

## Dr. Siddharth Tamang

### CURRICULUM VITAE

Assistant Professor Grade -II

Mechanical Engineering Department,  
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#### Education

Qualification	Year	Institute	Board
PhD - Mechanical Engineering	2014-2020	Indian Institute of Technology Delhi, New Delhi, India	Indian Institute of Technology Delhi
M.Tech - Mechanical Engineering	2012-2014	Indian Institute of Technology (ISM) Dhanbad, Jharkhand, India	Indian Institute of Technology (ISM) Dhanbad
B.Tech - Mechanical Engineering	2008-2012	Haldia Institute of Technology, Haldia, West Bengal, India	MAKAUT (Formerly WBUT)
Class XII	2008	St. Augustine's School, Kalimpong, West Bengal, India	CISCE, New Delhi
Class X	2006		

#### Work Experience

- **Assistant Professor Grade II** at Mechanical Engineering Department, IIT Kharagpur. **26<sup>th</sup> July 2021 to Present**
- **Temporary Faculty** at Department of Mechanical Engineering, IEST Shibpur, West Bengal. **16<sup>th</sup> Nov 2020 to 25<sup>th</sup> July 2021**
- **IRD Early-Doc Fellow**, Industrial Research & Development Unit, IIT Delhi. **20<sup>th</sup> July 2020 to 19<sup>th</sup> Oct 2020**
- **Research Associate** at Foundation for Innovation and Technology Transfer (FITT) - IIT Delhi, on a project titled "Process development of welded (Flash Butt Welded) joints" for ARGL Pvt Ltd. **1<sup>st</sup> July 2019 to 30<sup>th</sup> March 2020**

#### Research Experience

- ◆ **Doctoral Research** on "Joining of Dissimilar Materials through Microwave Hybrid Heating" under the guidance of **Prof. S. Aravindan**. (27<sup>th</sup> July 2014 to 11<sup>th</sup> June 2020)

- ◆ **M. Tech** Dissertation on “**Prediction of Output Parameters of Submerged Arc Welding by Response Surface Methodology**” under the guidance of Dr. N. K. Singh. (July 2013 - May 2014)
- ◆ **B. Tech** Final Year Dissertation on “**Selection of business class cars using MCDM- a sustainable approach**” under the guidance of Dr. Bikash Byapari. (Jan 2012 - June 2012)

## Journals

- **S. Tamang** and S. Aravindan “Joining of dissimilar metals by microwave hybrid heating: 3D numerical simulation and experiment”, International Journal of Thermal Sciences. Volume 172, Part A, 107281, Feb 2022, <https://doi.org/10.1016/j.ijthermalsci.2021.107281> Impact Factor 3.744
- **S. Tamang** and S. Aravindan “Effect of susceptors on joining of AA6061-T6 to AZ31B by microwave hybrid heating” Journal of Materials Engineering and Performance. Journal of Materials Engineering and Performance, Sep 2021 <https://doi.org/10.1007/s11665-021-06220-2> Impact Factor 1.819
- **S. Tamang** and S. Aravindan “3D numerical modelling of microwave heating of SiC susceptor”, Applied Thermal Engineering, Vol 162, 114250, Nov 2019. <https://doi.org/10.1016/j.applthermaleng.2019.114250> Impact Factor 5.295
- **S. Tamang** and S. Aravindan “Brazing of cBN to WC-Co by Ag-Cu-In-Ti alloy through Microwave Hybrid Heating for Cutting Tool Application”, Materials Letters, Vol 254, pp 145-148, Nov 2019. <https://doi.org/10.1016/j.matlet.2019.07.041> Impact Factor 3.423
- **S. Tamang** and S. Aravindan “An Investigation on Joining of Al6061-T6 to AZ31B by Microwave Hybrid Heating using Active Braze Alloy as an Interlayer”, Journal of Manufacturing Processes, Vol 28, Part1, pp 94-100, Aug 2017. <https://doi.org/10.1016/j.jmapro.2017.05.027> Impact Factor 5.01
- **S. Tamang**, N. Kumar and S. Aravindan “Effect of Gold Nanodots in Microwave Brazing: A Novel Approach to Join Ti6Al4V to MACOR<sup>®</sup>”, Key Engineering Materials, Vol. 821, pp 222-228, Sep 2019. <https://doi.org/10.4028/www.scientific.net/KEM.821.222>
- **S. Tamang**, P. Potaliya and S. Aravindan “Corrosion behaviour of magnesium–yttria composite sintered by microwave hybrid heating”, Materials Research Innovations, Vol22, Issue 7, pp 422-426, June 2017. <https://doi.org/10.1080/14328917.2017.1337297>
- **S. Tamang**, A. Pandey and S. Aravindan “Dissimilar Joining of stainless steel (SS304) and Inconel 718”, ISME Journal of Manufacturing Sciences, Vol. 09, No. 01, pp. 13-19, June 2020. DOI:123.10.32020

- A. Kar, G. Balaji, **S. Tamang** and S. Aravindan “Mechanical characterization of gas tungsten arc welded super duplex stainless steel joint”, Materials Research Innovations, Vol 22, Issue 1, pp 43-49, Dec 2016. <https://doi.org/10.1080/14328917.2016.1265263>

## Conferences

- **S. Tamang** and S. Aravindan “Joining of Cu to SS304 by microwave hybrid heating with Ni as interlayer” Proceeding of the 17th International Conference on Microwave and High Frequency Heating AMPERE 2019, Valencia, Spain, September 9-12, 2019, Editorial Universitat Politècnica de València, pp 98-104. <http://dx.doi.org/10.4995/Ampere2019.2019.9813>
- **S. Tamang** and S. Aravindan “Microstructural investigation on joining of Al6061-T6 to AZ31B using nickel interlayer by microwave hybrid heating”, Proceeding of the International Symposium on Joining Of Materials (SOJOM 2018), Tiruchirappalli, April 27-28, 2018.
- **S. Tamang** and S. Aravindan “Joining of dissimilar materials”, Proceeding of the International Welding Symposium (IWS 2K16), Bombay, October 5- 7, 2016.
- S. K. Nath, N. Singh, **S. Tamang** and S. Aravindan “Indirect Electric Arc and Modified Indirect Electric Arc Metal Inert Gas Welding on Mild Steel”, Proceeding of the International Conference on Advanced Production and Industrial Engineering, New Delhi, December 9-10, 2016.
- **S. Tamang**, and N.K. Singh “Optimization of output parameter of Submerged Arc Welding by Response Surface Methodology”, Proceedings of the 17th ISME Conference, New Delhi, Oct 3-4, 2015.

## Teaching Experience

- ◆ Casting, Forming and Welding, ME31007, Mechanical Engineering Department, IIT Kharagpur.
- ◆ Workshop Process-II, ME29701, Mechanical Engineering Department, IIT Kharagpur.
- ◆ Casting, Forming and Welding Lab, ME39007, Mechanical Engineering Department, IIT Kharagpur.
- ◆ Manufacturing Technology ME 604, Department of Mechanical Engineering, IEST Shibpur.
- ◆ Machine Shop Practice, ME 2272, Department of Mechanical Engineering, IEST Shibpur.
- ◆ CAD Modelling and Simulation Laboratory, ME 2273, Department of Mechanical Engineering, IEST Shibpur.

### Invited Talks

- ◆ “Microwave joining of dissimilar materials” at SYNERGY 2020 organized by IndiaWelds Nov 20-21, 2020, Virtual Platform.
- ◆ “Joining of material using microwave hybrid heating and simulation” at Quality Improvement Program organized by TEQIP, at IIT Delhi, 10<sup>th</sup> Dec 2019.
- ◆ “Joining and Simulation of Materials through Microwave Hybrid Heating” at IWS North Zone seminar at HMR Institute of Technology and Management, Hamidpur, New Delhi, 4<sup>th</sup> Nov 2019.

### Training and Courses Undergone

- ◆ Auto Cad 2009 from **INDO DANISH TOOL ROOM-JAMSHEDPUR** 5<sup>th</sup> Jan 2010 to 21<sup>st</sup> Jan 2010 at Jamshedpur.
- ◆ “Conventional & Non-Conventional Machining Techniques” **CIPET** 7<sup>th</sup> June and 26<sup>th</sup> July 2009 at Haldia, West Bengal.
- ◆ “An overview on Teesta Low Dam Project-Stage III” at **Teesta Low Dam Project-III, NHPC** 15<sup>th</sup> June 2011 to 14<sup>th</sup> July 2011.
- ◆ “Machine Shop, Fabrication Shop and other manufacturing activities” from 20<sup>th</sup> May 2013 to 1<sup>st</sup> July 2013 at **Bharat Westfalia, Ranchi**.
- ◆ **COMSOL Multiphysics RF and Wave Optics Training Course** held on 12<sup>th</sup> Feb, 2016 at Mumbai.

### Grants and Honors

- ◆ Awarded fellowship during M. Tech, from MHRD, Government of India, July 2012- May 2014
- ◆ Awarded fellowship during PhD, from MHRD, Government of India, July 2014- July 2019
- ◆ Awarded the **Best Paper** at the International Symposium on Joining of Materials (SOJOM 2018), on the theme ‘Emerging Joining Technologies’ held at Tiruchirappalli, India on April 27-28, 2018
- ◆ Received International Travel Support (ITS) from SERB, Government of India, 9<sup>th</sup> Sep to 12<sup>th</sup> Sep, 2019, File Number: ITS/2019/003642.

### Membership of Organization

- ◆ Life member of Indian Welding Society (IWS)-L01918
- ◆ Full member of The Minerals, Metals & Materials Society (TMS)- 560507