

RESUME

Personal Information

Name: Dr. Hemant Kumar Saw

Father's Name : (Late) Indalsingh Saw

Date of birth: 1 Jan 1972

Address for communication

Office:

Assistance Professor

Department of Mathematics

Govt. Digvijay Autonomous P G College Rajnandgaon

Chhattisgarh Email-hemantsao.227@gmail.com

Mob. No. 09425566260/7748024264



Residence:

MatangiNivas

Plot No. 24, AwantiUdyan Road

Maitrikunj, Risali

Bhilai-490 006, Chhattisgarh

Permanent Address:

Village- Ranitarai

P.O – Balod, 491-226

Distt- Balod, Chhattisgarh

Academic qualifications

- **Ph. D–** 2018 from PT RSU Raipur, C.G. Topic- “**Analysis of Some Reliability Models of manufacturing plant**”.
- **SLET** - Qualified 1999
- **M.Sc.** - PT RSU Raipur, 1996

Discipline -Mathematics First division, 71.75%, second rank in the university Merit list.

- **B.Sc.-PT** RSU Raipur, 1994

Discipline- Mathematics, physics, chemistry. First division, 65.66%

- **Higher Secondary-** MP Board 1990, Govt H SS Balod, CG, First division 73.84%
- **High School-** MP board 1988, Govt H SS Balod, CG, First division 72.75%

Present Occupation

- Assistance Professor,(FROM 2014 TO TILL DATE)
Department of Mathematics,
Govt. Digvijay P G College Rajnandgaon,Chhattisgarh
- Deputy Controller, Autonomous Examination Cell
Govt. Digvijay P G College Rajnandgaon , Chhattisgarh
- Research Supervisor, HemchandyadavVishwavidyalayDurg, C.G.

Teaching experiences

- *Associate professor Grade II* from 2011 to Sept.2014, Christian college Of Engineering and Technology Bhilai, C.G.
- *Sr. Lecturer (Assistant Professor)* from, 2006 to 2010, Christian college Of Engineering and Technology Bhilai.C.G.
- *Lecturer*, from 2002 to 2005Christian college Of Engineering and Technology Bhilai,.
- *Lecturer*, from (2001-2002Rungta College Engineering and Technology Bhilai,.C.G.
- *Assistant Professor (contract)* Govt BPD PG College Kanker(2000-2001).
- *Assistant Professor (contract)*Govt PG College Balod (1999-2000)
- *Assistant Professor (contract)*,Govt NCJ College , DalliRajhahara,(1996-1998)

Research interest

Reliability Engineering/ Reliability Analysis

Membership of Professional Bodies

- Life Member, *The Indian Mathematical Society*,Pune, LMN- K-07-130, 2007.
- Life Member,*The Indian Science Congress Association*, Kolkata, L15387, 2009.

Awards/ Appreciations

- Merit (2nd position) in M.Sc. (Mathematics) exam 1996 Pt. RSU Raipur.C.G.
- Appreciation for effective work of university examinations and College Exam section, 2004, MPCCET Bhilai.
- Appreciation for effective mathematics teaching in year 2007, MPCCET Bhilai.
- Best teacher of Science department for session 2008-2009, MPCCET Bhilai.

Publications

Research papers Published in International Journals

- [1] Hemant Kumar Saw and V. K. Pathak, Stochastic Modelling and Reliability Analysis of a RO Membrane System Used in Water Purification System with Patience –Time for Repair, *International Journal of Engineering Research & Technology (IJERT)* Vol. 3 Issues 2, February – 2014 ISSN: 2278-0181.
- [2] Hemant Kumar Saw and V. K. Pathak, Profit analysis of Hulling system in Rice-mill Plant with change in demand and PM at down state subject to maximum operation time, *International j. of math. sci. &Engg.Appls. (IJMSEA)* ISSN 0973-9424, vol. 8 no. iii (May, 2014), pp. 251-263.
- [3] Hemant Kumar Saw, V. K. Pathak and G.K.Goswami, Economic and Performance Evaluation of Two Unit Cold Standby System with Hardware Failure and Human Error, *Intl. Journal of Applied mathematical Analysis & Application*.ISSN0973-3868 (2017)Jan- June 2017, UGC Sr. No. 16380 in UGC Notification No.F.1-2/2016 (PS) Amendment-10th January 2017.
- [4] Hemant Kumar Saw and H.L. Manker, Reliability Modeling of a System With One Main Unit and Two Associate Units Along With Sub-Unit, Communications in Mathematics

and Applications Vol. 13, No. 1, pp. 281–293, 2022 ISSN 0975-8607 (online); 0976-5905 (print) December 8, 2021

- [5] Hemant Kumar Saw , Iti Sao and PrachiSingh,Reliability Modeling and Analysis of an Industrial System with one Main Unit with Two Subunit ,International, Journal of Science and Research (IJSR) ISSN: 2319-7064, Volume 12 Issue 12, December 2023
- [6] Hemant Kumar Saw, Shruti Shukla, Rakesh Tiwari, Stochastic Modeling And Analysis of A Repairable Single Unit Systems. International Journal Of Engineering And Computer Science Volume 13 Issue 01 January 2024, Page No. 25991-26000 ISSN: 2319-7242.
- [7] Hemant Kumar Saw, Rakesh Tiwari and Shruti Shukla, Profit analysis of a two-unit similar cold standby system with endurance time and preventive maintenance, International Journal of Statistics and Applied Mathematics 2024; 9(4): 16-21,May 2024, ISSN: 2456-1452
- [8] H L Manker, Hemant Kumar Saw and Iti Sao,Reliability analysis of a system using semi Markov process, International Journal of Statistics and Applied Mathematics (*Web of Science*)2024; 9(4): 145-151July 2024 ISSN: 2456-1452.

Research paper Published in National Journals

- [1] Hemant Kumar Saw and V. K. Pathak, Reliability Modelling and Analysis of Single unit system with Environmental Failure and PM at MOT. *Bull. Cal. Math. Soc. ISSN 0008-659, 107, (3) 193–204 (2015).*UGC Sr. No. 5913 in UGC Notification No.F.1-2/2016 (PS) Amendments-10th January, 2017.
- [2] Hemant Kumar Saw and V. K. Pathak, Economic and Performance evaluation of a Stochastic Model with Hardware failure and Human error, *Bull. Cal. Math.*

Soc.,ISSN0008-659, 107, (5) 411-420. (2015). UGC Sr. No. 5913 in UGC Notification No.F.1-2/2016 (PS) Amendment-10th January 2017.

- [3] V. K. Pathak, Human LalMankerand Hemant Kumar Saw, Reliability Availability Cost analysis (RAC) of Three Unit System. *Journal of the Calcutta Mathematical Society 12(1) 47-64 (2016)*

Book /Book Chapter Published

- 1. Book- Reliability Engineering (Elementary Aspect)** publisher LAP LAMBERT Academic publishing Republic of Moldova Europe, ISBN: 978-620-4-71746-3
- 2. Edited Book-**Role of Applied Sciences in Social Implications, Volume-D: Mathematics and Computer Science (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-78-81-959977-0-1.
- 3. Edited Book-**Role of Applied Sciences in Social Implications, Volume-A: Chemical Science (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-978-81-956770-8-5.
- 4. Edited Book-**Role of Applied Sciences in Social Implications, Volume-B: Earth Environment and Energy (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-978-81-956770-9-2.
- 5. Edited Book-**Role of Applied Sciences in Social Implications, Volume-C: Life Science (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-978-81-959977-1-8.
- 6. Edited Book-**Role of Applied Sciences in Social Implications, Volume-E: Physics and Electronics (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-978-81-959977-2-5.
- 7. Book Chapter-**Chapter 5-Stochastic Reliability Modelling of an Industrial system with one main Unit with Two sub unit published in Edited Book-Role of Applied Sciences in Social Implications, Volume-D: Mathematics and Computer Science (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-78-81-959977-0-1.

8. **Book Chapter**-Chapter 17 -Stochastic Reliability Analysis of single unit system with Patient Time published in Edited Book-Role of Applied Sciences in Social Implications, Volume-D: Mathematics and Computer Science (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-78-81-959977-0-1.
9. **Book Chapter**-Chapter 18 –Risk Assessment in Private school using Fuzzy Logic Technique during Pandemic published in Edited Book-Role of Applied Sciences in Social Implications, Volume-D: Mathematics and Computer Science (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-78-81-959977-0-1.
10. **Book Chapter**-Chapter 8 – Bio- Diesel A Renewable Fuel published in Edited Book-Role of Applied Sciences in Social Implications, Volume-B: Earth Environment and Energy (compilation of research papers received for presentation in International conference Role of Applied Sciences in Social Implications-IC-RASSI, publisher Probcell, press Bhilai, CG, ISBN-978-81-956770-9-2.

Project

1. Completed Minor Research project on “**Reliability Analysis of Industrial System**” funded by Autonomous cell, Govt Digvijay PG College Rajnandgaon.

Ph D Supervision

[1] Ms Shruti Shukla, Hemchand Yadav Vishwavidyalaya order no.800/DSW/Ph.D cell/2022 dated 07/10/2022

[2] Ms. Iti Sao JRF qualified, Hemchand Yadav Vishwavidyalaya order no.1246/Ph.D cell/2024 dated 04/04/2024

Invited Talk/ Guest Lecture

1. Guest Lecture on topic “*Real Analysis*” on 28 December 2018 at Govt. College Armarikala, Balod, C.G.
2. Invited talk on topic “*Fibonacci Sequence and Golden Ratio*” on national seminar on “Recent Development of Mathematics and its Application” held on 14 February 2020 at Govt. BSBA P G College, Dongargaon, C. G.
3. Key note speaker on Webinar on topic “Real Number System” 04/05/2021 at Govt. College Armarikala, CG

4. Guest Lecture on topic “Jordan Holder Theorem and its applications” 23/12/2020 at Govt PG college Balod CG.
5. Guest Lecture on topic “Real Number system” on 28/04/2021 at Govt rani suryamukhidevi College , Chhuriya CG
6. Guest Lecture on topic “Simplex method for Linear Programming Problem” on 04/10/2021 at Govt PG College Balod, CG.
7. Delivered lecture on Value added certificate course on “Scientific Document Preparation Using Latex”, 2021 Organized by the department of mathematics, Govt Digvijay P G College Rajnandgaon, C G.
8. Guest Lecture on topic “Operations Research and it's Applications” on 25/05/2022 at Shri Shankaracharya Mahavidyalaya Junwani road Bhilai, CG.
9. Guest Lecture on topic “Operations Research” on 06/12/2022 at Govt. BSBA P G College, Dongargaon, C. G.
10. Resource person for seven days' workshop on topic “NET-JRF/SET Preparation” on 17-23 February 2024 Organised by the department of mathematics, Govt. Digvijay PG College Rajnandgaon , CG
11. Guest Lecture on topic “Role of Mathematics in carrier Building” 8/01/2024 at Rani Rashmi Devi singh Govt college, khairagarh, CG

Papers presented in International Conferences/seminar

- [1] Presented paper entitled “*Performances Evaluation of Milk packing System*” in VIth International symposiums Optimization and statistics ISOS-2008, held at AMU Aligarh, UP, 23-25 Dec, 2008.
- [2] Presented paper entitled International conference Role of Applied Sciences in Social Implications-IC-RASSI, held at Govt Digvijay PG College, Rajnandgaon CG.

Papers presented in national Conferences/ seminar

- [1] Presented paper entitled "*Profit analysis of two unit systems with PM*" in National conference on Engineering and science Aicon-2009, held at CSIT Durg, 6-8 Feb 2009.
- [2] Presented paper entitled "*Transient Reliability analysis*" in Nation Seminar held at MPCCET, 24-25 Feb 2010.
- [3] Presented paper entitled "*Performance evaluations a wind mill system with two standby and two associate units*" in national Seminar "Emerging Areas in pure and Applied Mathematics" held at Kalyan PG college Bhilai Nagar, 25-26 Nov 2011.
- [4] Presented paper entitled "*Profit Analysis of a wind mill system*" in Indian science Congress Association ISCA, held at KIIT Bhuneshwar, Jan 3-5, 2012.
- [5] Presented paper entitled "*Reliability Analysis- A review*" in Technologia 2012, a national Conference 1-2 March 2012. CCET Bhalai CG.
- [6] Presented research paper entitled "*MTSF and Profit Analysis of a Reliability model*" in AICTE Sponsored National Seminar held at BIT Durg on 15th -16th March 2013.
- [7] Presented research paper entitled "*Stochastic Analysis of Repairable System of four units*" on AICON 2013 held at CSIT Durg.
- [8] Presented research paper entitled "Reliability Modelling and Economic Analysis of Water Purification System" on National seminar on Advances in Nonlinear analysis and Optimization. Feb. 15-17, 2014. at Pt. RSU Raipur C.G.
- [9] Presented research paper entitled "Stochastic modelling and reliability analysis of water purification system with patient –time for repair" at All India conference on "intelligent systems", April 25th - 26th, 2014 at Chhatrapatishivaji institute of Technology, ICON (CSIT) Durg, India, ISBN: 978-81-923288-2-9.

- [10] Presented research paper entitled “Reliability Modelling and Stochastic Analysis” UGC sponsored National seminar on Contribution of Ancient Indian Mathematicians and Its Uses in Present Age held on 22&23 Jan 2016 at Govt. Dr. BSBA College Dongargaon, C.G.
- [11] Presented research paper entitled “*Reliability Analysis of Two unit Cold Standby system with Human and Environment Failure*” on national seminar “Advanced Research in Physics and its Role in Development of Society” held on 29 January 2018, at Department of Physics, Govt. Digvijay PG College, Rajnandgaon, C.G
- [12] Presented research paper entitled “*Reliability Analysis of Two unit Cold Standby system with Hardware and Environment Failure*” on national seminar “Recent Trends and Development in Science” sponsored by CCOST, Raipur, held on 13-14 January 2019, at Govt, E R Rao Science P G College, Bilaspur, C.G.
- [13] Presented research paper entitled “*Cost Benefit analysis of a Stochastic Model with Two type Failures*” on national seminar on Impact of Computer Science and IT on Modern Society”, held on 18-19 January 2020, at Govt, E R Rao Science P G College, Bilaspur, C.G.
- [14] Presented research paper entitled “*Use of Social Media on Education*” on national seminar on “Impact of Social Media on Society” held on 06-07 February 2020 at Department of Sociology, Govt. Digvijay P G College Rajnandgaon, C. G.
- [15] Presented research paper entitled “*Application of Financial Mathematics*” on national seminar on “Recent Development of Mathematics and its Application” held on 14 February 2020 at Govt. BSBA P G College, Dongargaon, C. G.

Workshop participated

1. Attended the Workshop on “*Reliability Theory and Survival Analysis*” December 3-5, 2012 held at IIT Kanpur
2. Attended the Workshop on “*Teaching English as foreign language*”, held at MPC CET Bhilai, 29 July 2007.

3. Attended the Workshop on *"The Role of communication skill in Technical education"*, held at MPCCET Bhilai, 9 Feb-2008.
4. Attended the Workshop on *"Application of Mathematics in Engineering and technology"* held at MPCCET Bhilai, WAMET-Jan-2008.
5. Attended the UGC Sponsored national workshop *"Emerging Area of Applications of Mathematics"* held at Govt PG College Dhamtari, 26-28 Oct 2010.
6. Attended the Workshop on *"Importance of Communication Skill in technical Colleges"* held at CCET Bhilai , 12th January 2012.
7. Attended the international Workshop on *"Reliability Theory and Survival Analysis"* December 3-5, 2012 held at IIT Kanpur
8. Attended the Workshop on *"Life and works of Shrinivas Ramanujan"* BCS PG College Dhamtari, C.G., 22-24 Dec 2013.
9. Attended the Workshop on *"Soft Computing and its application using MATLAB"*, 19 June 2015, CCET Bhilai, CG.
10. Attended the Workshop on *"Diminutions of Quality Education"* 2 July 2015, RUSA workshop Digvijay PG College Rajanandgaon CG.
11. Attended the Workshop *"RMO Teachers Training"* 2-5 Nov 2015, sponsored by NBAC Mumbai, BCS PG College Dhamtari, C. G. 22-24 Dec 2013.
12. Attended the Workshop on *"Importance of Communication Skill in technical Colleges"* held at CCET Bhilai, 12th January 2012.
13. Attended the Workshop on *"Life and works of Shrinivas Ramanujan"* BCS PG College Dhamtari, CG, 22-24 Dec 2013.
14. Attended the Workshop on *"General Relativity and Cosmology"* held on 8-9 Feb 2016 at Kalyan P G College Bhilainagar, C.G.
15. Attended the Workshop on *"Maintenance Repair and use of Laboratory Instruments"* held on 15-16 Dec 2016 at department of Physics, Govt. Digvijay P G College, Rajnandgaon, C.G.
16. Attended the Workshop on *"Effective Teaching and Learning Methodology"* held on 4 Jan 2017, at Govt Digvijay P G College, Rajnandgaon, C.G.
17. Attended the Workshop on *" Different Funding Agencies Art of effective writing of Research paper and project"* held on 27 September 2017, at Govt. Digvijay PG College

Rajnandgaon,C.G.

18. Attended the Workshop on “*Cryptography and network Security*” held on 05-06 October 2017 at GovtNagarjuna PG College Raipur, C G.
19. Attended the Workshop on “*Karyalin Hindi: SwaroopevamVishestayen*”held on 06 October 2017 at Govt. Digvijay P G College Rajnandgaon, C.G.
20. Attended the Workshop on “*Innovation in Examination Reform*” held on 03 Feb. 2018 at Govt. D B Girls P G College, Raipur,C. G.
21. Attended the Workshop on “ *Computer Training for College Staff*” held on 17-22 December 2018 at GovtDigvijay P G College, Rajnandgaon,C.G.
22. Attended the Workshop on ” *Laboratory Safety Measures*” held on 28-29 January 2019 at Govt. Digvijay P G College Rajnandagon, C.G.

Orientation Course/ Refresher Course/ Trainings

1. Attended “*Staff development program*” held at MPC CET from 17-21 Oct-2003 NTTTI Bhopal
2. Attended orientation course in “ *Quality of Higher Education Learning Process*” held on 1-28 November 2017 at HRDC Pt. RSU Raipur, C.G.
3. Attended Refresher course In “*Mathematics and Statistics*” held on 23 September to 06 October 2019 at HRDC Sardar Patel University, VallabhVidyanagar, Gujrat.
4. Attended Refresher course on “*Mathematics*” held on 16-30 March 2021 at Teaching learning centre, Ramanujan College University of Delhi
5. Attended Refresher course on “*Mathematics and computational techniques*” held 4-16 December at HRDC GGU, Bilaspur.

Responsibility/Academic/ Social work of the college

1. Coordinator, Examination section ,CCET Bhilai(from Aug2012- Aug 2014)
2. Exam Controller in Christian college of Engineering and Technology Bhilai from2005 to 2014.
3. NSS Coordinator, from 2017-2019 at Govt. Digvijay PG College, Rajnandgaon,C.G.
4. Coordinating in SVEEP Program 2018-19.
5. Coordinator of Math –Lab, at Department of Mathematics , Govt. Digvijay P G College, Rajnandgaon, C.G.

6. Coordinator of Poster Competition on Science Day celebration on 28 February 2020.
7. Organizing secretary in Webinar “Advance in Pure and applied mathematics”, Organized by the department of mathematics, GovtDigvijay P G College Rajnandgaon,C G.
8. Course Coordinator, of 30days Value added certificate course on “Scientific Document Preparation Using Latex”, Organized by the department of mathematics, GovtDigvijay P G College Rajnandgaon,C G.
9. Deputy Controller, Autonomous Examination Cell
Govt. Digvijay P G College Rajnandgaon , Chhattisgarh
10. Research Supervisor, HemchandyadavVishwavidyalayDurg, C.G.

Course taught

PG Level: Advanced Abstract Algebra, Operations Research, Complex Analysis.

Functional analysis, Graph Theory,

UG Level: Calculus, Differential Equations, Vector Calculus, Discrete Mathematics,

Numerical Analysis, Abstract Algebra, Real Analysis, Complex Analysis, Linear Algebra.