

Faculty Name: Dr. Amit Raj

Designation : Assistant Professor

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**BIO**

Dr. Amit Raj is currently working as an Assistant Professor in the Mechanical Engineering Department of SITRC, Nasik, India. He got his Bachelor (B. Tech) in Mechanical Engineering from Lovely Professional University, Jalandhar, Punjab in 2014. He has been awarded with the Doctor of Philosophy (Ph.D.) in Mechanical Engineering from Indian Institute of Technology Guwahati, India in the specialization of Manufacturing Engineering in December 2020. After Ph.D., he has worked as a Post-Doctoral student in an Indo-Russian Project (funded by DST, India and RFBR, Russia) for about 1.5 years at IIT Guwahati in the Department of Mechanical Engineering. During his Ph.D. and Postdoctoral work, he has published a total of 2 Patents, 7 SCIE/Scopus Journals, 5 Conference papers and 3 Book chapters.

Qualification:

1. B. Tech (Mechanical Engineering, Lovely Professional University)
2. Ph.D. (Mechanical Engineering, IIT Guwahati)

Paper Publications details:

1. International Journals: **07**
2. International Conferences: **05**
3. Patents: **02**
4. Book chapters: **03**

Research work:

- Worked as a Post-Doc in an Indo-Russian project entitled “**Experimental and numerical research on contact friction in the process of plastic deformation by means of compression with torsion**” under the supervision of Prof. Uday S. Dixit (IIT Guwahati) and Prof. Pavel A. Petrov (Moscow Polytechnic University, Russia) funded by DST (India) and RFBR (Russia) at Department of Mechanical Engineering, IIT Guwahati, Assam, India.
- Actively participated in a DST funded project entitled “**Design and Development of proper bonding mechanism for individual AAC block units in wall system of a structure**” under the supervision of principal investigators Dr. U. S. Dixit and Dr. A. Ch. Borsaikia at IIT Guwahati, Assam, India.
- Actively participated in the project entitled “**Design and Development of Rider Operable and Retractable Stabilizer Wheels System in Bicycle**” under the supervision of project investigators Dr. U. S. Dixit and Mr. H.P Jeevaji at IIT Guwahati, Assam, India.

Research interest:

- Finite Element Modelling of Metal Forming Process.
- Incremental Sheet Forming
- Additive Manufacturing of Concrete Structure
- Stress-strain analysis using Finite Element Method
- Inverse analysis
- Design and Manufacturing of Light-weight Concrete
- Concrete Plasticity

Experience:

1. Teaching experience: 01
2. Research experience : 07

Subjects:

- Modelling of Metal Forming Process
- Sheet Metal Forming, Additive Manufacturing
- Automation in Manufacturing
- Manufacturing Technology
- Basic and applied thermodynamic
- Material science and Metallurgy
- Mechanical behavior of Material
- Mechanics of Solid