

Curriculum Vitae

Dr. Khemraj Sahu

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OBJECTIVE

To work with a reputed organization that provides an ample opportunity to utilize my teaching abilities and research experience effectively in order to achieve organizational goals along with career growth.

ACADEMIC RECORD

Qualification	College/Institution	Board/University	Year	Percentage / CGPA
Ph.D. (Mechanical Engineering)	Indian institute of Technology (BHU) Varanasi	Indian institute of Technology (BHU) Varanasi	2018	8.00 (First Hons.)
M.Tech. (Production Engineering-) through GATE-2009	Indian institute of Technology (BHU) Varanasi	Indian institute of Technology (BHU) Varanasi	2011	7.53 (First Div.)
B.E. (Mechanical Engineering)	Chhattisgarh Institute of Technology Rajnandgaon	Pt. R. S. S. U. Raipur	2008	8.02 (First Hons.)
Class XII	Govt H S School Bhakhara, Dhamtari	C.G.B.S.E Raipur	2004	72 % (First Div.)
Class X	Govt H S School Bhakhara, Dhamtari	M.P.B.S.E Bhopal	2001	70% (First Div.)

EXPERIENCE

1. Currently works as an Assistant Professor in the Department of Automation and Robotics at SIT College of Engineering, Yadav Ichalkaranji, Maharashtra Since **July 7, 2025**.
2. Works as Guest Faculty in the Department of Mechanical Engineering, Government College of Engineering Kalahandi, Odisha, from **4 Oct 2021 to 2 July 2025**.
3. Three-year work experience in the Department of Mechanical Engineering, Government College of Engineering Kalahandi, Odisha, from **29 Sept 2018 to 30 Sept 2021** as an Assistant Professor under the TEQIP-III project by National Project Implementation Unit.
4. **One-year** teaching experience in the Department of Mechanical Engineering, A.N.A. college of Engineering and Management Studies, Bareilly-243501 (Affiliated, Dr. A.P.J. Abdul Kalam Technical University, Lucknow (formerly known as UPTU)).
5. Experience about NBA Accreditation related work.

EXPERT LECTURE

1. Delivered an expert lecture on “**Manufacturing of Orthopedic Implants**” in One Week Self-Financed Short-Term Training Program on Emerging Trends and Challenges in Biomechanics and Biomaterials organized by Department of Biomedical Engineering, National Institute of Technology, Raipur from 25 to 30 July 2023.
2. Delivered an expert lecture on “**Rapid Manufacturing Process**” in One Week Faculty Development Program on “Advances in Mechanical Engineering & Application of Optimization Technique” organized by Department of Mechanical Engineering, Gandhi Institute of Excellent Technocrats, Gangapatna Bhubaneswar from 26 Feb 2024 to 03 March 2024.
3. Delivered an expert lecture on “**Advanced Characterization Techniques**” in One Week Self-Financed Short-Term Training Program on **Advanced Materials Testing and Characterization** organized by Department of Materials Science and Engineering, National Institute of Technology, Hamirpur from 29 July 2024 to 02 August 2024.

PATENT

1. Indian Patent Published on design of ‘Solid Lubricant Bearing (Design No – 411602-001)’ on 16 May 2024

PROJECT/THESIS

Thesis Topic of Ph. D.- *‘Investigations into the Deformation Behavior and Characterization of Aluminum-Silicon Alloys during Bulk Processing’*

Description: The work aims to demonstrate the feasibility of the bulk processing of Al-Si alloys through converging and impression die setups at different working conditions. The interaction of various processing parameters involved during the bulk processing has been analyzed and discussed. It is expected that the outcome of the present work will fill the gap in the existing knowledge about the bulk processing of Al-Si alloys.

Thesis Topic of M. Tech: *‘Investigation into Forging of Polygonal Disc’*

Description: In this work, various technological aspects during the cold forging of polygonal [Cylindrical, Hexagonal, Pentagonal, Square, and Triangular] discs have been analyzed and discussed to illustrate the interaction of various processing parameters involved. The relationship made between parameter such forging load, the number of sides, bulging and barreling of the specimen at different inter-facial friction conditions during the process.

B. E. Project: *‘Fabrication of Three Roller Pyramid Type Plate Bending Machine’*

Description: In this fabrication, three rollers are used for making bending machine. The two rollers are placed on the bottom of the machine and one roller in top position, are used to bend a flat aluminum sheet with less force and good surface finish.

PUBLICATIONS: INTERNATIONAL AND NATIONAL JOURNALS

1. **Khemraj, A.K. Jha,** ‘Effect of Height to Diameter Ratio on Barrelling of Cylindrical Billets Deformed During Cold Forging under different Inter-Facial Friction Conditions’, *An International Journal of Manufacturing Technology and Research*, ISSN: 0973-0281. **(UGC Approved)**
2. **Khemraj, Jha, A.K. and Ojha, S.N.** (2017) ‘Microstructural features induced during compression of Al-18Si-2.5Cu-0.6Fe alloy at elevated temperature’, *Int. J. Microstructure and Materials Properties*, Vol. 12, Nos. 5/6, pp.332–347. **(Scopus)**

3. **Khemraj**, A.K. Jha, S.N. Ojha, (2018) 'Tribo-mechanical Behavior of Complex Hypereutectic Al-Si Alloy Compressed through a Converging Die at Elevated Temperatures' *Materials Research Express*, 5, 076509. (SCIE)
4. **Khemraj**, A.K. Jha, S.N. Ojha (2018) 'Deformation behavior of aluminum-silicon (Al-Si) alloy during forging under various processing conditions', *Materials Today: Proceedings* 5, pp. 26955–26960. (Scopus)
5. **raj**, Jha, A.K. and Ojha, S.N. (2019) 'Deformation and fracture characteristics of complex Al-Si alloy during high speed forging under different processing conditions', *Int. J. Materials and Product Technology*, Vol. 58, No. 1, pp.32–54. (SCIE)
6. **Khemraj**, A.K. Jha, S.N. Ojha, (2019) 'Deformation Behavior of A356, Al-11Si-2.5Cu-0.6Fe, and Al- 18Si-2.5Cu-0.6Fe Alloys Forged under Different Processing Conditions', *Int. J. Materials Engineering Innovation*, Vol. 10, No. 1, 2019. (Scopus)
7. **Sahu**, K., & Singh, R. B. (2021). Development of Fine-Grained Complex A356 Aluminum Alloy through Converging Die Compression. *Transactions of the Indian Institute of Metals*, 74(7), 1689-1699. (SCIE)
8. **Sahu**, K., Narayane, D., Singh, M. K., Singh, R. B., & Srivastava, A. (2021). Microstructural analysis of forged Al-11Si-2.5 Cu-0.6 Fe alloy at different processing conditions. *Materials Today: Proceedings*, 47, 6682-6685. (Scopus)
9. Behera, B., **Sahu**, K., & Roy Choudhury, A. (2022). Effect of processing parameters on Tribo-mechanical properties of developed Nano-Composite Coating of h-BN & B4C on Ti6Al4V Substrate by Laser Surface Alloying. *Advances in Materials and Processing Technologies*, 8(4) 3934-3949.(Scopus)
10. Narayane, D., Taiwade, R. V., & **Sahu**, K. (2023). Review on development and performance of shape memory alloy/polyimide thin-film composites. *Materials and Manufacturing Processes*, 38(3), 245-259. (SCI)
11. Singh, R. B., Kumar, S., & **Sahu**, K. (2023). Development of Graphitic 2024 Al Alloy by Mechanical Alloying. *Key Engineering Materials*, 962, 3-10. (Scopus)

INTERNATIONAL AND NATIONAL CONFERENCE

1. **Khemraj**, A.K. Jha, S.N. Ojha, Oral Presentation on 'Investigation into Forging of Polygonal Disc' in **The Indian Institute of Metals**, organized by Department of Metallurgical Engineering, Indian Institute of Technology (Banaras Hindu University) Varanasi – 221 005 India during 12-13 November, 2013.
2. **Khemraj**, A.K. Jha, S.N. Ojha, 'Closed-die forging on Hyper-Eutectic Al-Si Alloy' *An International conference* on Advanced and Agile Manufacturing Systems (ICAM'2015), At KNIT-Sultanpur, India during 28-29 December-2015. (ISBN: 978-93-85777-03-5)
3. **Khemraj**, A.K. Jha, S.N. Ojha, 'Deformation Behavior of Aluminum-Silicon (Al-Si) Alloy during Forging under various Processing Conditions', *An International conference* on Advances in Materials and Manufacturing (ICAMM-2016), At Department of Mechanical Engineering, University college of Engineering (Autonomous), Osmania University, Hyderabad, India during 08-10 December-2016. (ISBN: 978-93-86256-19-5)
4. **National conference** on 'Advanced Material and their Applications' organized by Department of Mechanical Engineering and Department of Basic Science, Government College of Engineering Kalahandi, India during April 20-21, 2019
5. **Khemraj Sahu**, Dhiraj Narayane, Manvandra Kumar Singh, Raj Bahadur Singh, Ashish Srivastava, 'Microstructural Analysis of Forged Al-11Si-2.5Cu-0.6Fe alloy at Different Processing Conditions' *An International Conference* on Recent Advances in Design, Materials and Manufacturing (ICRADMM 2020) organized by Department of Mechanical Engineering, Amity University Gwalior

during 15 & 16 October 2020. (**E-Souvenir 146**).

6. Manvandra K Singh, Rakesh Kumar Gautam, Ashwani Sharma, Gopal Ji, Vineet Kumar, **Khemraj Sahu** and Uma Shankar, 'Effect of Waste Metallic Chips on Wear Response of Copper Metal Matrix Hybrid Composites', **International Conference** on Management and Recycling of Metallurgical Wastes, organized by IIT(BHU), Varanasi, India during 11-12 February 2024.
7. M. K. Singh, M. Kumar, Avnish Ravi, R. K. Gautam, A Sharma, R. K. S. Gautam, H. Nautiyal, **Khemraj Sahu**, V. Kumar and Gopal Ji, 'Development of Self-Lubricating Copper Metal Matrix Hybrid composites using Microwave Sintering and Its Characterizations', **International Conference** on Recent Advances in Functional Materials (RAFM-2024), organized by Atma Ram Sanatan Dharma College (University of Delhi) India during 14-16 March 2024

SEMINARS/WORKSHOPS/ STTP/TRAINING PROGRAMME

1. **Summer Training programme** at Bhilai Steel Plant, under Steel Authority of India Limited (SAIL) Bhilai from 19-06-2006 to 01-07-2006.
2. National Workshop on '**Mathematical Modeling and Computer Simulation**' Organised by Teaching-Learning Cell Indian Institute of Technology (Banaras Hindu University) Varanasi-221005, India during March 20-21, 2015.
3. Short-term Training Programme on '**Fundamental of Tribology and Its Industrial Applications (FTIA - 2015)**' Organized by Department of Mechanical Engineering, NIT Surat-395007, India during July 06-10, 2015.
4. National Workshop on '**Metallurgy for Non-Metallurgists**' organized by Department of Metallurgical Engineering, Indian Institute of Technology (Banaras Hindu University) Varanasi – 221 005 India during 08-10 December, 2015
5. Short-term training course on '**Materials Tribology Fundamental and Recent Advances**', organized by Department of Mechanical Engineering, Indian Institute of Technology (Banaras Hindu University) Varanasi – 221 005 India during 23-29 March, 2017.
6. TEQIP-III Sponsored Training on '**Advanced Pedagogy and Digital Tool for TEQIP Faculty Members**' from June 03-07, 2019 organized by IIT Kharagpur (INDIA)
7. TEQIP-III Sponsored workshop on '**Institutional Reforms-Governance and Academics**' on from June 15-17, 2019 organized by Government College of Engineering Kalahandi in association with Government College of Engineering Jalgaon (INDIA).
8. One-week short-term training programme on '**MATLAB: Fundamentals and Applications**' from July 08-12, 2019 organized by Government College of Engineering Kalahandi in association with Government College of Engineering Jalgaon (INDIA).
9. TEQIP-III Sponsored national seminar on '**Recent Scopes and technologies in Mechanical Engineering**' from September 20-21, 2019 organized by Government College of Engineering Kalahandi in association with Government College of Engineering Jalgaon (INDIA).
10. NPIU TEQIP-III Sponsored Faculty Development Program on "**Future-skill technologies in 3D Printing & Design**" organized at IIT Hyderabad between June 19 – 26, 2021
11. Participated in One Week Short Term Course on "**Smart Manufacturing towards Industry 4.0 (SMI 4.0)**" organized by Department of Production and Industrial Engineering, National Institute of Technology, Jamshedpur from 27 to 31 May 2024.

FDP/WORKSHOP/STTP ON VIRTUAL MODE

1. One-week faculty development programme on '**Moddle Learning Management System**' from May 25-30, 2020 sponsored by Government College of Engineering Kalahandi in association with Spoken Tutorial Project, IIT Bombay (INDIA).
2. One day online webinar on '**Smart Manufacturing**' on June 1st, 2020 organized by Department of

Industrial and Production Engineering, Shri G. S. Institute of Technology and Science Indore (INDIA).

3. TEQIP-III Sponsored two-week online short-term training program on '**Green Energy Technology for Sustainable Development**' from June 11-20, 2020 jointly organized by NIT Kurukshetra and GECBikaner (INDIA).
4. One day online webinar on '**Refrigerant in Engineering Applications**' on June 22nd, 2020 organized by Department of Mechanical Engineering, Vidyavardhaka College of Engineering Mysuru, Karnataka (INDIA).
5. TEQIP-III Sponsored online faculty development programme on '**Six Sigma**' from July 06-10, 2020 organized by Basaveshwar Enineering College Bagalkot, Karnataka, (INDIA).
6. TEQIP-III Sponsored One-week online workshop on '**Interdisciplinary Approach of Tribology in Engineering and Biomedical Research**' from August 04-08, 2020 organized by Department of Mechanical Engineering, NIT Silchar (INDIA).
7. Five-day virtual international short-term course on '**Tribology and Sustainability**' from August 24-28, 2020 organized by SRM Institute Science of Technology Kattankulathur, Tamil Naidu (INDIA).
8. TEQIP-III Sponsored online faculty development programme on '**Recent Advancement in Welding and Joining Technology (RAWJT-2020)**' on September 12-16, 2020 organized by Department of Mechanical Engineering, Veer Surendra Sai University of Technology, Burla, Odisha (INDIA).
9. TEQIP-III sponsored one-week faculty development program on '**Recent Advancement in Mechanical Engineering (RAME-2020)**' from October 12-16, 2020 organized by Department of Mechanical Engineering, Government College of Engineering, Keonjhar, Odisha in coordination with ICT Mumbai.
10. TEQIP-III sponsored E-Training Program/Short-term course on '**Micro-Mechatronics and Soft Robotics**' from December 21-23, 2020 organized by Department of Mechanical Engineering, IIT Indore.
11. TEQIP-III sponsored one day National Webinar on "**NATIONAL EDUCATION POLICY 2020 (NEP-2020)**" held on 26th February 2021, organized by TEQIP Cell, Government College of Engineering Kalahandi, Bhawanipatna.

NPTEL FDP Courses

1. NPTEL Online FDP course on 'Manufacturing of Composites'.
2. NPTEL Online FDP course on 'Polymers and Polymer Composites'.
3. NPTEL Online FDP course on 'Robotics'.

PROFESSIONAL MEMBERSHIP

1. **Life Member (LM#S-5828)** of Tribology Society of India (affiliated to International Tribology Council, U.K.).
2. **Associate Member (AS 51199)** of the Indian Institute of Metals.

SCHOLASTIC ACHIEVEMENTS

1. Secured AIR-987 in the **GATE-2009**, which is a National Level Entrance Examination.
2. I was among top three students during my B. E.
3. Secured 1st position in class 10th exam.

AREA OF INTEREST

1. Manufacturing technology

2. Additive manufacturing
3. Mechatronics & Automation
4. Manufacturing System Design
5. Production Engineering
6. Materials science.
7. Tribology and surface Engineering
8. CAD/CAM

COMPUTER SKILL

1. CAD / CATIA lab
2. Deform 10
3. Solidworks 10
4. OriginPro 8.0
5. Minitab Statistical Software 21

PERSONAL DETAILS

Father's name :	Mr. T. K. Sahu
Mother's name:	Ms. L. Sahu
Date of birth :	15 th December 1985
Nationality :	Indian
Marital Status :	Married
Languages Proficiency :	English, Hindi

DECLARATION

I hereby declared that the above said particulars are true to the best of my knowledge. Mark sheets/Certificates will be available on request.

Date:

Dr. Khemraj Sahu