

Curriculum Vitae



➤ PERSONAL DETAILS:

1. **NAME:** Dr. Machchendra Kisan Sonpimple
2. **DATE OF BIRTH:** 12th January, 1968
3. **MARITAL STATUS:** Married
4. **NATIONILITY:** Indian
5. **LANGUAGE KNOWN:** English, Hindi, Marathi.
6. **CORRESPONDANCE ADDRESS:** 208/A, Rachana Vihar,
Narendra Nagar, Mhada colony, Borkute Layout,
Nagpur-440015.
7. **E-mail:** sonpimple@rediffmail.com
msonpimple@gmail.com
8. **Mobile :** Mob: 9423054182

➤ EDUCATION

S.N	Qualification	University	College	Division / Year of passing
1.	Ph.D. “Development of Hybrid Simulated Annealing For Mechanism Synthesis.”	R.T.M.Nagpur University, Nagpur	R.T.M.Nagpur University, Nagpur	Awarded (12/10/2013)
2.	M.Tech.(Mechanism & Machine Design)	R.T.M.Nagpur University, Nagpur	V.N.I.T, Nagpur.	First Class (Dec.2000) (67%)
3.	B.E.(Mechanical)	Shivaji University Kolhapur.	Govt. college of Engineering, Karad (Satara)	First Class (May 1992) (61%)

➤ EXPERIENCE :- TEACHING (25 YEARS)

S.N	Employers Name	Post Held/Date of Appointment	Length of Service
1	Priyadarshini College of Engineering, Nagpur	Lecturer(12/08/1994 to 31/08/2004)	10 Yrs
2	Priyadarshini College of Engineering, Nagpur	Lecturer(SS)(01/09/2004 to 01/07/2006)	1.10 Yrs
3	Priyadarshini College of Engineering, Nagpur	Assistant Professor (02/07/ 2006 to 08/7/2014) P.G.Programme-Coordinator M.Tech.(Mechanical Engineering Design)	08 Yrs
4	Priyadarshini College of Engineering, Nagpur	Associate Professor (09/07/ 2014 to 29/10/2015) P.G.Programme-Coordinator M.Tech.(Mechanical Engineering Design)	1.4 Yrs.
5	Priyadarshini College of	Professor (30/10/2015 to 29/08/2017) Regular	1.10 Yrs.

	Engineering, Nagpur		
6	Government College of Engineering, Karad	Associate Professor (MPSC selected) (30/08/2017 to 08/01/2018); Permanent / Regular	04 month 08 days
7	Government College of Engineering, Jalgaon	Associate Professor (09/01/2018 to till date); Permanent / Regular (MPSC selected)	Till now Working
8	Government College of Engineering, Jalgaon	Associate Professor and Head (Mechanical)..07/10/2020 to 31/07/2024	3year and10mo nth
9	Government College of Engineering, Jalgaon	Dean (Reseach and Development)..from 01/08/2024 to till date	Till now Working

➤ **RESEARCH ACTIVITY : CONSULTANCY PROJECT**

S.N	Title of Project	Agency	Project Duration	Nature of work
1.	Design &Development of pedal driven Ambar Charkha.	Centre of Science For Villages.	March-2003	Co-Investigator
2.	Modification in Roller Type ‘TUWAR’ Grains Processing Machine	Shubha Laxmi Food Product Pvt. Ltd, Lakadganj Nagpur	March-2004	Co-Investigator
3.	Design Of Mechanism for Executive Chair	ERGO Mumbai	March-2005	Co-Investigator
4.	Design, Fabrication and commissioning of flyash Brick Making Plant	Vasant Chemicals,Hyderabad	March-2006	Co-Investigator
5	TEQIP - III	MHRD	2017-2018	Co- Ordinator

➤ **GUEST / EXPERT LECTURES DELIVERED**

S.N	Title	Conference / Workshop / STTP	Nature of participation	Organized by
1.	Research Methodology in engineering &Technology	STTP(25June to 29June2007)	Resource Faculty	RKNEC,Nagpur
2.	An Approach towards research in Engg.&Technology	STTP	Resource Faculty	Indira college of engineering,Pune
3.	Modeling &Simulation of Research outcome relevant to Entrepreneurship Development using AI technique	Workshop(23feb 2008)	Resource Faculty	Priyadarshini college of Engineering, Nagpur
4.	Training to Young faculty members for building Higher level Scholarship.	STTP(23June to 05July 2008)	Resource Faculty	Priyadarshini college of Engineering, Nagpur
5.	Industry Application of CAD/CAM	STTP(30July to 06Aug. 2008)	Resource Faculty	Priyadarshini college of Engg, Nagpur

6.	Performance Improvement workshop for first year students	Workshop(May 2003&May2004)	Expert Lecture (Engineering Drawing)	PCE,Nagpur
7.	JIGYASA-2009	Student Convention(29January to 31 January 2009)	Chair Person (Technical Session- Mechanical)	PCE,Nagpur
8.	Optimal Synthesis of a Mechanism	Workshop(04.01.2014)	Expert Lecture	Gurunanak Institute of Engineering and Management,Nagpur
9	Research Methodology in Engineering & Technology- STTP 26-28 Feb. 2009	STTP26-28 Feb. 2009	Resource Faculty	Govt. Polytechnic, Nagpur

➤ **STTP/WORKSHOP –ATTENDED/ORGANISED**

1.	Mechtronics and Its Industrial Exposure	STTP(15- 27Oct 2001)	Organized	PCE,Nagpur
2.	Advanced Materials and Latest Trends in Computer Technology	STTP(27Oct-10Nov 2001)	Organized	PCE,Nagpur
3.	Effective Role Execution for Institutional Development	STTP(19-21Feb 2009)	Participant	YCCE Nagpur
4.	Rapid Prototyping and Its Applications	Workshop(8 March2004)	Organized	PCE,Nagpur
5.	Programme On Librarianship	Workshop(17Jan2004)	Participant	PCE,Nagpur
6.	Curriculum Development/Revision in BE Mechanical Engineering(Interdisciplinary Group)	Workshop(08Dec2009)	Participant	St.Vincent Pallotti College of Engineering,Nagpur
7.	Industry Application of CAD/CAM	STTP(30July to 06Aug. 2008)	Organized	PCE,Nagpur
8.	JIGYASA-2009	Student Convention(29January to 31 January 2009)	Organizing Secretary	PCE,Nagpur
9.	Quest for the Best	FDP-2012(Human Excellence Department)	Participant	PCE,Nagpur
10	“Research Methodology Including Mathematical Modelling, Computer	STTP(26December to 31Aug. 2013)	Organized	PCE,Nagpur

	Application and Simulation” A prerequisite for fulfillment of Ph.D.			
11	“Research Methodology Including Mathematical Modelling, Computer Application and Simulation” A prerequisite for fulfillment of Ph.D.	STTP(26December to 31Aug. 2013)	Participant	PCE,Nagpur
12	Seventeenth National Symposium on Cryogenics (SNSC) –	National Conference February 1999	Organized / Attended	PCE,Nagpur
13	Industrial Problems in Machines & Mechanisms(IPROM) –	National Conference January 2001	Organized / Attended	PCE,Nagpur
14	IFTtoMM – High Level International Specialty Conference Sponsored by International Federation of Theory of Machines & Mechanisms – on Industrial Automation.	International Conferene 11 th to 14 th July, 2006	Organized / Attended	PCE,Nagpur
15	One day Workshop on Credit-Based Curriculum Development for the U.G. Course in Mechanical Engineering	Workshop(24Jan2014)	Organized / Attended	PCE,Nagpur
16	One day Workshop on Virtual Labs Faculty Training and Orientation Program in collaboration with IIT Bombay	Workshop (21/08/2015).	Attended	PIET,Nagpur
17	One Week STTP on Latest Trends in Mechanical Engg.	STTP (19 -23 Jan. 2016).	Participant	GNIT,Nagpur
18	Two week FDP on Advances in Applied Mathematics to Engg.	FDP (11.- 22 Dec.2017)	Participant	Govt. C.O.E. Karad
19	One Week FDP on Recent Trends in Renewable Energy Technology for Sustainable development	FDP (05.- 09 Feb.2018)	Participant	Govt. C.O.E. & R., Avasari
20	One Week PDP	PDP (26-30 Nov. 2018)	Participant	IIM, Raipur
21	One week FDP on 3D Printing Technology & its Applications	FDP (11 – 15 Dec.2018)	Participant	Govt. C.O.E. Jalgaon
22	One Week STTP on MATLAB- Fundamentals	STTP (08 – 12 July 2019)	Participant	Govt. C.O.E. Kalahandi (Orisa)

	& Applications			
23	One week FDP on Industry 4.0-Opportunities and Challenges	FDP (03– 07 Feb.2020)	Participant	Govt. C.O.E. Chandrapur
24	FDP for students induction	FDP (27– 29 May2019)	Participant	CSMSS,Aurangabad
25	DTE Sponsored One week FDP on Product development and Analysis(PDA-2022)	FDP (21– 25 Feb 2022)	Participant	GCOE,Aurangabad
26	Foundation Training Programme for Class-1 officers of Higher and technical Education Department	STTP(28August– 26 September 2023)	Participant	YASHADA,Pune
27	Quality Assurance and Accreditation:An Overview in Respect of New Guidelines and NEP2020	STTP(31Jan– 04Feb 2023)	Participant	Govt. C.O.E. Jalgaon
28	ICETEST-2021	International Conference (06– 07Feb 2023)	Chairperson- Logistic and Accomodation Committee	Govt. C.O.E. Jalgaon
29	ICETEST-2021	International Conference (06– 07Feb 2023)	Session Chair	Govt. C.O.E. Jalgaon

➤ COURSES OFFERED

Undergraduate: Engineering Drawing, Kinematics of Machines and Mechanism, Mechanical Measurement, Automatic control.

Postgraduate: Advanced Mechanism, Finite Element Analysis, and Engineering Optimization.

➤ AREA OF RESEARCH: Kinematics of Mechanisms, Optimal Synthesis.

➤ RESEARCH PUBLICATION:

International Journals:

Sr. No	Title of Paper	Name- Authors	Name of Journals	Status (Vol, Issue, pp.)
1	A Novel Hybrid Simulated Annealing–Direct Search Algorithm For Optimum Synthesis Of Function	M.K.Sonpimple P.M.Bapat J.P.Modak	International Journal of applied &Theoretical information	Vol.10No.2pp67-74 Dec2010

	Generation Problem		Technology (JATIT) Dec2010	
2	A Hybrid Simulated Annealing Algorithm for Mechanism Synthesis With N-Accuracy Points.	M.K.Sonpimple Dr.P.M.Bapat Dr. J.P.Modak	IJET- IACSIT	Vol.2 No4 August 2010 Page No.367-373
3	A Novel Hybrid Simulated Annealing–Gradient based Algorithm For Optimum Synthesis Of Function Generation Problem	M.K.Sonpimple P.M.Bapat J.P.Modak	International Journal of Engineering Research &Industrial Application (IJERIA)	Vol.3 No. I pp99-114 Feb 2010
4	Optimization of Design Parameters of NEF Crankcase Cleaning Machine at Mahindra and Mahindra Pvt. Ltd.	M.K.Sonpimple R. G. Jain	International Journal of Advanced Engineering Sciences and Technologies	Vol.8 No. 2 Pp184-189 July2011
5	Design Optimisation of Pressure Vessel	M.K.Sonpimple K. R. Kaware	International Journal of Advanced Engineering Sciences and Technologies	Vol.8 No. 2 Pp157-162 July2011
6	Design Optimisation of Power Screw Jack	M.K.Sonpimple Reena M Arora	International Journal of Advanced Engineering Sciences and Technologies	Vol.9 No. 2 Pp171-177 August2011
7	Design Optimization and Analysis of Worm and Worm Gear	M.K.Sonpimple A. R. Agrawal	Global Journal Engineering and Applied Sciences	Vol.1 No. 3 Pp27-29 August2011
8	Optimal synthesis of crank rocker mechanism for point to point path generation	M.K.Sonpimple	IJEI	Vol.1 No. 2 Pp47-53 September2012
9	Electronic Line Shafting – Control for Paper Machine Drive	A.Wankhede M.K.Sonpimple	IJSER	Vol.3 No. 3 Pp1-4 March2012
10	An Approach to Find the Stresses Induced In a Flat Belt during Half Rotation of a Driving Pulley	M.K.Sonpimple	International Journal of Innovative Technology and Exploring	Vol.2No. 3 Pp1-4 February2013

			Engineering	
11	Application of Non-Traditional method for the optimization of a friction Clutch	M.K.Sonpimple Faisal Hussain	International Journal of applied & Theoretical information Technology (JATIT)	Vol.49 No. 2 Pp481-487 March2013
12	Sensitivity Analysis of Quick Return Mechanism	M.K.Sonpimple S.D.Shelare	IJMER	Vol.3 No. 1 Pp35-39 March2013
13	Investigation of Dynamic Characteristics of Rotor System Foundation Frame, subjected to different Loading conditions	A.Karande M.K.Sonpimple	IJMER	Vol.3 No. 1 Pp227-237 March2013
14	Development of traditional optimization approach for Optimal Synthesis of a Path generator Linkage	M.K.Sonpimple S.Deshmukh	IJETR	Vol.1No. 9 Pp94-99 Nov2013
15	Design And Development of Function Generator linkage for Reclining Chair	M.K.Sonpimple A.Chature	IJMCA	Vol.1No. 4 Pp75-81 August 2013
16	Design And Development of wheel chair with stretcher attachment	M.K.Sonpimple Shubhangi Gondane	International Journal of production and mechanical engineering	Vol.1No1 Pp75-81 Pp10-18, March2014
17	Gradient Descent optimization Approach For Optimal Synthesis of Path Generator Linkage	M.K.Sonpimple S.Deshmukh	IJERT	Vol.3No1 Pp75-81 Pp10-02, Feb 2014
18	Optimal synthesis of a Path Generator Linkage using Non Conventional Approach	Mr. Monish P. Wasnik, Prof. M. K. Sonpimple,	IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)	Vol 01, PP 38-44, Jan.2014
19	Research Review On Material Handling System For Rebar Processing Industry	Manish S. Marke, Dr. M. K. Sonpimple	International Journal Of Pure And Applied Research In Engineering And Technology	Volume 3 (9): 30-37, May-2015
20	Biomechanics of Human Gait Concept in a Prosthetic Foot	R. M.Thakare; M.K.Sonpimple	International Engineering Journal For Research & Development (IEJRD)	(Vol.2, No. 3) JUNE 2015

21	Low Cost Prosthetic Device For Toe Part	R. M.Thakare; M.K.Sonpimple	International Engineering Journal For Research & Development	Volume 2 Issue 4 JULY 2015
22	Computer Aided Modelling & Cost Estimation pf A Hand Truck	M.K.Sonpimple	IJARP	Volume 1 Issue 3 Sept 2017
23	Design and Development of Constant Pressure Delivering Pump	M.K.Sonpimple	International Journal for Engineering Science &Management	Volume 7 Issue 2 Dec 2017
24	Kinetic Energy Recovery System using Spiral spring in Bicycle	M.K.Sonpimple	International Journal of scientific Research & development	Volume 7 Issue 2 May 2019
25	Design and Modification of Innovative Motorized Hand Truck	M.K.Sonpimple	International Journal of Advanced Engineering,man gement and Science(IJAEMS)	ISSN2454-1311 Jan-2017

International / National Conferences:

Sr. No	Title of Paper	Name of Conference/Journal	Vol.No. Page no. &year
1.	“Development of Hybrid Simulated Annealing Optimization Technique for optimum Synthesis of Function Generation Problem.	International Conference(PICA2006) on recent trends in Automation & its Adoption to the industries	11-14 July 2006
2.	CAD, Modeling Analysis &operation of Dam Gate Lifting Hoist Mechanism	International Conference(PICA2006) on recent trends in Automation & its Adoption to the industries	11-14 July 2006
3.	Design & Development of a wheel chair with stretcher Attachment.	III International Conference on mechanical engineering &mechanics(ICMEM),China	11-13oct 2009
4.	Synthesis of Path Generation for page turning mechanism for Disabled person- A case study.	International Conference(PICA2006) on recent trends in Automation & its Adoption to the industries	11-14 July 2006
5.	Design and Development of pedal driven Ambar Charkha	Advances in Mechanical Engineering Science2004, Tamkur, Karnataka	24-25 sep2004.
6.	Synthesis of motion generator	National Conference on “Emerging	1,37,2004

	linkage for Tee-Reset Mechanism	Trends in Mechanical Engineering”	
7.	Application of Non-linear Programming Technique for optimal synthesis of a planer Mechanism for path generation problem.	National Conference on “Emerging Trends in Mechanical Engineering”	1,38,2004
8.	Path generation mechanism synthesis using Continuation method	National Conference on “Emerging Trends in Mechanical Engineering”	1,50,2004
9.	Synthesis of function generator Multiloop linkages for Reclinig Chair.	Recent trends in Mechanical Engineering R-Time-2004	23-24 July 2004
10.	Synthesis of motion generator linkage for material conveying	Advances in Mechanical Engineering(2004)	23-24 June 2004
11.	Estimation of Belt Tensions During One Rotation of Driving Pulley of a Belt Drive	National Conference on “Allied Trends of Engineering for development of Technological Aspects” (Technomanthan2012) COET Dhamangaon Rly.	02March2012
12	Optimal Synthesis of path generator linkage using non-conventional approach	International Conference (SocPros2012) J & k Lakshmi pat University ,Jaipur	December 2012
13	Investigation of dynamic characteristics of rotor system foundation frame subjected to different loading conditions & Harmonic excitation	National Conference NCIPET 2013, S B Jain COE Nagpur	01,247-269, Feb2013
14	Sensitivity Analysis of Quick Return Mechanism	National Conference NCIPET 2013, S B Jain COE Nagpur	01,38 - 43, Feb2013
15	Optimal synthesis of a Path Generator Linkage using Non Conventional Approach	International Conference on “Advances on Engineering & Technology” at Anjuman college of Engg, Nagpur	8 th & 9 th January 2014
16	Approximate Mechanism Synthesis using Global Search for Twenty Accuracy Points	International Conference on “Emerging Trends in Mechanical Engineering” at TGPCET Nagpur	22 nd and 23 rd April, 2015
17	Revolution in Ginning Machines	International Conference on “Emerging Trends in Mechanical Engineering” at TGPCET Nagpur	22 nd and 23 rd April, 2015
18	Modeling of Single panel Flood Door using FEA	International Conference on “Emerging Trends in Mechanical Engineering” at TGPCET Nagpur	22 nd and 23 rd April, 2015

Book Publication:

- Book published in Lambart Academic Publishing with ISBN 978-3-659-33418-4 titled “Non Traditional method for Optimization of Friction Clutch”.

M Tech Dissertations Guided:

S.N	Title of Paper	Name of projectee	Status
1.	Design and Development of pedal driven Ambar Charkha	Mr.Tupkar	Completed&Awarded
2.	Application of Optimized Algorithm for optimal synthesis of a planer mechanism for path generation problem	Mr.Khan	Completed &Awarded
3.	CAD,Modeling,Analysis &operation of Dam Gate Lifting Hoist Mechanism	Mr.Firake	Completed&Awarded
4.	CAD, Modeling, Analysis of a Bull gear of a Drag line.	Mr.Pazare	Completed&Awarded
5.	Design & Development of a wheel chair with stretcher Attachment.	Mrs.Shubhangi	Completed&Awarded
6.	Application of Non-traditional method for optimization of a friction clutch.	Mr.Faisal	Completed&Awarded
7.	Application of Non-traditional method for optimization of a worm gear.	Mr.Verma	Completed&Awarded
8.	Application of Non-traditional method for optimization of a composite drive shaft	Mr.Patil Piyush	Completed&Awarded
9.	CAD, Modeling, Analysis of Bucket tooth of a drag line.	Mr.Naushad	Completed&Awarded
10.	Design Optimisation and Analysis of Worm and Worm Gear	Mr. Amit Agrawal	Completed&Awarded
11.	Design Optimisation of Power Screw Jack	Mrs. Reena Arora	Completed&Awarded
12.	Design Optimisation of Pressure Vessel	Mr. Kaware	Completed&Awarded
13.	Optimisation of Design parameters of NEF crank Case Cleaning Machine at Mahindra and Mahindra	Mr.R. G. Jain	Completed&Awarded
14.	Reduction in Bore size Variation of Transmission Case Through Optimisation Using Design of Experiments	Mr.Sanjay Garad	Completed&Awarded
15.	An Analysis of Response of an Epicyclic Gear Train Solution With Tandom Bicycling	Mr. Dhanjay Nandgaye	Completed&Awarded
16.	Design and Development of Automatic Storage Rack System	Mr.Vivek Patil	Completed&Awarded
17.	Design and Failure Analysis of Coupler Screw in Narrow Guage Railway	Mr.Tejpai Parshivnikar	Completed&Awarded
18.	Estimation of Stresses Induced in Belt of a Belt Drive	Mr. Thote Shrikant	Completed&Awarded
19.	Computer Aided Modeling, Analysis and Manufacturing of Turbine Blade.	Mr.Kale Suhas	Completed&Awarded

20.	Estimation of Stresses Induced a Ceiling Fan Blade	Mr.Patil Varun	Completed&Awarded
21	Investigation of dynamic characteristics of rotor system foundation frame, subjected to different loading conditions & Harmonic excitation	Mr.Karande	Completed&Awarded
22	Development of traditional optimization approach for Optimal Synthesis of a Path generator Linkage	Mr.Deshmukh	Completed&Awarded
23	Optimal Synthesis of a path generator linkage using Non-conventional Approach	Mr.Waswani	Completed&Awarded
24	Optimization of Double Roller Gin for processing of cotton at different moisture content	Nilesh R. Gowardipe	Completed&Awarded
25	Design, Analysis and Optimization of Single Panel Flood Door.	Rahul B. Agare	Completed&Awarded
26	Design and Development of low cost Prosthetic device for Toe-Flex part	Rupam M. Thakare	Completed&Awarded
27	Stress Analysis and Simulation of an Asphalt Roller	Pravin Bhakte	Completed&Awarded

➤ **ACADEMIC DEVELOPMENTS:**

S.N	Name of a lab.	ACTIVITY
1.	P. G. Course: Stress analysis	Development of Lab. Under MODROB SCHEME.
2.	U. G. Course: Mechanical measurement	<ul style="list-style-type: none"> • Development of electronic kit for Automobile Head Lights. • Mobile Charger through rotational energy. • Automation of railway level crossing.

(ii) Coordinator (Industrial visit.)

- Neco Casting
- Mahindra & Mahindra.
- Bajaj Iron steel.
- Prasanna Engineering works
- Aurbindo Lamination Ltd.
- VIP.

(iii) Co-ordinator (Mini projects)

- Development of Plucking Rod
- Synthesis of Pantograph Mechanism
- Automation of railway level crossing.
- Development of electronic kit for Automobile Head Lights.
- Mobile Charger through rotational energy.

(iv) P.G. Assignments

- M. Tech.(MED) Coordinator
- R&D activities
- Lab. Development under MODROB SCHEME

(v) UG course Assignments

- Co-ordinator Industrial visit
- Co-ordinator Mini Projects
- UG Projects

MEMBERSHIP

- (i) ISTE- Life Member
- (ii) Association of Machines and Mechanisms-Life Member
- (iii) IE-(AMIE)- Life Member
- (iv) ISHRAE – Life Member

Dr. M. K. Sonpimple

