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EDUCATION

2017- 2023, National Institute of Technology Silchar, India

PhD (Full-time/regular): Experimental investigation of mechanical properties and anti- wear performance of Ag/Si doped a-C and AlCr(Si)N thin film coatings for biomedical application

Grade: 8.00 C.P.I

2013-2015, University College of Engineering, Osmania University, Hyderabad, India

M.E (Tool Design- Mechanical)

Percentage: 75.2 % (First class with distinction)

2007-2011, National Institute of Technology Silchar, India

B. Tech (Mechanical Engineering)

Grade: 6.25 C.P.I (First Class)

WORK EXPERIENCE

- **Nov 2023- Till date, National Institute of Advanced Manufacturing Technology (Formerly NIFFT), [Deemed to be University under distinct category] [Centrally Funded Technical Institute, Government of India], Ranchi, Jharkhand, India**
Assistant professor in the Department of Mechanical Engineering
- **Mar 2022- Oct 2023, Sathyabama Institute of Science and Technology (Deemed to be University), Chennai, Tamil Nadu, India [NIRF India University ranking 2023: 51, QS Asia ranking 2023: 301-350, QS world ranking 2023: 1001-1200]**
Assistant professor in the School of Mechanical Engineering
- **Jul 2017- Mar 2022, National Institute of Technology Silchar, India**
Research scholar (Regular) and teaching assistant in the Department of Mechanical Engineering
- **Oct 2015- Jul 2017, CVR College of Engineering, Hyderabad, Telangana, India**
Assistant professor in the Department of Mechanical Engineering
- **Jun 2014- Jun 2015, Ingenious Tools and Design Solution Pvt Ltd. Ghaziabad, India**
Design intern
- **Jun 2011- Jun 2013, ABCI Infrastructures Pvt. Ltd., Assam, India**
Site Engineer- Railway steel bridge fabrication, erection & commissioning and vendor development.

PATENTS AND DESIGN REGISTRATIONS

1. **Lokeswar Patnaik**, Sunil Kumar, Vikram Kumar. "A Glass Inserting Machine for Spill Guard Shelves of Refrigerator and Method of Assembling Thereof" Patent No. IN 389335, Date of grant: Feb 15, 2022, Intellectual property of India.
2. **Lokeswar Patnaik**, Sunil Kumar, Saikat Ranjan Maity. "Polishing set-up on vertical milling machine: An alternate to metallographic polishing machine" Patent No. IN 541276, Date of grant: Jun 10, 2024, Intellectual property of India.
3. **Lokeswar Patnaik**, Sunil Kumar, Rehmath Bazil RM, B.Karthick, Harish M, Vangara Madhavi Lata, Godavarthi Vamsi Krishna, Mediseti Suresh Chandra, Saikat Ranjan Maity, Syed Mahammad Shafi. "A machine for producing mechanical test specimen as per ASTM standard" Patent No. IN 519480, Date of grant: Mar 05, 2024, Intellectual property of India.
4. **Lokeswar Patnaik**, Sunil Kumar, Saikat Ranjan Maity. "Polishing Attachments on Conventional Lathe Machine" Patent No. IN 502293, Date of grant: Jan 23, 2024, Intellectual property of India.
5. **Lokeswar Patnaik**, Sunil Kumar, Vikram Kumar, Saikat Ranjan Maity. "Desiccant Inserting Machine for Drying Moisture Inside the Blind Hole of an Automobile Component" Patent No. IN 493864, Date of grant: Jan 1, 2024, Intellectual property of India.
6. **Lokeswar Patnaik**, Sunil Kumar, Amit Kumar, Saikat Ranjan Maity and V.S.S Venkatesh. "Special Purpose Automated Surface Finishing System with Multi-axis Arm and Related Methods" Patent Application No.: 202531059080, Date of Filing: Jun 19, 2025, Intellectual property of India.
7. **Lokeswar Patnaik**, Sunil Kumar, A. Anderson. "Hot liquid dispenser" Design No. 363706-001, Date of issue: Jul 6, 2022, Intellectual property of India.
8. **Lokeswar Patnaik**, Sunil Kumar, Saikat Ranjan Maity, A. Anderson, Shiela Chetri, G. Madhan Kumar. "Canned Drink Dispenser" Design No. 373687-001, Date of issue: Jan 10, 2023, Intellectual property of India.
9. **Lokeswar Patnaik**, Anees CP, P Sunilkumar, Jatin Gajjar and Sunil Kumar. "Mold with heating coil for fabrication of polymer composite", Design No. 389615-001, Date of issue: Apr 4, 2024, Intellectual property of India.
10. **Lokeswar Patnaik**, Izhar Basha, Jahnvi Reddy and Sunil Kumar. "Turbine Blade with Inclined Dovetail Base" Design No. 384642-001, Date of issue: Jan 15, 2024, Intellectual property of India.
11. **Lokeswar Patnaik** and Sunil Kumar. "Smart lubrication system for the lathe machine" Design No. 430266-001, Date of issue: Nov 04, 2024, Intellectual property of India.
12. Sunil Kumar, **Lokeswar Patnaik**, Shiela Chetri, KB Badri Narayan, Saikat Ranjan Maity. "Identity Card with QR Code" Design No. 399851-001, Date of issue: May 22, 2025, Intellectual property of India.
13. Sunil Kumar, **Lokeswar Patnaik**, Saikat Ranjan Maity. "Magnetic Door Stopper" Design No. 419156-001, Date of issue: Jul 15, 2024, Intellectual property of India.
14. A. Anderson, **Lokeswar Patnaik**, Nivin Joy and Annam Renita. "Wind mill operated solar desalination system" Design No. 367888-001, Date of issue: Oct 20, 2022, Intellectual property of India.
15. Sunil Kumar, **Lokeswar Patnaik**, Jatin Gajjar, Shiela Chetri, Adrita Roy and Saikat Ranjan Maity. "Water Trolley Terrains" Design Application, Design No. 373686-001, Date of issue: Jan 18, 2023, Intellectual property of India.
16. Piyush Pratap Singh, Abhishek Jha, Krishnadas Narayanan Nampoothiri, Sunil Kumar and **Lokeswar Patnaik**. "Multipurpose Stair Climbing Cylinder Carrier", Design No. 385108-001, Date of issue: Jan 10, 2024, Intellectual property of India.
17. Priya Kumari, Siddhant Gokhale and **Lokeswar Patnaik** "Design of Shredding Tool Cutter for Fine Plastic Waste Chips Production" Design Application: 469988-001, Date of filing: Aug 18, 2025, Intellectual property of India.
18. Siddhant Gokhale, Priya Kumari and **Lokeswar Patnaik** "Design of Shredding Tool Cutter for Producing Coarse Chips from Plastic Waste" Design Application: 469981-001, Date of filing: Aug 18, 2025, Intellectual property of India.
19. TS Sriya and **Lokeswar Patnaik**. "Structural Brick Design for High Compression Load" Design Application: 468659-001, Date of filing: Aug 6, 2025, Intellectual property of India.
20. Khushi Kumari, Kumar Prem Prakash, **Lokeswar Patnaik** and Prasant Kumar Swain "Automated Composite Lay-up Machine" Date of filing: Sep 12, 2025, Intellectual property of India.
21. S Manoj, G Madhan Kumar, **Lokeswar Patnaik** and V Sanjay. "SUZHAL Thruster/15-99" Design Application: 368044-001, Date of filing: Jul 20, 2022, Intellectual property of India.

¹Research matrices:

Google scholar : Citations: 998, h-index: 19, i10-index: 30
 Scopus : Citations: 790, h-index: 16
 Web of Science : Citations: 630, h-index: 15
 ResearchGate : Citations: 925, h-index: 17

¹ As on Sep 18, 2025

International journals:

1. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Comprehensive structural, nanomechanical and tribological evaluation of silver doped DLC thin film coating with chromium interlayer (Ag-DLC/Cr) for biomedical application." *Ceramics International- Elsevier* (2020), 46 (14), 22805-22818. <https://doi.org/10.1016/j.ceramint.2020.06.048>
2. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Lubricated sliding of CFRPEEK/AlCrN film tribo- pair and its effect on the mechanical properties and structural integrity of the AlCrN film" *Materials Chemistry and Physics- Elsevier* (2021), 273, 124980. <https://doi.org/10.1016/j.matchemphys.2021.124980>
3. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Modeling of wear parameters and multi-criteria optimization by box-behnken design of AlCrN thin film against gamma-irradiated Ti6Al4V Counterbody." *Ceramics International- Elsevier* 47, no. 14 (2021): 20494-20511. <https://doi.org/10.1016/j.ceramint.2021.04.059>
4. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Effect of lubricated sliding wear against CFRPEEK on the nanomechanical properties of Ag alloyed Cr/DLC thin film." *Journal of the Mechanical Behavior of Biomedical Materials- Elsevier* 118 (2021): 104478. <https://doi.org/10.1016/j.jmbbm.2021.104478>
5. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Mechanical and Tribological Assessment of Composite AlCrN or a-C: Ag-based Thin Films for Implant Applications." *Ceramics International- Elsevier* (2021), 47 (5), 6736-6752. <https://doi.org/10.1016/j.ceramint.2020.11.016>
6. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Comparative study on the structural make-up and mechanical behavior of silicon and silver doped amorphous carbon films" *Silicon- Springer* (2022): 1-18. <https://doi.org/10.1007/s12633-021-01607-1>
7. **Lokeswar Patnaik**, Saikat Ranjan Maity, Sunil Kumar, Magdalena Łepicka and A. Anderson. "Fuzzy CODAS based analysis of wear and temperature induced responses of Si doped a-C film and CFRPEEK tribopair" *Silicon- Springer* (2022). <https://doi.org/10.1007/s12633-022-02213-5>
8. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Evaluation of Scratch Resistance and Adhesive Energy of AlCrN and Ag doped a-C Films Deposited on Chrome Nitrided 316 LVM Stainless Steel" *Advances in Materials and Processing Technologies- Taylor & Francis* (2022). <https://doi.org/10.1080/2374068X.2021.1927643>
9. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Evaluation of Gamma irradiated Ti6Al4V and Silver alloyed a-C coatings as friction pairs via Response Surface Methodology" *Advances in Materials and Processing Technologies- Taylor & Francis* (2022). <https://doi.org/10.1080/2374068X.2021.1945277>
10. **Lokeswar Patnaik**, Sunil Kumar, Jatin Gajjar, Priyadarshini Dash, Saikat Ranjan Maity, Magdalena Łepicka and P. Booma Devi. "Box-Behnken based investigation of Surface Quality and Tool Wear Rate and FEM Analysis of Tool wear in TiAlN/CrN coated carbide tool" *International Journal on Interactive Design and Manufacturing (IJDeM)- Springer* (2022). <https://doi.org/10.1007/s12008-022-01146-y>
11. **Lokeswar Patnaik**, Sunil Kumar, Jatin Gajjar, Amarapalli Deepak, Jayketh Naidana, V.S.S. Venkatesh, Magdalena Łepicka, Saikat Ranjan Maity, Syed Mahammad Shafi and Shiela Chetri "Carbon-fibre-reinforced-PEEK and silicon doped amorphous carbon as a potential tribopair for implant application" *Advances in Materials and Processing Technologies- Taylor & Francis* (2023). <https://doi.org/10.1080/2374068X.2023.2184337>
12. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Effect of tribological process parameter on the wear and frictional behaviour of Cr-(CrN/TiN) composite coating: An experimental and analytical study." *Ceramics International- Elsevier* 47, no. 11 (2021): 16018-16028. <https://doi.org/10.1016/j.ceramint.2021.02.176>
13. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Friction and tribological behavior of bare nitrided, TiAlN and AlCrN coated MDC-K hot work tool steel." *Ceramics International- Elsevier* (2020), 46 (11), 17280- 17294. <https://doi.org/10.1016/j.ceramint.2020.04.015>

14. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik** "Wear assessment of Cr₂O₃/TiAlN coated DAC-10 tool steel against steel and Al₂O₃ counterbodies." *International Journal of Applied Ceramic Technology- Wiley* (2021). <https://doi.org/10.1111/ijac.13935>
15. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Morphology and wear behavior of monolayer TiAlN and composite AlCrN/TiAlN coated plasma nitrided DAC-10 tool steel" *Arabian Journal for Science and Engineering- Springer* (2022). <https://doi.org/10.1007/s13369-022-06711-x>
16. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "A novel BWM integrated MABAC decision-making approach to optimize the wear parameter of CrN/TiAlSiN coating" *Journal of Industrial & Management Optimization- American Institute of Mathematical Sciences-AIMS* (2022). <https://doi.org/10.3934/jimo.2022061>
17. V.S.S Venkatesh, Kalapala Prasad, **Lokeswar Patnaik**, "Effect of SiC and TiC reinforcements on the Mechanical Properties of ZrB₂ - SiC- TiC Hybrid Composite fabricated through Spark Plasma Sintering" *Silicon-Springer* (2022). <https://doi.org/10.1007/s12633-022-02263-9>
18. Sunil Kumar, Shubrajit Bhaumik, **Lokeswar Patnaik**, Saikat Ranjan Maity, Viorel Paleu, "Application of integrated BWM Fuzzy-MARCOS approach for coating material selection in tooling industries" *Materials-MDPI* (2022). <https://doi.org/10.3390/ma15249002>
19. Kumar, Sunil, **Lokeswar Patnaik**, Syed Mahammad Shafi, V.S.S. Venkatesh and Saikat Ranjan Maity. "Wear parameter optimization for CrN/TiAlSiN coating using novel BWM integrated TODIM decision-making approach." *International Journal on Interactive Design and Manufacturing (IJIDeM)- Springer* (2022). <https://doi.org/10.1007/s12008-022-00902-4>
20. Pathak, D., Kushari, S., Maity, S., **Lokeswar Patnaik**., Kumar, S., & Dey, S. "Vibration Analysis of Cracked Cantilever Beam Using Response Surface Methodology". *Journal of Vibration Engineering & Technologies- Springer* (2022), 1-24. <https://doi.org/10.1007/s42417-022-00713-7>
21. Kumar, S., Maity, S. R., & **Lokeswar Patnaik**. "Wear Parameter Optimization of Ceramic Coating Using the Fuzzy Integrated PSI-CODAS Decision-Making Framework". *Arabian Journal for Science and Engineering- Springer* (2022), 1-23. <https://doi.org/10.1007/s13369-022-07212-7>
22. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Mechanical and Scratch Behavior of TiAlN Coated and 3D Printed H13 Tool Steel" *Advances in Materials and Processing Technologies- Taylor & Francis* (2021). <https://doi.org/10.1080/2374068X.2021.1927642>
23. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Effect of Annealing on Structural, Mechanical and Tribological Properties of Cr-(CrN/TiAlN) coating" *Advances in Materials and Processing Technologies- Taylor & Francis* (2021). <https://doi.org/10.1080/2374068X.2021.1946755>
24. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Relative effect of wear parameter on wear behavior of TiAlN coated tool steel and parametric optimization using MCDM method" *Advances in Materials and Processing Technologies- Taylor & Francis* (2022). <https://doi.org/10.1080/2374068X.2022.2033018>
25. Reddy, Bandi Venkata Ramana, Saikat Ranjan Maity, Krishna Murari Pandey, **Lokeswar Patnaik** and Sunil Kumar. "Enhancement of microstructure and mechanical performance of spray formed Al-6Si-18Pb Alloy by warm rolling" *Advances in Materials and Processing Technologies- Taylor & Francis* (2022). <https://doi.org/10.1080/2374068X.2022.2036490>
26. Syed Mahammad Shafi, **Lokeswar Patnaik**, Saikat Ranjan Maity, Sunil Kumar, Kuldeep K. Saxena, Chander Prakash and Dharam Buddhi "Hydroxyapatite/ Si-doped TiN interlayer coatings as potential candidates for surface modification of Medical Grade 316 LVM stainless steel for bioimplant applications" *Surface Reviews & Letters- World Scientific* (2022). <https://doi.org/10.1142/S0218625X23400048>
27. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Optimization of Wear Parameters for Duplex-TiAlN Coated MDC-K Tool Steel using Fuzzy MCDM Techniques." *Operational Research in Engineering Sciences: Theory and Applications* (2022). <https://doi.org/10.31181/110722105k>
28. Maity, S. R., Kumar, S., & **Lokeswar Patnaik**. "Effect of Mean Stress on Ratchetting of Austenitic Stainless Steel (AISI 304) at Room Temperature" *Physics of Metals and Metallography- Springer* (2023) <https://doi.org/10.1134/S0031918X21100550>
29. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Effect of tribological parameters and their optimization for wear responses of TiAlN coating" *Emerging Materials Research-ICE Virtual Library* (2022). <https://doi.org/10.1680/jemmr.22.00015>
30. V.S.S Venkatesh, **Lokeswar Patnaik** and Sunil Kumar, "Susceptor-assisted rapid microwave sintering of Al- kaolin composite in a single-mode cavity" *Archives of Metallurgy and Materials- Polish Academy of Sciences* (2022). <https://doi.org/10.24425/amm.2023.142464>

31. V.S.S. Venkatesh, Ganji Prabhakara Rao, **Lokeswar Patnaik**, Nakul Gupta, Sunil Kumar, Kuldeep K Saxena, BDY Sunil, Sayed M Eldin and Fatima Haider Qutb Al-khafaji "Processing and Evaluation of nano SiC reinforced aluminium composite synthesized through ultrasonically assisted stir casting process" *Journal of Materials Research and Technology-Elsevier* (2023). <https://doi.org/10.1016/j.jmrt.2023.05.030>
32. V.S.S Venkatesh, Ganji Prabhakara Rao, **Lokeswar Patnaik** and Sunil Kumar "Effect of spark plasma sintering temperature on phase evaluation and mechanical behaviour of Cu- 4wt% SiC composite" *Silicon- Springer* (2023). <https://doi.org/10.1007/s12633-023-02530-3>
33. Bhowmik, A., Kumar, R., Babbar, A., Romanovski, V., Roy, S., **Lokeswar Patnaik**, ... & Alawadi, A. H. "Analysis of physical, mechanical and tribological behavior of Al7075-fly ash composite for lightweight applications" *International Journal on Interactive Design and Manufacturing (IJIDeM)* (2023), 1-14. <https://doi.org/10.1007/s12008-023-01583-3>
34. Ahijith Kumar, P. V., **Lokeswar Patnaik**, Kiran Bharati, V. S. S. Venkatesh, and Sunil Kumar. "Investigating tool wear rate and surface quality of hardened tool steel: a fuzzy-MARCOS analysis and response surface methodology study." *International Journal on Interactive Design and Manufacturing (IJIDeM)* (2024): 1-22. <https://doi.org/10.1007/s12008-024-01950-8>
35. Banerjee, N., A. R. Biswas, A. Sen, S. R. Maity, M. Kumar, and **Lokeswar Patnaik**. "Techniques for Laser Beam Welding (LBW) Mg Alloys to Various Other Materials: A Review and What Else Can be Done." *Lasers in Engineering (Old City Publishing)* 58 (2024).
36. Kumar, Sunil, P. V. Ahijith Kumar, Kiran Bharti, **Lokeswar Patnaik**, Saikat Ranjan Maity, and Magdalena Łepicka. "Coating material selection for bulk metal forming dies: A MEREC-integrated approach with multiple MCDM methods." *International Journal on Interactive Design and Manufacturing (IJIDeM)* (2024): 1-16. <https://doi.org/10.1007/s12008-024-01983-z>
37. Bodduru, Kamesh, Mesfin Kebede Kassa, **Lokeswar Patnaik**, and Lavish Kumar Singh. "Investigating the effect of MXene reinforcement on the mechanical and vibrational behaviour of honeycomb core sandwich composite structures." *Diamond and Related Materials* 149 (2024): 111583. <https://doi.org/10.1016/j.diamond.2024.111583>
38. Sahu, Ashutosh, N. Janardhan, Kiran Kumar Amireddy, Venkata Sushma Chinta, **Lokeswar Patnaik**, and Lavish K. Singh. "Aluminum-Based Amorphous Alloys and Composites Synthesized Via Powder Metallurgy Route: A Review." *Powder Metallurgy and Metal Ceramics* (2025): 1-16. <https://doi.org/10.1007/s11106-025-00493-1>

Book chapters (*Scopus indexed*):

1. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Computational Wear Analysis of Acetabular Cup for Various Daily Activities with Different Biomaterials" *Advances in Computational and Bio-Engineering*. Springer, Singapore. 2020. 119-128. https://doi.org/10.1007/978-3-030-46943-6_13
2. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Conceptualization of a Machining Fixture for Machining Cylinder Block on a Horizontal Machining Center." *Advances in Mechanical Engineering*. Springer, Singapore, 2020. 185-204. https://doi.org/10.1007/978-981-15-0124-1_18
3. Kumar Sunil, Saikat Ranjan Maity, **Lokeswar Patnaik**. "Application of Box-Behnken Method for Multi-response Optimization of Turning Parameters for DAC-10 Hot Work Tool Steel." *Recent Advances in Mechanical Engineering*. Springer, Singapore, 2020. 407-415. https://doi.org/10.1007/978-981-15-7711-6_42
4. Kumar, Sunil, and **Lokeswar Patnaik**. "Design and Simulation Study of HPDC for Automotive Parts—Pinion Housing Based on ADSTFEAN Simulation System." *Advances in Mechanical Engineering*. Springer, Singapore, 2020. 171-184. https://doi.org/10.1007/978-981-15-0124-1_17
5. Kumar Sunil, Saikat Ranjan Maity, **Lokeswar Patnaik**. "Effect of Surface Modification on the Nanomechanical and Wear Properties of AISI D3 Cold Work Tool Steel." *Recent Advances in Mechanical Engineering*. Springer, Singapore, 2021. https://link.springer.com/chapter/10.1007/978-981-19-3266-3_9
6. Kumar Sunil, Saikat Ranjan Maity, **Lokeswar Patnaik**. "Parametric Optimization of Tribological Process Parameters and Their Comparative Effect on Wear Responses of TiCrN Coated Cold Work Tool Steel " *Recent Advances in Mechanical Engineering*. Springer, Singapore, 2021. https://link.springer.com/chapter/10.1007/978-981-19-3266-3_8
7. Shafi, Syed Mohammad, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Comparative Study on the Structural Make-Up, Physical and Antibacterial Behavior of Nitride Based and Silicon Doped Coatings—A Brief Review." In *International Conference on Recent Advances in Mechanical Engineering Research and Development*, pp. 265-279. Singapore: Springer Nature Singapore, 2022. https://doi.org/10.1007/978-981-97-0900-7_22

Conference proceedings (Scopus indexed):

1. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "DLC/CrN or AlCrN/CrN Composite Films: The Better Candidate in Terms of Anti-Wear Performance and Lesser Ion Release in Hip Implant" *Materials Today: Proceedings* (2021): 1214-1220. <https://doi.org/10.1016/j.matpr.2020.11.242>
2. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Status of nickel free stainless steel in biomedical field: A review of last 10 years and what else can be done." *Materials Today: Proceedings* (2020): 638-644. <https://doi.org/10.1016/j.matpr.2019.12.205>
3. **Lokeswar Patnaik**, I. Saravanan, and Sunil Kumar. "Die casting parameters and simulations for crankcase of automobile using MAGMASoft." *Materials Today: Proceedings* 22 (2020): 563-571. <https://doi.org/10.1016/j.matpr.2019.08.208>
4. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "A Review on Slug Reversal During Punching and Blanking." *Materials Today: Proceedings* 18 (2019): 2745-2752. <https://doi.org/10.1016/j.matpr.2019.07.138>
5. **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Structural and Corrosion Study of a-C film with Ti, Cr and Ni Interlayers" AIP Conference Proceedings 2369, 020073 (2021). <https://doi.org/10.1063/5.0061168>
6. **Lokeswar Patnaik**, and Sunil Kumar. "Design and development of a special purpose machine for glass insertion in plastic frame for spill guard glass shelf assembly of commercial refrigerators." 2017 IEEE AMIAMS at National Institute of Technology Allahabad. [10.1109/AMIAMS.2017.8069203](https://doi.org/10.1109/AMIAMS.2017.8069203)
7. **Lokeswar Patnaik**, Sunil Kumar, and S. Deva Prasad. "A comparative study of chain clamping fixture with other clamping methods for gate valve body: cycle time and rigidity study." *MATEC Web of Conferences*. Vol. 77. EDP Sciences, 2016 in Kuala Lumpur, Malaysia. <https://doi.org/10.1051/mateconf/20167701033>
8. Ashvita, A. J., **Lokeswar Patnaik**, Saikat Ranjan Maity, and Sunil Kumar. "Comparative study on surface modification of heat-treated hot work tool steel using plasma nitriding and thin film deposition technique." *Materials Today: Proceedings* (2024). <https://doi.org/10.1016/j.matpr.2024.05.119>
9. Hareesh, Gurram, **Lokeswar Patnaik**, Shubrajit Bhaumik, Saikat Ranjan Maity, and Sunil Kumar. "Effect of wear parameters and their optimization for wear characteristics of TiCrN thin film using novel MCDM method." *Materials Today: Proceedings* (2023). <https://doi.org/10.1016/j.matpr.2023.03.758>
10. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "A Comparative Study on Wear Behaviors of Hot Work and Cold Work Tool Steel with Same Hardness under Dry Sliding Tribological Test" *Materials Today: Proceedings* (2021): 949-954. <https://doi.org/10.1016/j.matpr.2020.11.004>
11. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Effect of heat treatment and TiN coating on AISI O1 cold work tool steel." *Materials Today: Proceedings* (2020): 685-688. <https://doi.org/10.1016/j.matpr.2019.12.367>
12. Kumar, Sunil, I. Saravanan, and **Lokeswar Patnaik**. "Optimization of surface roughness and material removal rate in milling of AISI 1005 carbon steel using Taguchi approach." *Materials Today: Proceedings* 22 (2020): 654-658. <https://doi.org/10.1016/j.matpr.2019.09.039>
13. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Box-Behnken Analysis of Surface Modification Of Aluminium Alloy AA6061 Using Roller Burnishing." *Materials Today: Proceedings* 18 (2019): 4613-4621. <https://doi.org/10.1016/j.matpr.2019.07.445>
14. Kumar, Sunil, Saikat Ranjan Maity, and **Lokeswar Patnaik**. "Relation between mechanical and tribological properties of plasma nitrided and TiCrN coated YXR-7 tool steel" AIP Conference Proceedings 2369, 020033 (2021). <https://doi.org/10.1063/5.0061159>

Other journals and conference proceedings:

1. **Lokeswar Patnaik**, and Sunil Kumar. "Analysis and Design of Plastic Mold for Male Insulator of Solar Connector using Plastic Advisor 7.0." *CVR Journal of Science and Technology* 11 (2016): 51-56. [10.32377/cvrjst1109](https://doi.org/10.32377/cvrjst1109)
2. **Lokeswar Patnaik**, Saikat Ranjan Maity and Sunil Kumar. "Optimization of turning process parameters on surface roughness and tool wear rate of biomedical grade stainless steel 316LVM against AlCrN coated tool." 2019 COPEN at Indian Institute of Technology Indore.
3. **Lokeswar Patnaik**, and Sunil Kumar. "Conceptualization of Inspection Fixture for Front Axle Beam of a Truck." 2017 ICIE at National Institute of Technology Surat. Vol. 1 (2017): 721-725.
4. **Lokeswar Patnaik**, and Sunil Kumar. "Analysis and Design of Multi Impression Split Core, Finger Cam Operated Mold Brass Insert Connector Plug." 2017 FEAST at National Institute of Technology Calicut. Vol. 1 (2017): 185-191.

5. Kumar, Sunil, and **Lokeswar Patnaik**. "Design and Analysis of Four Stage Progressive Tool for House-wiring Wire Clip." *CVR Journal of Science and Technology* 13 (2017): 88-95.
<http://cvr.ac.in/ojs/index.php/cvracin/article/view/62>
6. Kumar, Sunil, and **Lokeswar Patnaik**. "Design and Analysis of Seven Stage Progressive Tool for Automobile Engine Starter Key." *CVR Journal of Science and Technology* 12 (2017): 48-52. [10.32377/cvrjst1208](https://doi.org/10.32377/cvrjst1208)
7. Kumar, Sunil, and **Lokeswar Patnaik**. "Effect of Roller Burnishing on Surface Roughness and Micro Hardness of AA6082 Alloy using Box-Behnken Design of Experiment." 2017 ICIE at *National Institute of Technology Surat*. Vol. 1 (2017): 701-706.
8. Kumar, Sunil, and **Lokeswar Patnaik**. "Switching from Three Simple Tool to Single Progressive Tool for Web-Brake Shoe Production: A Feasibility Study." 2017 FEAST at *National Institute of Technology Calicut*. Vol. 1 (2017): 162-166.

CONFERENCES ATTENDED

1. 12th International Conference on Materials Processing and Characterization (ICMPC 2021), *National Institute of Technical Teachers Training and Research*, Chandigarh, 6th to 9th October 2021.
2. 11th International Conference on Materials Processing and Characterization (ICMPC 2020), *Indian Institute of Technology Indore, Madhya Pradesh*, 15th to 17th December 2020.
3. National Conference on Physics and Chemistry of Materials (NCPCM 2020), Department of Physics, Govt. *Holkar Science College, Indore*, 14th to 16th December 2020.
4. 10th International Conference on Materials Processing and Characterization (ICMPC 2020), Department of Mechanical Engineering, *GLA University Mathura, Uttar Pradesh*, 21st to 23rd February 2020.
5. International Conference on Computational and Bio-engineering (CBE 2019), Department of Computer Science and Department of Bioscience and sericulture, *Sri Padmavati Mahila Visvavidyalayam*, 27th to 28th December 2019.
6. 11th International Conference on Precision, Meso, Micro & Nano Engineering (COPEN 2019), Department of Mechanical Engineering, *Indian Institute of Technology Indore*, 12th to 14th December 2019.
7. 9th International Conference on Material Processing and Characterization (ICMPC 2019), Department of Mechanical Engineering, *Gokaraju Rangaraju Institute of Engineering and Technology*, 8th to 10th March 2019.
8. International Conference on Recent Innovations and Developments in Mechanical Engineering (IC-RIDME 2018), Department of Mechanical Engineering, *National Institute of Technology Meghalaya*, 8th to 10th November 2018.
9. 4th International Conference on Industrial Engineering (ICIE), S.V. *National Institute of Technology Surat, Gujarat*, 21st to 23rd December 2017.
10. International Conference on Frontiers in Engineering, Applied Sciences and Technology (FEAST), *National Institute of Technology, Trichy*, 31st March to 1st April 2017.
11. IEEE International conference on Advances in mechanical, Industrial, Automation and Management Systems (AMIAMS), *Motilal Nehru National Institute of Technology Allahabad, UP*, 3rd to 5th February 2017.
12. 4th Asia Conference on Mechanical and Material Engineering (ACMME), Kuala Lumpur, Malaysia, 14th to 18th July, 2016.

OUTREACH ACTIVITIES

Fellowship, Awards & Certifications:

- **NPTEL certification** on "Product Design and Development" with ELITE score issued by IIT Roorkee.
- MHRD-Government of India. PhD fellowship (Teaching assistant) from Jul 2017- Mar 2022.
- Received 'Best paper award' in 12th International Conference on Materials Processing and Characterization held National Institute of Technical Teachers Training & Research, Chandigarh, 2021.
- Received 'Best paper award' in 11th International Conference on Materials Processing and Characterization held National Institute of Technology Indore, 2021.
- Cash reward and certificate of appreciation for publishing in "High Impact Factor Journals" for the period 2021-2022 & 2022- 2023 at Sathyabama Institute of Science and Technology (Deemed to be University), Chennai.

Editorial responsibility:

- **Editorial Board Member** in Scientific Reports Journal (Nature Portfolio).
- **Book editor** of "Thin Film Coatings: Fundamentals and Advancements" in CRC Press, Taylor and Francis.

- **Guest editor** for the issue titled “Advancements in Thin Film Coatings” in Frontier in Mechanical Engineering [Impact factor:2.3, Q2 journal]
- **Review editor** for Frontier in Mechanical Engineering [Impact factor:2.3, Q2 journal]

Reviewer services (Web of Science indexed):

- Diamond & Related Materials, *Elsevier*.
- Materials Chemistry and Physics, *Elsevier*.
- Journal of the Mechanical Behavior of Biomedical Materials, *Elsevier*.
- Surface and Coatings Technology, *Elsevier*.
- Silicon, *Springer*.
- Cybernetics and Systems, *Taylor & Francis*.
- Journal of the Brazilian Society of Mechanical Sciences and Engineering, *Springer*.
- Advances in Materials & Processing Technologies, *Taylor & Francis*.
- Proceedings of the iMechE, Part E: Journal of Process Mechanical Engineering, *Sage journals*.
- International Journal on Interactive Design and Manufacturing (IJDeM), *Springer*.
- International Journal of Cast Metal Research, *Taylor & Francis*.
- Journal of Bio- and Tribo-Corrosion, *Springer*.

Professional services:

- Member of Indian Ceramic Society (InCerS).
- Life member of Electron Microscope Society of India (EMSI).

WORKSHOP AND FACULTY DEVELOPMENT PROGRAMS ATTENDED

1. Malviya Mission Teacher Training Programme on “Nurturing Future Leadership” at IIT (ISM) Dhanbad from 21st to 25th Oct 2025.
2. AICTE recognized faculty development Program on “Additive manufacturing for biomedical applications” organized by National Institute of Technical Teachers Training & Research, Chandigarh from 25th to 29th April 2022.
3. “Computational Technologies” organized by Department of Mechanical Engineering, *National Institute of Technology Silchar* from 16th to 20th October 2018.
4. “New Product Development using System Engineering”, organized by *Indian Institute of Technology Kharagpur* from on 21st to 22nd October, 2016

PERSONAL INTERESTS

Educational outreach, mentoring, social work, short film making.

PERSONAL DOSSIER

Date of birth	: August 22, 1989
Place of birth	: Nowrangpur, Odisha, India
Gender	: Male
Father's name	: Late. Kameswar Patnaik
Mother's name	: Jayshree Patnaik
Marital status	: Married
Languages known	: English, Hindi, Odia, Telugu & Bengali
Address of correspondence	: Room No. 231, Faculty building, National Institute of Advanced Manufacturing Technology (Formerly NIFFT), Hatia, Ranchi- 834 003, Jharkhand, India

I hereby declare that all the information provided in this resume is true and accurate to the best of my knowledge.