

Prasad S. Shirodkar

Phone: Home: (0251) 2886989, Cell: 8976279188 email: prasad.shirodkar@djsce.ac.in.

Address: 11, Kamdhenu Society,
Nandivli Rd., Om Sai Nagar,
Near Vanvasi Ashram, Dombivli (E) Pin – 421201

Date of Birth: 18 Nov 1976

Education: **Michigan Technological University**, Houghton, MI,
M.S. Mechanical Engineering, August-2006, **GPA: 3.60**.
Focus in Industrial Engineering: Value Recovery, Product Life Cycle,
V.J.T.I, University of Mumbai, Mumbai, India,
M.E. - Mechanical Engineering, April-2002, First Class with Dist.
Focus in Design: Failure Analysis of Structures.
Datta Meghe COE, University of Mumbai, Mumbai, India,
B.E. - Mechanical Engineering, January 1999, First Class.

Teaching Experience:

**Subjects Taught: Engineering Mechanics, Engineering Drawing, Strength of Material,
Theory of Machines, Mechanical Vibrations, Machine Design,**

D. J. Sanghvi College of Engineering, Vile Parle

July 11 – till date

Working as an Assistant Professor in the Department of Mechanical Engineering

- Working as Associate Head of Mechanical Engineering Department. Co-ordinating departmental activity as per the guidance of Head of the Department
- CAP co-ordinator: Co-ordinating paper moderation work for Mechanical and Production department for SE and TE
- Library co-ordinator: Communicating requirement of books to the library. Co-ordinating NPTEL course registration for the students of Mechanical Engineering Department.
- In-Charge of Design stream of subjects in Mechanical Engineering Department.
- Checking punctuality of lectures and practical sessions on a weekly basis
- Worked as Jt. Convener in Exam Section, 2021 – 2023
- NAAC committee member at institute and department level
- NBA committee member at department level

Sardar Patel Institute of Technology, Andheri,

July 10 – May 2011

- Taking lectures and conducting labs in Engineering Mechanics and Engineering Drawing (using AutoCAD).

Michigan Technological University, Houghton, MI

Sept. 04 – Aug. 06

Teaching/Research Assistant

1. Teaching Assistant for Quality Engineering and Design of Experiments.

- Duties included, interacting with students, assessing home assignment, workshops, exams, etc.
- Additional duties also included setting up seminars and lectures via teleconferencing for the Sustainable Futures Institute at Michigan Tech.

2. Assisted Dr. Sutherland in the 2nd edition of “*Statistical Quality Design and Control, Contemporary Concepts and Methods*,” by Richard E. DeVor, T. H. “Phil” Chang, and John W. Sutherland. Responsibilities included preparing book exercises and solutions.

3. Developed a model to explain value flow over a product life cycle to promote value recovery processes such as reuse, remanufacture and recycle.

K. J. Somaiya Institute of Engr.& Information Technology, University of Mumbai Oct. 01 – June 04
Lecturer, Mechanical Engineering

Responsibilities:

- Taking lectures and conducting labs in Engineering Mechanics and Machine Drawing (using AutoCAD).

- Developing labs and machine shops for the institute.
- Performing evaluation for Mumbai University at CAS

Computer Skills:

Operating systems : UNIX, Linux, Windows, DOS
 Other Software : MS Word, Excel and Power Point, AutoCAD, Mechanical Inventor, WebSphere, JBOSS

Research Experience:

Characterization of Value Flow during Product Life Cycle, Michigan Technological University

- Developed a model to explain product value flow over a life cycle.
- Characterized the consumer satisfaction behavior over product use phase.
- Investigated barriers in setting up of product recovery infrastructure.

Failure Analysis of Storage Tanks and Preventive Measures, TOYO Engineering India Ltd.

- Performed failure analysis of storage tanks by developing models using ANSYS software.
- Identified weakness in the installation design of storage tanks.

Evaluation of Process Performance in a Powder Coating Plant using SPC Techniques, VOLTAS India Ltd.

- Identified the statistical signals that were causing the process to go out of control using SPC tools.
- Reviewed the statistical signals and suggested changes for process improvements.

Work Experience:

University of Michigan Health System, Ann Arbor, MI

Sept. 07 – Oct. 08

WebSphere / JBOSS Administrator

Responsibilities:

- Provide 24x7 WebSphere / JBOSS support in development, integration, testing, and production environment.
- Installation, application deployment (EAR and WAR), and administration of WebSphere Application Server V 5.x / 6.x
- Installing, configuring, and deploying applications on JBOSS Application Server V 4.0.5 / 4.3.0.
- Installation, configuration, and administration of IBM HTTP Web Server APACHE Web Server (2.2.6/2.2.8) on UNIX and Windows Platforms.
- Configuring mod_jk / mod_proxy_ajp for APACHE WebServer. Configuring SSL using Ikeyman / Openssl
- Fine-tuning performance of application servers by setting up JVM memory, thread pool size, etc.
- Trouble shooting problems in the business environment using the log files with the help of various tools such as, Resource Analyzer, Heap-Analyzer and Log Analyzer
- Creating clustered, multi-cell environment for efficient Work Load Management
- Setting up of Nodes, JDBC connectors, Virtual hosts, configuring Web Containers and EJB Containers, HTTP Session Managers
- Performing capacity planning tasks
- Migrating applications from WebSphere to JBOSS, WebSphere 5.x to 6.x
- Creating reports on installation, deployment, configuration, trouble shooting, etc.
- Basic UNIX (AIX, Sun Solaris and Linux) scripting skills
- Managing the system resources, performance monitoring, and system tuning
- Performing basic UNIX admin tasks
- Configuring performance monitoring tools, such as Wily 5.3 / 7.1 P8 for WAS / JBOSS
- Coordinating activities with various teams such as, the UNIX admins, the developers, and Networking team.

Helwig Carbon Products, Inc., Milwaukee, WI

Nov. 06 – March. 07

Part-Time Intern, Mechanical Engineering Project

Responsibilities:

- Data collection and analysis of hardness data for Carbon grades using SPC tools

- Design a fixture for testing of Carbon grades for using 'Equotip' hardness tester
- Design a procedure for testing of carbon grades using 'Equotip' (LEEB) hardness tester
- Establish tolerance range for Carbon grades based on 'LEEB' hardness' values

Publications:

- Kumar, V., P. S. Shirodkar, J. A. Camelio, and J. W. Sutherland, "Value Flow Characterization During Product Lifecycle to Assist in Recovery Decisions," International Journal of Production Research, Vol. 45, No. 18, 2007, pp. 4555-4572,
- Shirodkar, P. S., V. Kumar, M. E. Jarvie, and J. W. Sutherland, "Exploring Value Flow in the Product Life Cycle to Promote Successful Value Recovery," Proceedings of Sustainable Manufacturing IV - Global Conference on Sustainable Product Development and Life Cycle Engineering, Sao Carlos, Sao Paulo, Brazil, 2006, Paper #LCA02
- Kumar, V., D. J. Bee, P. S. Shirodkar, B. P. Bettig, and J. W. Sutherland, "Towards Sustainable Product and Material Flow Cycles: Identifying Barriers to Achieving Product Multi-use and Zero Waste," Proc. of ASME Manufacturing Engineering Division, 2005, (IMECE2005-81347), appeared on CD-ROM.
- Sarvesh Kulkarni, Vijaya Kumar N. Kottur, and Prasad Shirodkar, 2020, "Design and Development of Cost-Effective Solar Water Heating System," Proceedings of International Conference on Intelligent Manufacturing and Automation, pp. 615 - 624.
- Aditya H. Bhatt and Prasad S. Shirodkar, 2020, "Lateral Force Modelling Using Magic Formula Tire Model," Proceedings of International Conference on Intelligent Manufacturing and Automation, pp. 753 - 762.
- Abrar Khulli, Prasad Shirodkar, Vijaya Kumar N. Kottur, and Rajendra Khavekar, 2020, "Evaluation of Piping Isometric Drawings Using Six Sigma Process," Proceedings of International Conference on Intelligent Manufacturing and Automation, pp. 815 - 824.
- Avantika S. Prabhu, Dr. K.N.Vijaykumar, Prasad S. Shirodkar, and Sanket K. Joshi, 2020, "Embodied Design of 4-Legged Adult Walker," Journal of Advanced Research in Dynamical and Control Systems, Volume 12 | 07-Special Issue, pp. 2463 - 2468.
- Aditya Date, Amey Parab, Burhanuddin Telwala, Meet Rathod, Vinayak H. Khatawate, Prasad Shirodkar, 2023, "Numerical Validation of Thrust Produced by Remotely Operated Vehicle", Proceedings of International Conference on Intelligent Manufacturing and Automation, pp. 383–394

Awards and Recognition:

- Henes Fellowship: Fall 2005
- Appointed Graduate Scholar of the Sustainable Futures Institute
- IGERT Associate (NSF funded 5-year project): Spring 2005 – Spring 2006

Professional Activities:

- In charge of organizing the colloquium for the Sustainable Futures Institute in Fall 2005 and Spring 2006.
- Presented a poster in the Sustainable Futures Institute's Fall-2006 poster session

Workshops Attended

- A one week short term course on "Fault Diagnosis of Rotating Machines and Finite Element Analysis" in Mechanical Engineering Department at VJTI.
- STTP on "Research Methodology, Mathematical Modelling and Research Based Industry Institute Interaction Activities In Engineering and Technology" at Shivajirao S. Jhondhale College of Engineering.
- One day workshop on "Product Lifecycle Management" in Mechanical Engineering Department at SPCE.
- One day workshop on "Reverse Engineering and Product Development" in Mechanical Engineering Department at SPCE.
- One day workshop under TEQIP on "Outcome based education and accreditation for the faculty members of technical institutions" at VJTI.
- One day NPTEL awareness workshop conducted at K. J. Somaiya Institute of Engineering and Information Technology, Sion.
- One day NPTEL workshop conducted at IIT Bombay.
- Two day workshop on "Curriculum Development for Mechanical Engineering Program" at Mukesh Patel School of Technology Management & Engineering.

Online Faculty Development Program Attended

- Digi-Tech Teaching Learning- 2020, MAY 18-22, 2020. SINHGAD INSTITUTE OF TECHNOLOGY, LONAVALA
- SCILAB, MAY 26-30, 2020, DJSCE
- OpenFOAM FDP, 01st June 2020 to 07th June 2020, Shri Vile Parle Kelavani Mandal's Institute of Technology Dhule
- ROLE OF ENGINEER IN POST COVID ERA, MAY 11-15, 2020, Sandip Institute of Engineering and Management.
- GREEN MANUFACTURING: THE PRESENT & THE FUTURE, 15.05.2020 to 20.05.2020, Santhiram Engineering College, Nandyal
- Artificial Intelligence, 22.05.2020 to 26.05.2020, Universal College of Engineering
- A Journey into the Manufacturing Sector in India in View of Industry 4.0 Practices and Covid 19, 9th June to 13th June 2020, Department of Production Engineering, Dwarkadas J. Sanghvi College of Engineering
- Improving Teaching Experience using Best Practices, 15th June to 19th June 2020, Department of Information Technology, Dwarkadas J. Sanghvi College of Engineering
- One week FDP on, "Educational Technology-Integration and Interaction", 06/06/21 - 10/06/21
- One week FDP on, "Advances in Machining, Manufacturing and Computing Process", 24/05/21 - 29/05/21
- One week FDP on, "Outcome based Pedagogy for Effective Teaching and Learning in Engineering Education", 14/06/21 - 18/06/21
- One week FDP on, "IP Practical Aspects – Patent Drafting & Filing, Trademark & Copyright Filing", 17/05/21 - 22/05/21
- One week FDP on, "Redesigning Pedagogy: Educating for Innovation & Fostering for Society", 21/06/21 - 25/06/21
- One week FDP on, "Additive Manufacturing and Its Industrial Applications", 08/02/22 - 14/02/22
- One week FDP on, "Advanced Material and Manufacturing for Industry 4.0", 22/02/22 - 28/02/22
- Two week FDP on, "NEP 2020 Orientation & Sensitization Programme", 18/12/23 - 27/12/23
- One week FDP on, "Applications of AI-ML-DL in Product Life Cycle Design and Management", 22/07/24 - 26/07/24
- One week FDP on, "From Draft to Publication: Essential Steps in Research Article Writing", 06/01/25 - 10/01/25

Webinars attended

- CFD for Centrifugal Pump, 19-May-2, Imperial College of Engineering and Research, Wagholi, Pune, India
- Industry Scenario after COVID-19, 20th and 21st May 2020, Guru Gobind Singh College of Engineering and Research Centre Nashik
- Application of Statistical tools and Energy Engineering, 20th and 21st May 2020, Shree L R Tiwari College of Engineering
- Art of Online Teaching, Research Paper Writing & Patent Registration, 18th and 20 May 2020, SSBES ITM, Nanded, MS.
- Research Techniques and Challenges 26th -28th May 2020, Shivajirao S. Jondhle Polytechnic, Asangaon
- Entrepreneurship - Dream To Reality - The Journey and case studies !, 19TH May 2020 Sandip, Institute of Engineering & Management, Nashik
- Systematic Innovation Through TRIZ", 15th - 17th May 2020, TRIZ Chapter - GCOERC, Nashik

Online Certification

- AI for Everyone
- Leadership and Emotional Intelligence
- Google Cloud Product Fundamentals

- Machine Learning for All
- A Crash Course in Data Science
- Introduction to Data Analysis Using Excel
- Basic Data Descriptors, Statistical Distributions, and Application to Business Decisions
- Business App of Hypothesis Testing and CI Estimation
- Linear Regression for Business Statistics
- Business Statistics and Analysis Capstone
- Coursera Business Statistics and Analysis Specialization
- Welcome to Game Theory
- Assessment in Higher Education -Professional Development for Teachers
- Learning to Teach Online
- Experimental Design Basics

Patent Registration: Design Patent - Design of WINDMILL BLADES

Workshop Conducted:

Conducted a 5-day workshop on FEA and Modelling, using FreeCAD and Z88 Aurora (open source software)

References:

1. Dr. K. N. Vijaya Kumar (HOD, Mechanical Engg. Dept.)
D. J. Sanghvi College of Engineering
Phone: 9869363683, email: vijaykumar.kottur@djsce.ac.in
2. Prof. John W. Sutherland (Academic Advisor)
Michigan Technological University, Dept. of Mechanical Engineering - Engineering Mechanics
Phone: 906-487-3395, email: jwsuther@mtu.edu
3. Mr. Nitin Kulkarni (Manager)
Design Engineering Manager, Helwig Carbon Products, Inc., Milwaukee, WI
Phone: 414-362-6250, email: nitin.kulkarni@helwigcp.com