA*, 1(7), 157-162.
11. Suhas Deshmukh, Jayesh Dange, Mantha, S. S., (2014). "Investigation and Estimation of Geometric Differences between the Left and Right distal Femur via 3D solid models Developed from CT Scans Using CAD tools". *IJMCA*, 2(1), 006-010.

12. Suhas Deshmukh, Tandel, A., Deshpande, A. R., & Jagtap, K. R. (2014). Modeling, Analysis and PID Controller Implementation on Double Wishbone Suspension Using SimMechanics and Simulink. *Procedia Engineering*, 97, 1274-1281.
13. Suhas Deshmukh, Tandel, Anand, Kirankumar Jagtap, and Abhijeet Deshpande. "Comparison of Multibody Dynamic Analysis of Double Wishbone Suspension Using Simmechanics and FEA Approach." *International Journal of Research in Engineering and Science*, Volume 2, Issue 4, Pages 31-37, 2014
14. Suhas Deshmukh, Tandel, A. N., Jagtap, K & Deshpande, A. (2013). Modeling and PID Control Implementation on Double Wishbone Suspension using Multibody Dynamic Approach. *IJMCA*, 1(7), 099-103.
15. Suhas Deshmukh, AV Jomde, S Joshi, V Bhojwani, P Tipole, "Parametric Analysis Of Erosion Rate And Thermal Characteristics Of In-Bed Tubes In Atmospheric Fluidized Bed Combustion Boiler", *IJMCA* 1 (7), 104-109, 2013
16. Suhas Deshmukh, AR Aktar, P Tipole, V Bhojwani, "Effect of magnetic field strength on hydrocarbon fuel viscosity and engine performance", *IJMCA* 1 (7), 094-098 2013
17. Dongare, Priya, and Suhas Deshmukh. "Effect of Fiber Angle Orientation on Stress, Deformation and Buckling Torque of the Composite Drive Shaft." *Global Journal of Research in Engineering* 13.6 (2013).
18. Suhas Deshmukh, Mule, Anand, and S. R. Patil. "Investigation and Damping A Moan Noise In A Passenger Car." *International Journal of Engineering Research and Technology*. Vol. 2. No. 7 (July-2013). *IJERT*, 2013.
19. Suhas Deshmukh, Mule, Anand, and S. C. Shilwant. "Reliable Fuel Lines Design Considerations and Validation in a Passenger Car." *International Journal of Engineering Research and Technology*. Vol. 2. No. 7 (July-2013). *IJERT*, 2013.
20. Suhas Deshmukh, Gandhi, Prasanna, Rahul Ramtekkar, Kiran Bhole, and Alem Baraki. "" ON-AXIS" LINEAR FOCUSED SPOT SCANNING MICROSTEREOLITHOGRAPHY SYSTEM: OPTOMECHATRONIC DESIGN, ANALYSIS AND DEVELOPMENT." *Journal of Advanced Manufacturing Systems* 12, no. 01 (2013): 43-68.
21. Suhas Deshmukh, Chikhale, S. J., "Comparative Analysis of Vehicle Suspension System in Matlab-SIMULINK and MSc-ADAMS with the help of Quarter Car Model." *International Journal of Innovative Research in Science, Engineering and Technology* 2.8 (2013): 4074-4081.
22. Suhas Deshmukh, Taware, S. M., A Review of Energy Harvesting From Piezoelectric Materials. *IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE) ISSN (e)*, 2278-1684. (2013).
23. Suhas Deshmukh, Jadhav, Nilam P., and Mandar M. Lele. "Numerical Simulation of Fin and Tube Gas Cooler for Transcritical CO 2 Air Conditioning System." *International Journal of Engineering Research & Technology (IJERT)* 1.10 (2012).
24. Suhas Deshmukh, Malpani, Saurabh, Yogesh Yenarkar, S. P. Tak, and D. V. Bhope. "Design of flexure bearing for linear compressor by optimization procedure using FEA." (2012): 0975-5462.
25. Suhas Deshmukh and Jain, Shweta "Experimental investigation of magnetic fuel conditioner (MFC) in IC engine." *IOSR Journal of Engineering (IOSRJEN)* 2, no. 7 (2012): 27-31.
26. Suhas. Deshmukh. Gandhi, P. S., "A 2D optomechanical focused laser spot scanner: analysis and experimental results for microstereolithography." *Journal of Micromechanics and Microengineering* 20, no. 1 (2009): 015035.
27. Suhas. Deshmukh, and P. S. Gandhi. "Optomechanical scanning systems for microstereolithography (MSL): Analysis and experimental verification." *journal of materials processing technology* 209, no. 3 (2009): 1275-1285.

28. Deshmukh, Suhas P., Shashikant Dubey, and P. S. Gandhi. "Optical analysis of scanning microstereolithography systems." *MOEMS-MEMS 2006 Micro and Nanofabrication*. International Society for Optics and Photonics, 2006.
29. Suhas. Deshmukh, Jomde, A., Anderson, A., Bhojwani, V., Shinde, P., & Phadkule, S. (2006). RESONANCE ANALYSIS OF VALVED LINEAR COMPRESSOR FOR REFRIGERATION APPLICATION.
30. Suhas P. Deshmukh; Shashikant Dubey and P. S. Gandhi "Optical analysis of scanning microstereolithography systems", Proc. SPIE 6109, Micromachining and Microfabrication Process Technology XI, 61090C (January 21, 2006)

Supervision

PhD Candidates	M Tech. Thesis Guided	UG Students Groups
6-Nos ongoing	8 – Completed and 2 ongoing	12 Completed and 2-Ongoing

Organization & Committees

Department Level	Institute Level	University Level
Head of Department	Dean R&D	Syllabus Setting
R&D Coordinator		Board of Studies Member
Coordinator for Workshop and Conference		

Teaching

UG Subjects	PG Subjects	Professional Courses
Mechatronics, Numerical Methods, Dynamics of Machinery	Finite Element Method, Advanced Vibrations Autotronics	MATLAB:- Numerical Analysis, ANSYS:- Finite Element Analysis, dSPACE-DS1104 Microcontroller

Employment

2010-present	Professor & Dean (Research & Development), SAOE, Pune
2009-2010	Professor, VIT, Pune,
2008-2009	Head of Department & Head of Research and Development Cell, SCOE, Navi Mumbai,
2008-2008	Assistant Professor, SIT, Lonavala
2000-2004	Lecturer, LTCOE, Navi Mumbai

References

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