



# Dr. Nitish Bhardwaj

Ph.D. - Mechanical Engineering, IIT Guwahati

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## ACADEMIC PROFILE:

Qualification	Board/Institution	Year of Passing	Percentage/CGPA
PhD	Indian Institute of Technology Guwahati	2024	N/A
M. Tech	Indian Institute of Technology Roorkee	2015	82.8 %
B. Tech	Tezpur Central University, Assam	2013	84.7 %
AISSCE (XII)	CBSE, Army Public School Narengi	2009	87.3 %
AISSE (X)	CBSE, Maria's Public School Narengi	2007	92.4%

## EXPERIENCE:

Organization	Position	Duration	Time Period
Indian Institute of Technology (IIT) Guwahati	Teaching Assistant	5 years	Aug, 2017 – July, 2022
National Institute of Technology (NIT) Silchar	Assistant Professor	1 year	Aug, 2016 – July, 2017
Indian Institute of Technology (IIT) Roorkee	Teaching Assistant	2 years	Aug, 2013 – July, 2015

## RESEARCH PUBLICATIONS:

### *Journal Publication:*

1. Improvement of production efficiency and optimization of exit-hole-free FSSW joints using adhesive-bonded consumable pin and lubrication. **International Journal of Advanced Manufacturing Technology** (2024). <https://doi.org/10.1007/s00170-024-14295-z>
2. Experimental and Numerical Investigation on the Effect of Rotational Speed on Exit-Hole Free Friction Stir Spot Welding with Consumable Pin. **Journal of Material Forming** 16 Article 45. (2023)
3. Exit-Hole-Free Friction Stir Spot Welding of Aluminum Alloy Sheets Using a Consumable Pin. **Journal of Materials Engineering and Performance**. (2022) <https://doi.org/10.1007/s11665-022-07253-x>
4. An Inverse Approach Towards Determination of Friction in Friction Stir Spot Welding. **Procedia Manufacturing** 47: 839-846, (2020)
5. Recent Developments in Friction Stir Welding and Resulting Industrial Practices, **Advances in Materials and Processing Technologies** 5, no. 3: 461-496, (2019)
6. Friction in Micromanufacturing, **Journal of Micromanufacturing** 1, no. 1: 76-91, (2018)
7. Artificial Neural Network Modeling of the Effect of Cutting Conditions on Cutting Force Components during Orthogonal Turning, **International Journal of Current Engineering and Technology**: 127-130, Special Issue-2 (2014)

### *Book Chapters:*

8. Bhardwaj, N., Ganesh Narayanan, R., & Dixit, U. S. (2021). Modeling of Friction Stir Welding Processes. **Welding Technology**, Springer, Cham, 91-130.
9. Bhardwaj N., Ganesh Narayanan R., Dixit U.S. (2020) Refilling of Pinhole in Friction Stir Spot Welding Using Waste Chips. In: Shunmugam M., Kanthababu M. (Eds) **Advances in Additive Manufacturing and Joining**, Lecture Notes on Multidisciplinary Industrial Engineering. Springer, Singapore
10. Bhardwaj N., Ganesh Narayanan R., Dixit U.S. (2020) Effect of Lubrication on Energy Requirement and Joint Properties during FSW of AA5052-H32 Aluminium Alloy. In: Vishal S. Sharma et al. (Eds) **Manufacturing Engineering: Lecture Notes on Multidisciplinary Industrial Engineering**, Springer, Singapore

### ***Conference Publication:***

1. An inverse approach towards determination of friction in friction stir spot welding. **23rd International Conference on Material Forming (ESAFORM 2020)**. BTU, Cottbus, Germany, May 04-06 (2020)
2. Effect of Lubrication on Energy Requirement and Joint Properties during FSW of AA5052-H32 Aluminium Alloy. *Proceedings of 6th International Conference on Production and Industrial Engineering (CPIE)*, NIT Jalandhar, Punjab, India, p. 38-41 May 02-06 (2019)
3. Refilling of Pinhole in Friction Stir Spot Welding Using Waste Chips. *Proceedings of 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR)*, Anna University, Chennai, India, p.133-138 December 14-19 (2018)
4. A Computational Modeling of Surface Roughness as a function of the Cutting Conditions during Orthogonal Turning, *Proceedings of National Conference on Manufacturing: Vision for Future (MVF2013)*, IIT Guwahati, India, p.133-138 October 12-13 (2013)
5. Artificial Neural Network Modeling of the Effect of Cutting Conditions on Cutting Force Components during Orthogonal Turning, *Proceedings of International Conference on Advances in Mechanical Sciences – 2014*, Vardhaman College Of Engineering, Shamshabad-501218, Hyderabad, India, p.139 – 143 January 9-11 (2014)

### **SOFTWARE AND PROGRAMMING LANGUAGES:**

DEFORM-3D, ABAQUS, MATLAB, AutoCAD, SolidWorks, CATIA, MS Office tools, C, C++

### **ACHIEVEMENTS:**

1. MHRD scholarship for Post-graduation through GATE 2013
2. Winner of Paper Presentation on *Automotive Advances in Hybrid Vehicles and Alternatives to Conventional Internal Combustion Engines* organized by Tezpur University SEAINDIA Collegiate Club.
3. Completed course on Basic French in Dept. of EFL, Tezpur University.
4. Successfully completed International Workshop on Advances in Automotive Technology (IWAAT 2010) held at Bengal Engineering and Science University, Kolkata in association with SAEINDIA and collaboration with University of Windsor, Canada.
5. Successfully completed a workshop on Automation and Engine Design by METAWING
6. Scholarship from Brahma Samaj for academic proficiency.
7. Awarded Distinction by University of New South Wales in 2004 for International Assessment for Indian Schools (Mathematics)

### **OTHER INFORMATION:**

1. Nodal Coordinator for NAAC visit at NIT Silchar, 2016
2. Publicity Coordinator of Techxetra 2011, the annual national level technical festival of Tezpur University.
3. Event Coordinator of "NIRMAAN", an event in Techxetra 2011, the annual national level technical festival of Tezpur University.
4. Member of Society of Automotive Engineers India (SAE-India)
5. Member of Advisory committee of Tezpur University Society of Automotive Engineers India Collegiate Club (2012-2013)
6. Participated in social work as a member of National Service Scheme (NSS).