Dr. Vinod B. Suryawanshi

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1. Academic Qualifications

Degree	University	Year
B.E(Mechanical)	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	2000
M.Tech (Mechanical)	Indian Institute of Technology, Madras	2002
Ph.D (Nanoengineering)	North Carolina A&T State University, USA	2016

2. Work Experience

- November 2002-July 2005, Lecturer in Mechanical Engineering, Padre Conceicao College of Engineering, Goa
- July 2005-January 2008, Lecturer in Production Engineering, Fr. Conceicao Rodrigues College of Engineering, Bandra, Mumbai
- January 2008-till date, Assistant Professor in Mechanical Engineering, Veermata Jijbai Technological Institute, Mumbai
- Research Assistant, Joint School of Nanoscience and Nanoemgineering, North Carolina A & T State University, Greensboro, USA

3. Areas of Academic/Research Interest

- Manufacturing and Characterization of Polymeric Composites and Nanocomposites
- Bio-degradable/Green Polymeric Composite Materials
- Finite Element Analysis of Polymeric Composites
- Additive Manufacturing of Nanoreinforced Polymeric Composites
- Molecular Dynamic Simulation of Materials
- Electrospinning of Polymeric Nanofibers
- Nano-scale Mechanical Characterization using SEM/AFM/Nanoindentation

4. Courses Taught

Composite Materials, CAD/CAM, Finite Element Methods, Robotics, Computer Integrated Manufacturing, Metrology and Quality Control, Manufacturing Processes, Engineering Design, Theory of Machines, Fluid Power Systems, Mechatronics, Non-Traditional Machining, Theory of Machines, Kinematics of Machinery

5. Publications: Books

- Finite Element Analysis Published by Ane Books Pvt. Ltd, New Delhi
  https://www.amazon.in/Finite-Element-Analysis-T-S-Venkatesh/dp/9389212677

6. Publications: Journals/ Conference Proceedings

- Vinod B. Suryawanshi, and Ajit D. Kelkar, “Design and Development of Constant Stress Cantilever Beam, International Journal of Civil, Environmental, Structural, Construction and Architectural Engineering Vol. 9, No. 2, 2015
- Namita Maiti, S. Mukherjee, Bhunesh Kumar, U. D. Barve, V. B. Suryawanshi, and A.K.Das, “Design and development of indirectly heated solid cathode for strip type electron gun,” Review of Scientific Instruments, 81, 013302 ,2010

- Sagar Shinde, V.B.Suryawanshi, V.G.Patil, G.Kharabe,Transient Dynamic Stress Analysisof Mixing Chamber Applied for Chemical Industry, "International Journal of Engineering and Technology, Volume 05, Issue 06, 2018
- Mugdha Dongre, V.B.Suryawanshi, Cellulose based Nanocomposites and their Potential Applications, International e-conference on sustainable development in Mechanical Engineering, Oct 30-31, 2020, VNRVJIET, Hydrabad, India
- Vinod B. Suryawanshi, Neerajkumar Wayzode, Experimental Investigations on Effect of Dispersion and Deposition Method on Mechanical Properties of Nano-Silica/Epoxy Composites, International Conference on Advances in Mechanical Engineering, Istanbul, Dec 17-19, 2019
- Vinod B.Suryawanshi, L Zhang, AD Kelkar, Effect of Silane Treated Electrospun SiO2 Nanofibers Interleaving on Mode I Fracture Toughness of Glass Epoxy Composites, , 57th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, AIAA SciTech, Jan 5-8,2016,San Diego, California, USA
- Vinod B.Suryawanshi, Ajit D. Kelkar, Mechanical Properties of Silane Treated Glass Nanofiber –Epoxy Interphase Using Molecular Dynamics Simulation, Proceedings of the ASME 2015 International Mechanical Engineering Congress & Exposition, IMECE2015, November 13-19, 2015, Houston, USA
- Vinod B. Suryawanshi, Evan T. Kimbro and Ajit D. Kelkar, Life Prediction and Stiffness Degradation Modeling of Glass/Epoxy Composites Subjected to Flexural Fatigue Loading, ASME 2016 International Mechanical Engineering Congress and Exposition, Volume 1: Advances in Aerospace Technology, Phoenix, Arizona, USA, November 11–17, 2016
- Namita Maiti, Atul Tak, Yashodhan Khabade, Vinod Suryawanshi, A.K.Das, Modeling of Vapor Transport of Electron Beam Evaporation Based Coating System, American Institute of Physics, Conference Proceedings, Volume 1451, Issue 1, 2011, p.304-306
- V.B.Suryawanshi, Raavindra Savangouder ,Predictions on surface finish in extrude honingprocess based on Neural Network Models, ICRAMME 2005,Malaysia.
- Milind Kirkire, V.B.Suryawanshi, Artificial intelligence in mechanical design, International Conference on Advanced in Mechanical Engineering,SVNIT, 3rd - 5th Aug-2009
- Milind Kirkire, V.B.Suryawanshi, Knowledge based parametric approach for design of gearbox, International conference on Advanced Manufacturing and Automation, Kalashalingam University (INCAMA2009), 26-28 March,2009,
- Manoj Palsodkar, V.B.Suryawanshi, Milind Kirkire, Evaluation of Lean manufacturing systemby Discrete Event Simulation, APORS 2009, Dec 06-09,2009
- Manoj Palsodkar, V.B.Suryawanshi, Milind Kirkire , Discrete Event Simulation And Re-Engineering to Improve Performance of manufacturing System, Ninth Global Conference(GLOGIFT 09) on Flexible Systems Mgmt. November 12 – 14, 2009
- Manoj Palsodkar, V.B.Suryawanshi, Milind Kirkire, Simulation & Mfg Process Reengineering For Improved Throughput, COSMA 2009, NIT Calicut Dec.2009
- Sachin Waghmare, V.B.Suryawanshi, Milind Kirkire, Product Design Knowledge Reuse,International conference on advanced in mechanical engineering, ICAME 2010, SVNIT, Jan 4-6,2010
- Vijay Agale, V.B.Suryawanshi, Implementation of Artificial Neural Network Based Process Selection for Cylindrical Surface Machining, Fourth International Conference on Advances in Mechanical Engineering, SVNIT, Surat,23-24 September 2010
- V.B.Suryawanshi, V.V.Chaudhari, Artificial Neural Network Modeling of Extrude Honing Process, National Conference on Developments and Challenges in Mfg, MIT, Manipal, 2004

- V.V.Chaudhari, V.B.Suryawanshi, System Modleing Through Bond Graphs, National conference on Advances in Mechanical Engineering, JNEC, Shimoga, Karnataka,2004
- Raavindra Savangouder, V.B.Suryawanshi, Finite Element Analysis of Thermo-electric MEMS actuator, National Conference on Recent Trends in Mechanical Engineering, SRES College of Engg., Kopargaon, Maharashtra, 2004
- V.B.Suryawanshi, V.V.Chaudhari, Modeling of Mechatronics system: A Bond Graph Approach, National Conference on Recent trends in Mechatronics, MIT, Aurangabad, Maharashtra, 2004
- V.B.Suryawanshi, Raavindra Savangouder, Developments in MEMS in India, National Conference on Recent trends in Mechatronics, MIT, Aurangabad, Maharashtra, 2004
- Milind Kirkire, V.B.Suryawanshi, Design Automation of gears using Knowledge based parametric design, NCAME 2009, RGIT, Mumbai, 15th -16th Jan 2009
- Manoj Palsodkar, V.B.Suryawanshi, Manufacturing system simulation, National Conference, ZENITH 2009, Fr.Agnel Polytechnic, Navi Mumbai

7. Administrative Experience

- Rector, Boys Hostel, VJTI, June 2019- till date
- Faculty In-charge, VJTI Gymkhana, August 2019- till date
- Faculty In-charge, Swaccha VJTI, August 2019-till date
- Member, Internal Complaint Committee, VJTI, May 2018- till date
- Faculty In-charge, M.Tech Admissions, VJTI, 2017-18 (1 year)
- Program Co-ordinator, M.Tech (CAD/CAM and Automation) – 2009-2012 (3 years)
- Assistant Controller of Examinations – March 2011-August 2012 (1.5 years)
- Faculty In-charge – Society of Robotics and Automation, VJTI-2008-2012 (4 years)
- Co-ordinator- Mechanical Dept, TEQIP II (Training) – 2010-2012 (2 years)

8. Participation in Professional Development Programmes

- Advances in Manufacturing Systems and Automation, June 16-21,2003
- IDEAS (CAD software), NITTTR, Goa, Jan 8-21,2004
- Industry training to Academics at HAL, Nashik, June 5-12, 2006
- Imagineering Connect at Larson & Tubro, Mumbai, June11-30, 2007
- ERP (SAP) -Materials Management, Nov. 1-30, 2008
- Hands-on Training -Nastran-Hypermesh, Dec.12-17, 2008
- Motion Control and Automation, 29th Dec.08-2nd Jan 2009
- Build people to Build Institute, 7 days, Jan- Mar, 2009
- Advances in Mfg. and Micromachining Techniques, November 14-18, 2011
- Advances in Microscopy at ICAR-CIRCOT, Mumbai, 16-18, Jan 2017
- Process Instrumentation, Siemens, Mumbai, August 14-18, 2018
- Research Methodology for Engg, and Mgmt. Research, July 9-14, 2018
- Innovative Technologies for Sustainable Water Resources Mgmt., June 10-15, 2019
- Advances in Smart Manufacturing Technologies, Dec. 30, 2019-Jan 04, 2020
- Applications of Finite Element Analysis and CFD using ANSYS, June 13-17, 2020

9. Grants Received

- Grant of Rs. 9.0 Lacs under AICTE Prerana Scheme for conducting of classes of students for SC/ST for various entrance examinations such as GRE/TOEFL/CAT/GATE, 2019-2021 (2 Yrs)
- Grant of Rs. 12 Lacs from AICTE for appointing two Adjunct Professors for department (July –Dec 2017)

10. Consultancy/Testing Assignments Undertaken

- Trailer design checking for Road Transport Office (RTO), Mumbai, Maharashtra
- Technical and Quality Inspection of 7 and 14 CuM Refuse Compactors for Panvel Muncipal Corporation, Mumbai
- Technical and Quality Inspection of Suction cum Jetting Machine for Panvel Muncipal Corporation, Mumbai
- Technical and Quality Inspection of 3T and 5T Garbage Trucks for Panvel Muncipal Corporation, Mumbai
- Technical and Quality Inspection of E-Toilets for Panvel Muncipal Corporation, Mumbai

11. Organization of Workshops / Training Programs

- Two day training on "Effective role execution", 4-5 March 2009, VJTI, Mumbai
- 50 Hours, Software Training program "NX3 for Designer", July-Nov, 2007, at Fr.CRCE, Mumbai
- Co-cordinator for one week STTP on Nanomaterials: Synthesis, Modeling and Applications, at VJTI, Mumbai, March 19-24, 2017
- Two days Technical Larson and Toubro Lecture Series at VJTI, Sept. 8-9, 2017
- Two days workshop on FEAST-Software in association with SVR-InfoTech, Pune, September 10-11,2018

12. Invited Lectures / Resource Person / Keynote Address

- Delivered Invited Talk on "Nanoscale Mechanical Characterization" during Nanoscience and Nanotechnology: Fundamentals, Synthesis and Applications, SPCE, Mumbai, Jan 5,2017
- Delivered expert talk during on "Electrospun Nanofibers Synthesis, Characterization and Applications" at STTP on Nanomaterials: Synthesis, Modeling and Applications, at VJTI, Mumbai, March 17,2017
- Delivered expert talk on "Manufacturing of Nano-composites"during STTP "Advanced Manufacturing Processes and Management Practices" at VJTI Mumbai, Dec.25,2017
- Delivered Expert talk on " Research Culture in Foreign Countries", during STTP on Research Methodology for Engg, and Mgmt. Research, July 9-14, 2018
- Delivered Expert talk on "Applications of Polymeric Composites in Automotive Engineering" during One Week MSBTE sponsored faculty development program entitled " Emerging Trends in Automotive Technology ", January 17-21, 2020

13. Major Research Projects Completed

- Development of Nanoparticles Reinforced Sandwich Composites for Radiation Shielding Applications (NASA Project)
- Development of Electrospun Nanofibers Reinforced Composites using VARTM Method
- Mechanical Testing of Composites under Static/Dynamics Loading Conditions
- Nanoscale Mechanical Characterization using SEM of Single Nanofiber for obtaining Material Properties and Failure Behaviour
- Use of Atomic Force Microscope for Characterization of Nanofibers-Matrix Interphase.
- Finite Element Modeling of Progressive Failure of Composite Materials
- Modeling of Material Behaviour using Molecular Dynamics Simulation

14. Ph.D. Guidance: 04 Ongoing

- Mahendra Shelar (Registered in 2017), Topic: Manufacturing of Graphene Reinforced Prepreg Composites
- Mugdha Dongre (Registered in 2017), Synthesis of Nanocellulose from Papaya Petiole and manufacture Nanocellulose Reinforced Composites
- Neerajkumar Wayzode (Registered in 2018), Manufacturing of Graphene Reinforced Composites using Resin Film Infusion Process
- Sachin Kamble, (Registered in 2019), Manufacturing and Characterization of Jute/Sisal Reinforced Composites

15. M.Tech Projects Guided:22 Guided, 05 Ongoing

- Aziz Patvegar,(2007) "CAD Surface Creation using Carpeting Technique" , at Centre for Computational Technologies Pvt. Ltd, Pune,
- Bhunesh Kumar, (2009)"Design of Indirectly Heated Cathode for EB-PVD System", at Bhabha Atomic Research Center, Mumbai,
- Vaibhav Hase,(2009), "Feature Recognition from STL file", at Geometric Software Solutions, Mumbai,
- Vipul Shinde, (2010), "Application of Finite Element Simulation for the Design & Optimization of Forging Process Parameters to Manufacture a Crank Shaft" , at Bharat Forge Ltd., Pune,
- Amol Waghmare,(2011)"Analysis and Optimization of Busbar Support for Switchboard system using FEA", at Siemens Ltd. Mumbai,
- Yashodhan Khabade, (2010)"The CFD Modeling of EB-PVD of Ti/Al Metal Coating" , at Bhabha Atomic Research Center, Mumbai
- Tushar Takwale,(2011), "FEA based Analysis & Optimization of Duct Frequency &Support Locations", at Centre for Computational Technologies Pvt. Ltd, Pune,
- Tushar Sonawane,(2012)"The CFD Modelling of EB-PVD of Yttrium-Oxide (Y2O3) Coating", at Bhabha Atomic Research Center, Mumbai,
- Umakant Mane,(2012) "Flow Simulation and Thermal Stress Analysis of Plasma Torch Based Pyrolyser", at Bhabha Atomic Research Center, Mumbai,
- Umesh Choudhari, (2012)"Improvements in Design of Indirectly Heated Cathode", at Bhabha Atomic Research Center, Mumbai,
- Umesh Kale, (2018), Modeling of Liquid Impact Errossion on Fiber Glass Composites at NCAIR, IIT, Bombay
- Ajay Satpute, (2018), Development of Automotive Powertrain Components with Fiber Reinforced Polyamide using CAE tools, at Solvey India Ltd.
- Rahul Pawar, (2018), Numerical Analysis of Effect of Degraded Blade on Performance of Wind Turbine, at NCAIR, IIT, Bombay
- Amey Raikar, (2018), Finite Element Analysis of Polymeric Nanocomposites
- Sagar Shinde, (2018), "Transient Dynamic Stress Analysis of Mixing Chamber Applied for Chemical Industry"
- Roshan Jaiswal, (2019), Crashworthiness of LHB coach as per given standards
- Abhilash Vishwakarma, (2019), To re-verify present equation for stress Intensification factor using Finite Element Analysis at Proton Engineering, Thane
- Amit Salve, (2019) Bus Rollover Analysis According to ECE66/AIS031 regulation
- Umesh Pakhale, (2019), Manufacturing and Analysis of Polymeric Composites
- Vaibhav Mohite (2020), "Automation Of Testing Of X-ray Machine By Using 3D Printed

Robotic Arm" at Siemens Ltd, Bangalore

- Ashish Patil(2020), Finite Element Analysis of Fatigue Behaviour of Plain Weave E-glass Composites
- Rahul Kadam, (2020), Design and Fabrication of Cellulose-PLA Bio-Composite
- Shubham Raut, (Ongoing), Design and Analysis of Complaint Mechanism
- Shubham Gosavi, (Ongoing), Graphene Reinforced PLA Composites using 3D Printing: Manufacturing and Characterization
- Kunal Chavan, (Ongoing), Rice-Husk PLA Composites using 3D Printing: Manufacturing and Characterization
- Sweeti Kuwar, (Ongoing), Effect of 3D Printing Process Parameters on Mechanical Properties of ABS
- Vinayak Dharamkare, (Ongoing), Design and Analysis of Composite Automotive Bumper

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