**Faculty Data**

**Faculty Name:** Dr. Mangal Singh Lodhi

Designation: Assistant Professor

Employee ID: 505180

Qualification: Ph. D.

Phone No.:

Email Id: mslodhi@sgsits.ac.in

1. **About Faculty**

 Dr. Mangal Singh Lodhi is currently working as an Assistant Professor in the Department of Mechanical Engineering at Shri G. S. Institute of Technology and Science Indore (MP), India, since August 2023. His research areas are Computational Fluid Dynamics, Convective Heat Transfer, Microfluidic Systems and Electronics Cooling. He has published 05 International Journal papers, 05 National/International Conferences and 01 book chapter.

1. **Educational Qualification**

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| --- | --- | --- | --- | --- |
| **S. No.** | **Degree** | **Specialization** | **Year** | **University/Board** |
| 1. | Ph.D. | Thermal Engineering | 2021 | PDPM Indian Institute of Information Technology, Design & Manufacturing, Jabalpur  |
| 2. | M.E. | Heat Power Engineering | 2013 | Jabalpur Engineering College, Jabalpur |
| 3. | B. E. | Mechanical Engineering | 2011 | Samrat Ashok Technological Institute, Vidisha |

1. **Work Experience**

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| --- | --- | --- | --- | --- |
| **S. No.** | **Designation** | **Department** | **Employer Name** | **Duration of Employment** |
|  | Assistant Professor  | Mechanical Engineering | Shri G. S. Institute of Technology & Science, Indore | 0.0 Year (03/08/2023–Present) |
| 2. | Assistant Professor  | Mechanical Engineering | Samrat Ashok Technological Institute, Vidisha | 2.0 Year (31/08/2021–02/08/2023) |
| 3. | Lecturer  | Mechanical Engineering | University Polytechnic, RGPV, Bhopal | 0.5 Year (03/02/2014–30/06/2014) |

1. **Research Detail**
2. **PhD Supervision**
3. **Publication**

**International Journal Papers:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Author(s)** | **Title of Paper** | **Name of Journal** | **Volume** | **Page** | **Year** |
| 1. | MS Lodhi, T Sheorey, G Dutta | Mitigation of fluid flow and thermal non-uniformity of nanofuids in microfluidic system applied to processor chip: A comparative analysis of mass versus thermal mitigation | Microsystem Technologies | 27 | 1877-1893 | 2021 |
| 2. | M S Lodhi, T Sheorey, G Dutta | Single-phase fluid flow and heat transfer characteristics of nanofluids in a circular microchannel: Development of flow and heat transfer correlation | IMechE Part C: J Mechanical Engineering Science | 234 | 3689-3708 | 2020 |
| 3. | A Arora, MS Lodhi, R C Gupta | Cooling performance of micro heat pipe used for mobile electronic devices | International Journal of Engineering Sciences and Research Technology | 7 | 331-341 | 2018 |
| 4. | MS Lodhi, RC Gupta | Experimental study of thermal performance of heat pipe usingCuO/water nanofluid | International Journal of Engineering Sciences and Research Technology | 2 | 2048-2054 | 2013 |
| 5. | MS Lodhi, RC Gupta | Experimental study of thermal performance of heat pipe usingnanofluid: A review | International Journal of Emerging Trends in Engineering & Development | 3 | 187-195 | 2013 |

**International Conferences Papers:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.**  | **Authors(s)** | **Title of Paper** | **Name of Conference** | **Page** | **Year** |
| 1. | DS Rawat,MS Lodhi,T Sheorey | Fluid flow and temperature distribution in microchannel heat sink with Z-type flow arrangement: An Experimental Investigation | 48th National conference on Fluid Mechanics and Fluid Power  | 55-58 | 2021 |
| 2. | MS Lodhi, T Sheorey, G Dutta  | Mitigation of fluid flow and thermal non-uniformity in MEMS devices: Numerical investigation | 25th National and 3rd International ISHMT-ASTFE Heat and Mass Transfer Conference  | 63-68 | 2019 |
| 3. | A Arora, RC Gupta, MS Lodhi  | Cooling performance analysis of loop heat pipe using nanofluid | 5th International Conference Computational Methods for Thermal problems  | 35-38 | 2018 |
| 4. | MS Lodhi, G Dutta,T Sheorey  | Cooling of MEMS devices using nanofuids  | 24th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference  | 1287-1294 | 2017 |
| 5. | MS Lodhi, G Dutta,T Sheorey | A numerical model to predict the feasibility of alumina nanofluids in a microchannel | 10th International Conference on Computational Heat, Mass and Momentum Transfer | - | 2017 |

**Book Chapters:**

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| --- | --- | --- | --- | --- |
| **S. No.** | **Title** | **Author’s Name** | **Publisher** | **Year of Publication** |
| 1. | Fluid Flow and Temperature Distribution in Microchannel Heat Sink with Z-Type Flow Arrangement: An Experimental Investigation | D. S. Rawat, M. S. Lodhi,T. Sheorey | Fluid Mechanics and Fluid Power, Lecture Notes in Mechanical Engineering, Springer, Singapore | 2023 |

1. **Project**
2. **Testing & Consultancy**.
3. **Other Details**

**International Conferences/Workshops/FDP Courses Organized:**

1. 38th M. P. Young Scientist & Science Festival (MPYSC-2023), Organized by SATI Vidisha(MP) and M. P. Council of Science and Technology Bhopal (MP) during March 17 - 19, 2023.
2. 1st International and 4th National Conference on Reliability and Safety Engineering (INCRS-2018), Organized by Discipline of Mechanical Engineering, PDPM IIITDM Jabalpur (MP) during February 26 - 28, 2018.
3. International Conference on Physics and Mechanics of New Materials and Their Applications (PHENMA-2017), Organized by Discipline of Mechanical Engineering, PDPM IIITDM Jabalpur (MP) during October 14 - 16, 2017.
4. Workshop on Innovations and the Society Organized by Jabalpur Academia Initiative (JAI), PDPM IIITDM Jabalpur (MP) during December 5 - 6, 2016.
5. AICTE Sponsored STC on Numerical and Analytical Techniques to Undertake Research in Engineering (NATURE) Organized by Discipline of Mechanical Engineering, PDPM IIITDM Jabalpur (MP) during September 1 - 5, 2017.

**International Conferences/Workshops/FDP Courses Participated:**

1. 25th National and 3rd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTC-2019), Organized by Department of Mechanical and Industrial Engineering, IIT Roorkee (UK) during December 28 - 31, 2019.
2. 24th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTC-2017), Organized by Department of Mechanical Engineering, BITS-Pilani Hyderabad Campus Hyderabad (TS) during December 27 - 30, 2017.
3. 2nd One-Week Workshop on Technical Writing using LaTeX, Organized by School of Electronics Engineering, VIT-AP University, Amaravati (AP) during April 7 - 13, 2022.
4. Symposium on Engineer your Research for Start-up, Organized by CAD-CAM Centre, Department of Mechanical Engineering, VNIT Nagpur (MH) during March 1 - 5, 2021.
5. Design Workshop (DEW-2017) on Industrial Internet and Industry 4.0 Organized by PDPM IIITDM Jabalpur (MP) during December 9-11, 2017.
6. DST-SERB Sponsored STTP on Battery Thermal Management Systems: Present and Future, Organized by Department of Mechanical Engineering, SVNIT Surat (GJ) during June 12 - 16, 2023.
7. ATAL FDP on Smart manufacturing tools and Techniques for industry 4.0, Organized by Department of Mechanical Engineering, OIST Bhopal (MP) during November 14 - 24, 2022.
8. ATAL FDP on An Essence of Multiphase Flow: Challenges and Futuristic Technology, Organized by Department of Mechanical Engineering, SVNIT Surat (GJ) during December 20 - 24, 2021.
9. ATAL FDP on Cutting-edge multidisciplinary research in the field of fluids, Organized by Department of Mechanical Engineering, NIT Rourkela (RRK) during October 11 - 15, 2021.
10. ATAL FDP on Additive Manufacturing: Programming, Operation & Applications, Organized by Department of Industrial & Production Engineering, Dr. BR Ambedkar NIT Jalandhar (PB) during September 20 - 24, 2021.
11. FDP on Ethics & Values in Technical Education in Context of National Education Policy-2020, Organized by Centre for Value Based Education, DTU Delhi (DL) during April 15 - 19, 2021.
12. TEQIP-III Sponsored STC on Computational and Experimental Techniques in Heat Transfer and Fluid Flows, Organized by Department of Mechanical Engineering, NIT Uttarakhand (UK) during March 1 - 5, 2021.
13. ATAL FDP on 3D Printing & Design, Organized by Department of Mechanical Engineering, IIT Ropar (PB) during February 1 - 5, 2021.
14. FDP on LaTeX, Organized by School of Computer Science and IT, DAVV, Indore (MP) in association with Spoken Tutorial Project, IIT Bombay (MH) during May 30 - 31, 2020.
15. GIAN Course on Thermal Management of Electronics, Organized by Department of Mechanical Engineering, NIT Warangal (TS) during October 30 - November 3, 2017.

**Awards and Recognitions**

1. Recipient of Certificate of Fellowship for Training of Young Scientist during 34th M.P. Young Scientist Congress - 2019 by M.P. Council of Science and Technology, Bhopal, Government of Madhya Pradesh.
2. Recipient of Doctoral Fellowship from Ministry of Human Resources Department, Govt. of India during 2014-2019.
3. Recipient of Graduate Aptitude Test in Engineering (GATE) - 2011 Scorecard with All India Rank 15171 out of 81175 in Mechanical Engineering.