



**AISSMS**  
**COLLEGE OF ENGINEERING**

ज्ञानम् सकलजनहिताय  
Accredited by NAAC with "A+" Grade



## Department of Mechanical Engineering

### Faculty Profile

#### Dr. Sandeep H Wankhade

PhD (Mechanical/Production Engineering)  
Associate Professor, Department of Mechanical Engineering  
Chairman, TRIZ Chapter, TRIZ Association of Asia  
Coordinator, Mechanical Engineering(Sandwich pattern)  
Institute Coordinator, R&D Cell  
Director, Teaching Learning Centre, INTLC  
[shwankhade@aissmscoe.com](mailto:shwankhade@aissmscoe.com)



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

🔗 <https://www.linkedin.com/groups/10469750/>

#### ResearchAreas/ Areas of Interest

Hybrid EDM, Industry 4.0, TRIZ, New Product Development, Sustainability

#### Personal Details

**Date of Birth :** 03 /11/1971

**Domicile:** Maharashtra

**Gender :** Male

**Blood Group:** B+ve

**Contact Details:** 21, Suvidha Park-2, Near CME reargate, Nashik road, Bhosari,  
Pune – 411039

## Academic Background

S. NO.	Qualification	Specialization	University	Class/Grade	Year of Passing
1.	Ph.D.	Mech/Prod Engineering	SRTM Univ, Nanded	--	May 2017
2.	M.E.	Manufacturing Technology	Thapar University, Patiala	First with Honors	May 2001
3.	B.E.	Production Engineering	Amravati Univ, Amravati	First	May 1994

S. NO.	Certification	Specialization	Certifying Agency	Level	Year of Passing
1.	Six Sigma	Lean Six Sigma	QC Services	Black Belt	2011
2.	MATRIZ	Innovation	MATRIZ, USA	3	2018

## Work Experience

S. No.	Type of Experience	Years	Months
1	Teaching	24	03
2	Research	01	00
3	Industry	02	00
<b>Total</b>		<b>27</b>	<b>03</b>

## Subjects/Courses Taught

S. No.	Subject	UG/ PG	Class (FE/SE/TE/BE/ME)	No of times Subject Taught
1	Manufacturing Processes	UG	SE (Production Engg)	03
2	Production Metallurgy	UG	TE (Production Engg)	03
3	Mechatronics & Robotics	UG	BE (Production Engg)	03
4	Numerical Techniques & Database Management	UG	SE (Production Engg)	02
5	Engineering Graphics	UG	FE (Production Engg)	01
6	Machine Cutting & Tool Design	UG	TE (Production Engg)	01
7.	Material Management & Logistics	UG	BE (Production Engg)	01
8.	Manufacturing Technology	UG	TE (Production Engg)	05
9.	Industrial and Technology Management	UG	TE (Electrical Engg)	03
10.	Mechatronics	UG	TE (Mechanical Engg)	03
11.	Product Design and Development	UG	BE (Mechanical Engg)	03
12.	Industrial Engineering	UG	BE (Mechanical Engg)	01
13.	Autotronics	PG	SE (Automotive Engg)	01
14.	Robotics (Honours Course)	UG	TE (Mechanical Engg)	02
15.	Computer Integrated Manufacturing	UG	BE (Mechanical Engg)	01

## Research Publications

	National	International	State	SCI/ Scopus Indexed	UGC Approved
<b>Journals</b>	01	04 + 01*	00	02	02
<b>Conferences</b>	07	03	02	02	--

\* Communicated

## Publication Details (Journals)

S. No	Document Details	Authors	Year	Source Details	ISBN/ ISSN	Publisher
1.	Evaluation of Success Factors in Professional Business Incubation	Nitin Shekapure Sandeep Wankhade Vipin Gawai Swati Shekapure	2022	Journal of Optoelectronics Laser, volume 41 Issue 8, 2022	ISSN:1005-0086	Journal of Optoelectronics Laser
2.	Survey Paper on Extraction of 3D image Data for Detecting Chest Diseases	Nitin Shekapure Sandeep Wankhade Vipin Gawai Swati Shekapure Sachin Kallurkar	2022	Journal of Optoelectronics Laser, volume 41 Issue 8, 2022	ISSN:1005-0086	Journal of Optoelectronics Laser
3.	Enhancing User Experience for Computer Aided Design packages through Artificial Intelligence	Sachin S Kallurkar Prasad R Baviskar Sandeep H Wankhade3	2021	Design Engineering	ISSN: 0011-9342	Design Engineering (Toronto)
4.	Study of the Productivity and Surface Quality of Hybrid EDM	S H Wankhade S B Sharma	2016	Journal of Institution of Engineers (India): Series C, Springer, 97(1), 71-76	2250-0553	Institution of Engineers (India)
5.	Formulations of management policies by over ranking techniques	M P Khond B M Dabade S H Wankhade	2007	Journal of Institution of Engineers – Industrial Engineering Journal	0020-3408	Institution of Engineers (India)

## Publication Details (Conferences)

S. No	Document Details	Authors	Year	Conference Details	ISBN	Organised by
1	Trizustainability – TRIZ for Sustainability	S H Wankhade	2020	TRIZCON, Virtual Conf., 6-7 Oct 2020	--	The Altshuller Institute for TRIZ Studies
3	Assisted Electrical Discharge machining: An innovative hybrid approach	S H Wankhade B M Dabade M P Khond	2017	Advances in Intelligent Systems Research ICCASP/ICMMD-2016	1951-6851	Atlantis Press
4	Performance parameter optimization of newly developed Hybrid process: Abrasive Assisted Electrical Discharge machining	S H Wankhade B M Dabade M P Khond	2016	6th International & 27th All India Manufacturing Technology, Design and Research Conference (AIMTDR-2016)	978-93-86256-27-0	College of Engg, Pune
5	A case study on Solving a social problem using TRIZ	S H Wankhade N S Phadnis	2015	Inspiring Innovation Excellence–InnovEx Asia 2015	--	TRIZ Association of ASIA
6	Hybrid machining of Electrical Discharge and Abrasive Jet machining	S H Wankhade S B Sharma	2014	International Colloquium on Materials, Manufacturing and Metrology	978-93-80689-18-0	IIT Madras -Chennai
7	Expert system approach for implementation	S H Wankhade	2013	International Conference on CAD, CAM,	2195-4364	IIT Delhi

	planning and financial justification of robotic system: A case study	S M Kherde R D Palhade		Robotics and Autonomous factories		
8	Development of Material Strategy: A Case Study	S H Wankhade S K Bidgar M L Chanpur	2012	International Conference of Advances in Mechanical Engg,	--	Amrutvahini College of Engg. Sangamner
9	Productivity Improvement through Automation of Coolant Filling Unit	S H Wankhade	2010	Proceedings of the National Conference on Recent Trends in Mechanical Engineering, RTME 2010	--	MET's Institute of Engg, Bhujbal Knowledge City, Nashik, India.
10	Enhancement of the Productivity by streamlining the manufacturing Process of Pears soaps	S H Wankhade S M Kherde R D Palhade	2010	National Conference on "Emerging Trends in Mechanical Engineering" E-Time Nagpur	--	KDK College of Engineering, Nagpur
11	Critical Analysis of Grindability of Titanium Alloy (Ti-6Al-4V) by Conventional Wheels	S H Wankhade	2004	National Conference on "Emerging Trends in Mechanical Engineering" E-Time Nagpur	--	KDK College of Engineering, Nagpur
12	Gandhian Thoughts	S H Wankhade N W Nemade	2002	Seventh State level ISTE Convention (Maharashtra-Goa Section)	--	SSGM College of Engg., Shegaon
13	Improving the Productivity by automatic feeding	S H Wankhade	2000	Extended Proceedings of Industrial problems in	--	Priyadarshini College of Engg. & Architecture, Nagpur,

	mechanism: An experience at HLL, Khamgaon			machines and mechanisms (IPRoMM)		
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### PhD / ME / BE Student Guided for Project

<b>Level</b>	<b>B.E. (UG)</b>
<b>No. of Student guided</b>	75

### Professional Memberships

<b>Professional Body</b>	<b>Level ( National/ International)</b>	<b>Type (Fellow/Life/ Annual)</b>	<b>Membership No.</b>
Institute of Engineers (India)	National	Fellow	F-124182-2
Indian Society for Technical Education	National	Life	LM5783
TRIZ Association of Asia	International	Life	2018-001
International Business TRIZ Association	International	Life	--

### Patents/IPR Filed/Granted

<b>S. No</b>	<b>Investigator Details</b>	<b>Title</b>	<b>Year</b>	<b>Status (Filed/Granted)</b>	<b>Details</b>
1	Shree Phadnis Nikhil Phadnis Sandeep Wankhade	System for protection of damage from moving vehicles under conditions of restricted height	2016	Filed	201621019584

## Research Grants Received

S. No	Program	Duration	Funding Agency	Grant Amount
1.	Innovative & Inventive Problem Solving (online)	4 weeks	AICTE Quality Improvement Scheme (AQIS)	INR 3.92 Lacs
2.	Optimization of Hybrid Machining Process of Rotary Electro Discharge Machining with Abrasive media	2017-18	BCUD, SPPU, Pune	INR 1.9 Lacs
3.	Evaluation & study of process parameters of Hybridization of AJM and EDM	2008-09	BCUD, SPPU, Pune	INR 1.25 Lacs
4.	Correlation of field life degradation with reliability prediction for Mechatronics devices	2007-08	BCUD, SPPU, Pune	INR 1.0 Lac

## Details of Workshop/STTP/FDP/Seminar / Conferences Organized

S. No	Title	Type	Duration	Level (State/National/International)	Sponsoring Agency
1.	Innovative & Inventive Problem Solving (IIPS - 2021) (22/06/2021-17/07/2021)	Short Term Training Program (STTP) in online mode	4 phases (6 days/Phase)	National (attended by several International participants)	AICTE Quality Improvement Scheme (AQIS)
2.	Recent Trends in New Product Development (Mar 08-09, 2018)	Seminar	2 days	State	BCUD, SPPU, Pune
3.	Mechatronics–An Industrial Application Approach (Mar 03-04, 2017)	Seminar	2 days	State	BCUD, SPPU, Pune



4.	Zero Defect – Quality Improvement in Industries (Mar 03-04, 2016).	Seminar	2 days	State	BCUD, SPPU, Pune
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### Contribution as Resource Person

S. No.	Place/ Organization	Topic	Level(National/Int/State /Regional)	Date
1.	AISSMS Polytechnic in association with ISTE Faculty Chapter	Advanced Manufacturing Techniques based on TRIZ and Sustainability.	State	01/03/2023
2.	FE Induction Program, AISSMS COE, Pune	Introduction to TRIZ: Theory of Inventive Problem Solving	--	22/11/2022 & 23/11/2022
3.	Walchand College of Engineering, Sangli	TRIZ Orientation Session	Regional	17/02/2023
4.	Thiagarajar College of Engineering, Madurai	Introduction to TRIZ	Regional	16/02/2023
5.	Final year Course Product Design and Development organized by TRIZ CHAPTER-GCOERC, Nashik	TRIZ - An Idea Generation Tech. in Product Development	Regional	12/09/2022
6.	Walchand College of Engineering, Sangli during Industry Meet-22.	Innovation for Research and Start-ups	Regional	13/06/2022
7.	Shri A B Patil School, Sangli	Innovation in Education	Regional	13/06/2022
8.	CII - Young Indians (Yi) on the World Creativity & Innovation Week/Day Campaign	Theory of Inventive Problem Solving	National	16/04/2022
9.	Thiagarajar COE, Madurai	Theory of Inventive Problem Solving	Regional	07/04/2022
10.	Workshop under IIC at AISSMSCOE, Pune	TRIZ based Innovation	Regional	10/03/2021
11.	PEC-STC (online) on Digital Manufacturing, Punjab engg College, Chandigarh	“TRIZ Introduction, application and case study in Digital Manufacturing	National	26/02/2022

12.	Online One Week ISTE Self-Finance STTP/ Refresher Program on "Project Based Learning" organized by Department of E&TC of AISSMSCOE, Pune in association with BoS (E&TC) of SPPU, Pune	TRIZ way of Project Based Learning for sustainability	National	25/02/2022
13.	IIC, G H Raisoni Institute of Engineering and Business Management, Jalgaon.	TRIZ based Session on Problem Solving and Ideation Workshop	Regional	18/02/2022
14.	Dr Enti Ranga Reddy, Industrialist and AISC, Chairman & Council Member MCDB (2021-25)	Introduction to TRIZ	National	09/12/2021
15.	2 Sessions to guide top 100 teams of KPIT Sparkle 2022 competition.	TRIZ for Innovative Products	National	26 & 29/11/2021
16.	TRIZ Association of Asia	Moderated 'TRIZ for X' The International Conference	International	15-19/11/2021
17.	2 talks on Mentor Session for PPBL batches organized by IUCEE	Introduction to TRIZ (Inventive Problem Solving)	National	7 & 14/10/2021
18.	One week online self-finance AICTE - ISTE approved STTP on "Creative and Innovative Approaches for Teaching and Learning", organised by Dr. Rajendra Gode Institute of Tech. and Research Amravati.	TRIZ way of Creative Pedagogy	National	05/10/2021
19.	Innovation and Creativity at WIT Solapur	TRIZ for Creative	Regional	29/09/2021
20.	IIT Guwahati	TRIZ - Theory of Inventive Problem Solving	Regional	23/09/2021
21.	Global Emerging Innovation Summit, International Innovative Research Network, Melbourne, Australia	Application of TRIZ in Industry 4.0 and Sustainable manufacturing		4/08/2020
22.	D Y Patil College of Engineering, Ambi, Pune	Guidance for NAAC certification process	Regional	27/02/2019

23.	KPIT, Sparkle at PCCOE, Akurdi, Pune	Innovative way of Idea generation and Solving problems through TRIZ	National	23/02/2019
24.	RMIT, Melbourne, Australia	Panel Discussion on Innovation in Design	International	05/10/2018
25.	RMIT, Melbourne, Australia	Keynote address on Innovation by TRIZ	International	06/10/2018
26.	Priyadarshini College of Engineering, Nagpur, Maharashtra	Systematic Innovation for Faculty and "Systematic Innovation and TRIZ: Theory of Inventive Problem Solving" for Final Year Students	Regional	20- 21/04/ 2016
27.	Short Term Training Program of AICTE on "World Class Manufacturing: A strategic Perspective" College of Engg (COEP) Pune	TRIZ	National	17/06/2016
28.	Half day session for Managers, Vishay Components India Pvt. Ltd. Loni, Pune.	TRIZ Awareness	Regional	03/08/2016
29.	Half day session for Tool room staff of Forbes Marshall Limited, Kasarwadi Plant, Pune, MS.	Drives and Gear box mechanism	Regional	03/03/2012

#### Details of Workshop/STTP/FDP/Conferences Attended

S. N	Title	Type	Duration	Organizer	Sponsoring Agency
1.	Intellectual Property Rights (IPR) Advance Learning in Research and Innovation	FDP	14 - 18/02/2022.	SRMV Engg College, Tamil Nadu	SRMV Engg College, Tamil Nadu
2.	of the course on 'Product Design and Manufacturing'.	FDP			NPTEL

3.	Sustainable Industrial Development through Industry 4.0	STTP	15/02/2021 to 22/02/2021	Chennai Institute of Technology	AICTE
4.	Internet of Things for Futuristic Smart Systems	FDP	17/05/2021 to 21/05/2021	BVCOE, Pune	BVCOE, Pune
5.	One week on Problem based learning: Real time case studies and Industrial Practices	FDP	9 to 13/02/2021	SIT Lonavala, Pune	SIT Lonavala, Pune
6.	Online One Week Symposium on 'Affective management'	Symposium	08/03/2021 to 13/03/2021	NBN Sinhgad School of Engineering	IEEE Pune Section and IEEE sight
7.	NBA Awareness workshop	Workshop	11/05/2021 to 14/05/2021	Association of Managements of Un-aided Engg colleges	AISSMSCOE, Pune
8.	Design Development and use of Rubric in Students Assessment	FDP	19/10/2020 to 23/10/2020	NITTTR, Bhopal	AISSMSCOE, Pune
9.	Foundations: Data, Data, Everywhere	Cert. Course	05/08/2021 to 13/09/2021	Coursera	Google
10.	Electric Vehicle Subsystems	Foundation course	11 - 18/10/2021	Decibels Labs Pvt. Ltd., Bangalore	Decibels Lab
11.	Foundation to Electric Vehicle subsystems & Technology	Certificate Course	24/10/2021	Decibels Labs Pvt. Ltd., Bangalore	Decibels Lab
12.	Software based case studies for development of Multidisciplinary Project	FDP	22/11/2021 to 24/11/2021	AISSMS COE, Pune	AISSMS COE, Pune
13.	5 Days Online Faculty Development Program on "Design Thinking: Aspirations for Innovations" during 29/11/2021 - 03/12/2021.				
14.	CETL's Vision-Mission-Goals-PEO-PSO-PO-CO: Framing, Mapping, Assessment and Attainment	FDP	10 – 15 Jun 2019	AISSMSCOE, Pune	ISTE

15.	NBA Accreditation	Work shop	22-26Apr 2019	AISSMS IOIT.	NITTTR, Kolkata
16.	Introduction to Industry 4.0 and IIOT (Online)	FDP		IIT Roorkee	NPTEL, MHRD
17.	Organization Wide Innovation Portfolio Analysis	Work shop	29 Nov 2018	GENTRIZ	TRIZ Association of Asia
18.	Application of TRIZ in Industries “Innovex2016”	International conference	23 – 26 Nov 2016	TRIZ Association of Asia	TRIZ Association of Asia
19.	Alternative System Design – Developing New Products out of Old Ones	Work shop	27 Nov 2016	TRIZ Association of Asia	TRIZ Association of Asia
20.	World Class Manufacturing: A strategic Perspective	STTP	13–17 Jun2016	College of Engineering Pune(COEP)	AICTE
21.	Micro-Manufacturing	STTP	24 – 28 Mar2014	IIT, Guwahati, Assam	AICTE
22.	Advances in Product Design and Surface Engineering APDSE-2013	FDP	18 – 22 Nov2013	SCOE, Pune & Indian Institute of Metals, Pune Chapter	AICTE
23.	Industrial Applications of Statistical Software in quality management and reliability engineering	workshop	13Oct 2011	IIT, Pune	IIT, Pune
24.	MEMS and Mechatronics	STTP	22 Nov – 04Dec 2004	National Institute of Technology, Karnataka	AICTE-ISTE
25.	Design for Manufacturability and Assembly	STTP	25-30Oct 2004	SSGM College of Engineering, Shegaon, MS	AICTE-ISTE
26.	Database Management Systems and its Industrial Applications	STTP	31 Mar– 12 Apr 2004	College of Engg. Badnera, MS	AICTE-ISTE
27.	Mechatronics	STTP	29 Dec – 2 Jan2004	Vidyardhini College of	AICTE-ISTE

				Engineering, Thane, MS	
28.	Computer application & modern techniques in manufacturing processes	STTP	24 Mar– 5 Apr 2003	Anuradha College of Engg, Chikhli	AICTE-ISTE
29.	Mechatronics, Industrial problems in machines and mechanisms (IPRoMM2000)	Pre-conference school	17-18 Jan2001	Priyadarshini College of Engg and Architecture, Nagpur, MS	Association of Machines and Mechanisms (AMM)

## Major Professional Responsibilities Handled

S. No.	Role and Responsibilities
1.	Head, Department of Production Engineering (Sandwich pattern)
2.	Member, College Development Cell
3.	Coordinator, Internal Quality Assurance Cell <ul style="list-style-type: none"> <li>➤ Coordinating Institute Development Cell</li> <li>➤ Coordinating Certification from various bodies viz. National Board of Accreditation, National Assessment &amp; Accreditation Council and ISO</li> <li>➤ Staff Development Programs (for HODs, Teaching and Supporting Staff, Admin. Staff and Class IV employees)</li> <li>➤ Policy making and execution for Academic related issues</li> <li>➤ Improving Teaching Learning Process (Outcome based education) – ICT, Virtual labs</li> <li>➤ Academic Monitoring</li> <li>➤ Coordinating Counselling of Faculty members, supporting staff &amp; Students</li> <li>➤ Coordinating Mentoring activities</li> <li>➤ Industry Institute Interaction (Industrial training &amp; visit for Staff &amp; Students, MoUs, Expert Lectures, Placements, Faculty Development Programs)</li> </ul>
4.	Chief Coordinator, Foreign Collaborations
5.	Coordinator, Sandwich Training, Production Engineering Department
6.	Secretary, AISSMSCOE TRIZ Chapter
7.	Coordinator, Production Engg Department R&D Cell
8.	Member, Academic Development Cell
9.	Member, "Industry Education Partnership Cell (IEPC)" a combined activity of Maharashtra Economic Development Council (MEDC) & Maharashtra State and Board of Technical Education (MSBTE), Mumbai, Maharashtra.
10.	Faculty Advisor, Indian Society of Technical Education's (ISTE) Students Chapter
11.	Chairman, Cultural activities viz. Variety entertainment & Vigilance committee

## Awards Received

S. No.	Awards
1.	Silver medal in Elite Group in the NPTEL course on 'Product Design and Manufacturing', IIT Roorke
2.	Topper & Gold medal in Elite Group in the NPTEL course on 'Industry 4.0 and Industrial Internet of Things' conducted by IIT, Kharagpur, May, 2019
3.	Felicitated for guiding 3 teams during the PBL Project Recognition Ceremony by IUCEE on 06/01/22.
4.	Felicitated on the occasion of Shahu Jayanti-2017 and conferred a Recognition of Excellence for being awarded the PhD degree at AISSMS College of Engineering, Pune on Jun 26 2017 at the hands of Shri ShriSambhajiraje Chhatrapati, MP, Rajya Sabha (Council of States), upper house of the Parliament of India.
5.	Won Second Prize at the 11 <sup>th</sup> Maharashtra State Inter-University Research Convention (AVISHKAR 2016) at SRTM University in Teacher's category, Engineering & Technology, Nanded, Maharashtra, during 27-29 Jan 2017.
6.	Felicitated at Foundation day Function (Feb 10, 2017) of Savitribai Phule Pune University and awarded Memento and cash prize of Rs 3000/- for winning Second Prize in Teacher's category, Engineering & Technology in the AVISHKAR 2016 and being instrumental in winning overall trophy to S P Pune University among all Maharashtra State Universities.

**Declaration:** I hereby declare that all the statement made above are correct to the best of my knowledge and belief.

**Dr Sandeep H Wankhade**