

PERSONAL INFORMATION



SIDDESH KUMAR N M

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Sex: Male | Date of birth: 25/10/1993 |

Nationality: Indian

WORK EXPERIENCE

PES College of Engineering (PESCE), Mandya (Oct 2020- till dated)

Assistant Professor, working as an assistant professor in the Department of Mechanical Engineering

Indian Institute of Science (IISc), Bangalore (August 2019- May 2020)

Research Intern, worked in the Surface Interaction and Manufacturing lab (SIAM) as Research intern and carried out Masters project on the development of the aluminium metal matrix composite for the high wear application using solid lubricants, hexagonal boron nitride reinforced aluminium metal matrix composite.

Manipal Institute of Technology (MIT), Manipal (July 2018– July 2019)

Teaching Assistant, Organized classroom materials to help teachers prepare for daily instruction and activities. learning objectives through personalized and small group assistance to support classroom instruction.

EDUCATION AND TRAINING

2018–2020 Post Graduation: Manufacturing Engineering Technology (M Tech)

Manipal Academy of Higher Education, Manipal, India

Manipal Institute of Technology

CGPA 9.05

The curriculum included modules like Advance heat treatment, Material Science, Metallurgy, Tool design, Composite Materials, Non conventional machines, Robotics, Management & Entrepreneurship, Finite element analysis, and Materials technology.

2014–2017 Bachelor of Engineering (B.E) in Mechanical Engineering

Visvesvaraya Technological University, Belgaum (India)

The National Institute of Engineering

CGPA 8.15

The curriculum included modules like Basic and Applied Thermodynamics, Composite Materials, Strength of Materials, Mechanics of machines, Theory of machines, Robotics, Finite element analysis, Mechanical vibrations and Materials technology.

2011–2014 Diploma in Mechanical Engineering

Department of Technical Education, Karnataka (India)

Percentage 81.5%

Awarded as best student of the college and Secured 1st rank in the class

Scopus ID: 57208543461**Researcher ID: AAV-8090-2021****Orchid ID: 0000-0002-6905-0634****PATENTS**

1. **Indian Patent** “With Solar Water Boiling Systems, Increase Thermoelectric Capacity” Application No. **202141043279**, Published 05/11/2021.
2. **Indian Patent** “Construction of Cheap Verbalized Robotic Hand for Specific Adherence” Application No. **202141043085**, Published 05/11/2021.
3. **Indian Patent** “Extraction of Energy through Magnetic Bearings” Application No. **202241000664**, Published 21/01/2022.
4. **Indian Patent** “A Systematic Approach To Improve the Resin Property Through Ceramic Coating” Application No. **202141057194**, Published 04/2/20212

JOURNALS

1. **Siddesh Kumar, N. M.** (2022). Effect on wear property of aluminium metal matrix composite reinforced with different solid lubricants: a review. International Journal of System Assurance Engineering and Management. <https://doi.org/10.1007/s13198-022-01654-w> (**Q2, SCI Scopus indexed Journal**)
2. **Siddesh Kumar, N. M., Kerur, M. R. H., Khan, N., & Shashank, T. N.** (2022). Vibration analysis of healthy and faulty gear of parallel shaft drive system. AIP Conference Proceedings, 2463(May). <https://doi.org/10.1063/5.0080184> (**Q4 Scopus indexed Journal**)
3. **M. Sadashiva, N.M. Siddesh kumar, J. Monica, M.R. Srinivasa, N. Santhosh and S. Praveen Kumar.** 2021. The Effects of hardness and Impact strength Characteristics on Al Based Hybrid Composite FSW Joint, International Journal of Vehicle Structures & Systems (IJVSS) . 2022, Vol. 14 Issue1,p13-17.5p. <https://www.proquest.com/docview/2646985971?pq-origsite=gscholar&fromopenview=true> (**Q3 Scopus indexed Journal**)
4. **N.M. Siddesh Kumar, Dhruthi, G.K. Pramod, P. Samrat, M. Sadashiva,** A Critical Review on Heat Treatment of Aluminium Alloys, Materials Today: Proceedings,2022,ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2021.12.586> . (**Q4 Scopus indexed Journal**)
5. **N.M. Siddesh Kumar, M. Sadashiva, J. Monica, S. Praveen Kumar,**”Investigation on Corrosion Behaviour of Hybrid Aluminium Metal Matrix Composite Welded by Friction Stir Welding”, Materials Today: Proceedings,2022, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.01.362>. (**Q4 Scopus indexed Journal**)
6. **Siddesh Kumar N M, Chethan S, Talluri Nikhil and Dhruthi,** A Review on Friction Stir Processing Over Other Surface Modification Processing Techniques of Magnesium Alloys, Functional Composites and Structures © 2022 The Korean Society for Composite Materials and IOP Publishing Limited <https://doi.org/10.1088/2631-6331/ac49f3> . (**Q2, SCI Scopus indexed Journal**)
7. **Siddesh Kumar N. M, Shashank, T. N., Khan, N., Babu, K. J. M., & Prasad, S. L. A.** (2021). Modal and Harmonic Analysis of Spur Gear using FEA. Journal of Failure Analysis and Prevention. <https://doi.org/10.1007/s11668-021-01243-2>. (**Q3, SCI, Scopus indexed Journal**)

8. **Siddesh Kumar N. M**, T. N. Shashank, and Dhruthi, “Review—Different Ceramic Reinforcements In Aluminium Metal Matrix Composites,” *ECS J. Solid State Sci. Technol.*, vol. 10, no. 5, p. 053003, 2021, <https://doi.org/10.1149/2162-8777/ac0114> . (Q2, SCI Scopus, indexed Journal)
9. M. C Gowri Shankar, Y. M. Shivaprakash, N. M. **Siddesh Kumar. N. M.** A. Siddhartha, and A. Dutta, “Experimental investigation on silicon carbide reinforced Duralumin based MMC produced by cold compacting,” *Int. J. Mech. Prod. Eng. Res. Dev.*, vol. 9, no. 2, pp. 507–524, 2019, <https://doi.org/10.24247/ijmperdapr201949>. (Q3 Scopus indexed Journal)
10. Y. M. Shivaprakash, B. M. Gurumurthy, M. A. Siddhartha, **N. M. Siddesh Kumar**, and A. Dutta, “Studies on mild steel particulates reinforced duralumin composite fabricated through powder metallurgy route,” *Int. J. Mech. Prod. Eng. Res. Dev.*, vol. 9, no. 2, pp. 903–920, 2019, <https://doi.org/10.24247/ijmperdapr201988>. (Q3 Scopus indexed Journal)
11. **Siddesh Kumar N. M**, J. Monica, G. Karthikareddy, M. Sadashiva, and G. Bawge, “Comparitive Study on Methods used to Improve the Corrosion Resistance Property of Aluminium Alloys – A Review,” 2021, ISSN NO. 0038-111X, Vol 62 Issue 2, pp. 3196 – 3213, <http://solidstatetechnology.us/index.php/JSST/article/view/9935> .(US Journal)
12. Ramesh Kurbet, Karthikareddy G , Monica J , **Siddesh Kumar. N. M** , Avinash M, Dr. Rudreshi Addamani “A Review on Friction Stir Welding over other Welding Techniques of Aluminium Alloys”,2021, ISSN NO. 0038-111X Vol 62 Issue 2. pp. 3713-3729, <https://solidstatetechnology.us/index.php/JSST/article/view/10079>. (US Journal)

BOOK PUBLICATION

1. **Siddesh Kumar N M**, Sadashiva M, Monica J,” Inception to Non Traditional Machining” 20 Nov 2021 ISBN-10 – 1684874947 / isbn -13 – 978-1684874941,Notion Press Publication. <https://notionpress.com/read/inception-to-non-traditional-machining>
2. Siddesh Kumar N. M, M. Sadashiva, J. Monica “Speculative Testament of Corrosive Behaviour of Aluminium Composite Welded by FSW” Proceedings of Fourth International Conference on Inventive Material Science Application, 978-981-16-4320-0, 508587_1_En,(Chapter 36)<https://www.springerprofessional.de/en/speculative-testament-of-corrosive-behaviour-of-aluminiucompos/19774016> (Springer Nature)
3. Pavan K N, N L Muruli Krishna, Siddesh Kumar. N. M. “Elements of Mechanical Engineering”, 14 June 2021 ISBN-10 -1639977341 / ISBN- 13- 978-1639977345.Notion Press Publication.<https://notionpress.com/read/elements-of-mechanical-engineering-1352969>.

Accepted articles for publication

1. **Siddesh Kumar N M**; Shashank T N; Dheeraj N U; Dhruthi ; Amir Kordijazi; Pradeep K Rohatgi; Sadashiva M, “A Review – Different Coatings on Reinforcements in Aluminium Metal Matrix Composites,” *International Journal of Metal Casting*. (Q2 SCI Indexed)

ROLES & RESPONSIBILITY

AT INSTITUTION LEVEL:

- Coordinator - Innovation and entrepreneurship activities
- Convener at IIC-PESCE
- Coordinator - Atal Ranking of Institutions on Innovation Achievements (ARIIA)
- Coordinator - Institute Level Final Year Project Committee (IPCC)

INTERNATIONAL CONFERENCE

1. Presented a research article titled “A Critical Review on Heat Treatment of Aluminium Alloys” in The International Conference on Artificial Intelligence & Energy Systems. Dec 08 & 09 2021, St Joseph’s College of Engineering and Technology, Palai, Kerala, India
2. Presented a research article titled “Parametric Bases Influence of Silicon Carbide Particulates on Tensile and Hardness Characteristics of Graphitic Aluminium Copper Alloy” in the 4th International Conference on Advances in Mechanical Sciences(ICAMS-2021), Nov 26-27th, 2021, Vardhaman College of Engineering, Telangana, India
3. Presented a research article titled “Investigation on Corrosion Behavior of Hybrid Aluminium Metal Matrix Composite Welded by Friction Stir Welding” in the International Conference on Advances in Mechanical Engineering: Transcending Boundaries-2021 July 22-23rd, 2021, Mangalam College of Engineering, Ettumanoor, Kerala, India
4. Presented a research article titled “Vibration Analysis of Healthy and Faulty Gear of Parallel Shaft Drive System” in the International Virtual Conference “Recent Innovations in Science & Technology (RIST 2021)” conducted on 19th & 20th June 2021, organized by ERANAD Knowledge City Technical Campus, Malappuram, Kerala, India.
5. Presented a research article titled “Speculative Testament of Corrosive Behaviour of Aluminium Composite Welded by FSW” at 4th International Conference on Inventive Material Science Application (ICIMA 2021)
6. Presented a research paper titled “Effect on wear property of aluminium metal matrix composite reinforced with different solid lubricants – A review” at International conference on Maintenance and Intelligent Asset Management ICMIAM -2020
7. Presented a research paper titled “Effect on wear property of aluminium alloy with different reinforcement by friction stir processing: A review” at INDIA TRIB 2019 – 10th International Conference on Industrial Tribology, India

Presented papers in National level technical paper presentation competitions

1. ANKURA 17 on "Experimental design and fabrication of mixed type of solar dryer"
2. MECH I PRIX 2016 on "Conceptual design on Combination of two stroke and four stroke petrol engine in a single cylinder engine"
3. COGNIE SCIENCE 2016 on "Desalination of saltwater using renewable energy technologies and pressure energy"
4. Presented a research papers in state level technical paper presentation competition PATRIKA 17 on "Smart agricultural equipment"

ACCOMPLISHMENTS

Technology Integration

- Participated in technology training courses like coordinate measuring metrology and trained colleagues in new technology concepts and practices applicable for the classroom.

- Participated in Basic Course in Automobile Technology on Commercial vehicle at NIE Mysuru.
- Participated in Advance Course in Commercial Vehicle Technology on Commercial vehicle at NIE, Mysuru.
- Student member of ISHRAE-Indian Society of Heating, Refrigeration and AIR Conditioning Engineers at NIE, Mysuru.

SOFTWARE SKILLS

- **Software:** Microsoft office, Basics of C programming, Solid edge, CATIA, ANSYS, CREO, NX CAD.
- **Machines:** Lathe, 3D Printing, Wire cut EDM, Friction Stir Welding, Optical profile meter, Stir casting equipment.

ACTIVITIES

- Placement coordinator from the Department of Mechanical Engineering at NIE Mysore.
- Participated in the State Level Robot Wrestling Competition in which we designed and fabricated the robot.
- Volunteer for the COGNIESCIENCE A National Level Technical Paper Presentation at NIE Mysore.
- Got First class in tenth in the National Level Math Talent Quest Examination.

PROJECTS

- **EXPERIMENTAL ANALYSIS OF AL 6061 MMC REINFORCED WITH HEXAGONAL BORON NITRIDE PRODUCED THROUGH FRICTION STIR PROCESSING:** A surface modification technique for the improvement in the corrosion resistance and wear resistance by introducing the solid lubricants to the metal matrix composite. As part of the Masters curriculum the project is carried out at Indian Institute of Science.
- **EXPERIMENTAL DESIGN AND FABRICATION OF MIXED TYPE OF SOLAR DRYER:** Final year project as the part of academics under NIE CREST(Center for Renewable Energy and Sustainable Technologies), a solution for the drying process of agricultural products like nuts and grapes by using the solar energy taking into consideration of relative humidity, dew point temperature and density of air and some more thermodynamics parameters.
- **DESALINATION OF SALT WATER USING RENEWABLE ENERGY AND TECHNOLOGIES AND PRESSURE ENERGY:** Research has been studied on the current concept of desalination of salt water and built the new ideology by using Renewable Energy Technologies, taking into consideration of density and properties of the materials, A theoretical research work.
- **SMART AGRICULTURE EQUIPMENT:** A mini project as the part of academics in third year of under graduation course. Solution for the problem of the farmers by giving the statically data analysis approach, mechanical approach, computer science approach.