

# DHANESH G. MOHAN

Phone: +91 78 450 450 95  
 dhanesh@sdu.edu.cn, dhaneshgm@gmail.com  
 www.dhaneshgmohan.com

Institute of Materials Joining  
 Shandong University  
 17923 Jingshi Road  
 Jinan – 250061, China

## PROFESSIONAL SUMMARY

Motivated mechanical engineering researcher successfully conducted considerable independent research in Additive Manufacturing, Materials Science, Friction Stir Welding, Hybrid Welding, and Corrosion and brought eleven years of experience in mechanical engineering teaching and research environments and eagerness to advance knowledge through forward-thinking investigations.

## SKILLS

- Additive Manufacturing
- Solid-State Welding
- Hybrid Welding Technologies
- Surface Coating
- Scanning Electron Microscope (SEM)
- Energy Dispersive X-ray Spectroscopy (EDAX)
- Transmission Electron Microscopy (TEM)
- X-Ray Diffraction (XRD)
- Corrosion Engineering
- Design Expert
- Materials & Metallurgy
- Optimization

## EDUCATION

<b>Postdoc</b>	Shandong University, Institute of Materials Joining, Jinan, China. <i>Funding Agency:</i> National Natural Science Foundation of China (NSFC) <i>Areas of Research:</i> <ol style="list-style-type: none"> <li>1. Extrusion control for high-quality printing on Big Area Additive Manufacturing (BAAM) systems</li> <li>2. Fabrication of Steel and Aluminium joints using Ultrasonic Vibration Assisted Friction Stir Welding (UVaFSW) and Laser-Assisted Friction Stir Welding (LaFSW) method.</li> </ol> <i>Advisor:</i> Prof. Dr. ChuanSong Wu	2019 – 2021
<b>Ph.D</b>	Faculty of Mechanical Engineering Government College of Technology, Coimbatore, Affiliated to Anna University, Chennai <i>Funding Agency:</i> 1. University Grants Commission (UGC) 2. Technical Education Quality Improvement Programme – II <i>Thesis:</i> Effect of Induction Assisted Friction Stir Welding on AISI 410 Stainless Steel <i>Advisor:</i> Prof. Dr. S. Gopi	2014 – 2019 8.91 (CGPA)
<b>ME</b>	Faculty of Manufacturing Engineering Government College of Technology, Coimbatore, Affiliated to Anna University, Chennai <i>Funding Agency:</i> 1. Technical Education Quality Improvement Programme – I	2012 – 2014 8.21 (CGPA)
<b>B.Tech</b>	Faculty of Mechanical Engineering Chaudhary Charan Singh University, Meerut, Uttar Pradesh	2004 – 2008 72.03 %
<b>Class XII</b>	Computer Science Government Eravankara VHHS, Mavelikara, Alappuzha State Board of Kerala	2002 – 2004 76.17 %
<b>Class X</b>	B.H.HS.S. Mavelikara, Alappuzha State Board of Kerala	2002 67.17 %

**WORKING HISTORY**

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**Postdoctoral Research Fellow****2019 to 2021***Shandong University, Jinan, Shandong, China*

- Researching Extrusion control for high-quality printing on Big Area Additive Manufacturing systems examines and understands the multi-resolution printing, extrusion diversion, and feed-forward extruder control.
- Laser-Assisted Friction Stir Welding, Ultrasonic Vibration Assisted FSW in studying and understanding the mechanical, metallurgical, corrosive, and microstructure properties of these methods on metals like steels and magnesium alloys, and aluminium alloys.
- Maintained accurate records of research findings and provided statistical analysis of data results.
- Leveraged interpersonal and communication skills to mentor Ph.D, graduate, and undergraduate students.

**UGC - Senior Research Fellow (Production Engineering)****2014 to 2019***Government College of Technology, Coimbatore, Tamilnadu, India*

- Planned, modified, and executed solid-state welding research techniques, procedures, and tests.
- Wrote and edited data collection forms and questionnaires.
- Encouraged creative thinking and motivated students by addressing individual strengths and weaknesses based on standardized testing results.

**TEQIP- Teaching Assistant (Mechanical Engineering)****2012 to 2014***Government College of Technology, Coimbatore, Tamilnadu, India*

- Deepened student understanding of engineering principles by utilizing group activities and special projects.
- Built and used diverse techniques to assist students with grasping materials and understanding concepts.

**Mechanical Engineering Lecturer****2010 to 2012***Sree Buddha College of Engineering, Pattoor, Alappuzha, Kerala*

- Deepened student understanding of engineering principles by utilizing group activities and special projects.
- Developed curricula, lessons, and test plans to maximize student success.

**Engineering Trainee****2008 to 2009***Cochin Ship Yard, Ernakulam, Kerala*

- Assisted with engineering calculations, design drawings, preliminary cost estimates, and field visits to observe construction progress.

**PATENTS**

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1. Application number 201641036726 titled “Construction of Flexible Focused Microwave Welding” was filed dated September 24, 2020.
2. Application number: 202121033368 titled “The Anaerobic Digestion of Fruit and Vegetable Process by Water Pretreatment”, Indian patent filed on July 25, 2021.
3. Application number: 12021050335 titled “The Anaerobic Digestion of Fruit and Vegetable Process by Water Pretreatment,” Philippines patent filed on July 25, 2021.

**LICENSE**

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1. Licensed Professional Engineer (**P.E**)

**CERTIFICATIONS**

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1. Certified Chartered Engineer (**C.Eng**)
2. Certified Peer Reviewer – *Elsevier*
3. Principles and Patterns of Pedagogy - *University of Illinois at Urbana-Champaign*

## BOOKS

1. Additive Manufacturing for High Entropy Alloys – *Under consideration to publish by Springer Nature* (ISBN: 978-1-032227-65-8)
2. Advances in Hybrid Friction Stir Welding - *Under consideration to publish by CRC Press (Taylor & Francis)* (ISSN: 1860-5168)

## PUBLICATIONS

1. **Dhanesh G. Mohan\***, Arun Arjunan, 'Dynamic Extruder Control for High-Quality Polymer Printing,' Advanced Composite Materials, Taylor and Francis (Accepted to Publish) 2022.
2. Ahmad Aminzadeh, Sasan Sattarpanah Karganroudi, Mohammad Saleh Meiabadi, **Dhanesh G. Mohan**, Kadiata Ba, 'A Survey on Process Monitoring Using Computer-Aided Inspection in Laser-Welded Blanks of Light Metals Based on Digital Twins' Concept', Quantum Beam Science, MDPI, Vol. 6, no. 2: 19, 2022. [[Link](#)].
3. **Dhanesh G. Mohan\***, Sasan Sattarpanah Karganroudi, 'Additive manufacturing of ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> ceramic components by selective laser melting', Progress in Additive Manufacturing, Springer (Accepted to Publish) 2022.
4. Sasan Sattarpanah Karganroudi, **Dhanesh G. Mohan\***, Robert E. Przekop, 'A review on laser deposition-additive manufacturing of ceramics and ceramic reinforced metal matrix composites,' Additive Manufacturing, Elsevier (Accepted to Publish) 2022.
5. **Dhanesh G. Mohan\***, Tomków J, 'Additive manufacturing of nickel-based superalloy Inconel 718 by selective electron beam melting: Processing window and microstructure', Materials Science and Engineering: A, Elsevier (Accepted to Publish) 2022.
6. **Dhanesh G Mohan\***, C S Wu, Sasan Sattarpanah Karganroudi, Robert E. Przekop, 'Additive Manufacturing for Space Applications: A Review, Journal of Materials Engineering and Performance, Springer (Accepted to Publish) (Invited Review), 2022.
7. Ahmad Aminzadeh, Sasan Sattarpanah Karganroudi, Mohammad Saleh Meiabadi, **Dhanesh G Mohan**, Kadiata Ba, 'Process monitoring using computer-aided inspection in laser-welded blanks of light metals based on digital twins', Quantum Beam Science, MDPI, (Accepted to Publish) (Invited Review), 2022.
8. **Dhanesh G. Mohan\***, Tomków J, Sasan Sattarpanah Karganroudi, 'Laser Welding of UNS S33207 Hyper Duplex Stainless Steel to 6061 Aluminium Alloy Using High Entropy Alloy as a Filler Material', Applied Sciences, MDPI MDPI, Vol. 12, no. 6: 2849, 2022. [[Link](#)]
9. **Dhanesh G. Mohan\***, S Gopi, Jacek Tomków, Shabbir Memon, 'Assessment of Corrosive Behaviour and Microstructure Characterization of Hybrid Friction Stir Welded Martensitic Stainless Steel,' Advances in Materials Science, Sciendo, De Gruyter, Vol. 21, Issue 4(70), 2021. [[Link](#)]
10. **Dhanesh G. Mohan**, Chuansong WU, 'A Review on Friction Stir Welding of Steels,' Chinese Journal of Mechanical Engineering, Springer, (Invited Review), Vol. 34, Issue 137, 2021. [[Link](#)].
11. Subramanian K, Murugesan S, **Dhanesh G. Mohan\***, Tomków J, 'Study on Dry Sliding Wear and Friction Behaviour of Al<sub>70</sub>68/Si<sub>3</sub>N<sub>4</sub>/BN Hybrid Composites'. Materials, MDPI, 2021, 14, 6560. [[Link](#)].
12. **Dhanesh G. Mohan\***, Tomków J, Gopi S, 'Induction assisted hybrid Friction Stir Welding of dissimilar materials AA5052 aluminium alloy and X12Cr13 stainless steel', Advances in Materials Science, Vol. 21, issue 3, 2021. [[Link](#)].
13. A Sasikumar, S Gopi, **Dhanesh G. Mohan\***, 'Prediction of Filler Added Friction Stir Welding Process Parameters for Improving Corrosion Resistance of Dissimilar Aluminium Alloys 5052 And 6082 Joints', Journal of Welding and Joining, The Korean Welding and Joining Society, (Accepted to Publish), 2021.
14. M Balamurugan, S Gopi, **Dhanesh G Mohan\***, 'Influence of Tool Pin Profiles on the Filler Added Friction Stir Spot Welded Dissimilar Aluminium Alloy Joints,' Materials Research Express, IOP Science, 2021. [[Link](#)]
15. A Sasikumar, S Gopi, **Dhanesh G. Mohan\***, 'Forecasting Process Parameters on Weld Nugget Hardness of Filler Added Friction Stir Welded Dissimilar Aluminium Alloys 5052 and 6082 Joints', Journal of Mechanical and Energy Engineering, Poland, Vol. 5(45), Issue 2, 2021. [[Link](#)].

16. A Sasikumar, S Gopi, **Dhanesh G. Mohan\***, 'Effect of Welding Speed on Microhardness and Corrosion Resistance Properties of Filler Induced Friction Stir Welded AA6082 and AA5052 Joints', Materials Research Express, IOP science, vol.8(6), 066531, 2021. [[Link](#)].
17. **Dhanesh G. Mohan\*** & S Gopi, 'Influence of In-situ Induction Heated Friction Stir Welding on Tensile, Microhardness, Corrosion Resistance and Microstructural Properties of Martensitic Steel,' Engineering Research Express, IOP Publishing, 5, 2021. [[Link](#)].
18. C J AnandhaKumar, S Gopi\*, **Dhanesh G. Mohan\*** and S Shashi Kumar, 'Predicting the Ultimate Tensile Strength and Wear Rate of Aluminium Hybrid Surface Composites Fabricated via Friction Stir Processing using Computational Methods,' Journal of Adhesion Science and Technology, Taylor & Francis, 2021. [[Link](#)]
19. C J AnandhaKumar, S Gopi\*, **Dhanesh G. Mohan\*** & S Shashi Kumar, 'Mechanical, Metallurgical and Tribological Properties of Friction Stir Processed Aluminium Alloy 6061 Hybrid Surface Composites' Surface Topography, IOPscience, 2021.[[Link](#)]
20. S Gopi & **Dhanesh G. Mohan\***, 'Evaluating the Welding Pulses of Various Tool Profiles in Single-Pass Friction Stir Welding of 6082-T6 Aluminium Alloy', Journal of Welding and Joining, The Korean Welding and Joining Society,8, 2021. [[Link](#)]
21. **Dhanesh G. Mohan\*** & S Gopi 'Evaluation of Corrosive Behaviour and Microstructure of Hybrid Friction Stir Welded AISI 410 Stainless Steel', Journal of Engineering Research, Academic Publication Council, Kuwait (Accepted to Publish), 2021.
22. **Dhanesh G. Mohan\*** & S Gopi, 'Optimized Parameters Prediction for Single-Pass Friction Stir Welding on Dissimilar Aluminium Alloys T- Joint,' International Journal on Emerging Technologies, 12(2), 2021. [[Link](#)]
23. **Dhanesh G. Mohan\***, S Gopi & Sasikumar, A., 'Examining the Mechanical and Metallurgical Properties of Single Pass Friction Stir Welded Dissimilar Aluminium Alloys Tee Joints,' SVOA Materials Science &Technology, 3(1), pp.6–12, 2021. [[Link](#)]
24. A Sasikumar, S Gopi\*, **Dhanesh G. Mohan**, 'Effect of Fillers on Microstructure and Tensile strength of Friction Stir Welded Dissimilar Aluminium Alloys,' Materials Research Express, 6(8), 2019. [[Link](#)]
25. **Dhanesh G. Mohan\***, S Gopi, V Rajasekar, 'Effect of Induction Heated Friction Stir Welding on Corrosive Behaviour, Mechanical Properties and Microstructure of AISI 410 Stainless Steel', Indian, Journal of Engineering and Materials Sciences, 2018, 25, 203 – 208. [[Link](#)]
26. **Dhanesh G. Mohan\***, S Gopi, V Rajasekar, 'Mechanical and Corrosion- Resistant Properties of Hybrid-Welded Stainless Steel,' Materials Performance, 57(1):53 - 56, 2018. [[Link](#)]
27. **Dhanesh G. Mohan\***, S Gopi, 'Induction Assisted Friction Stir Welding: A Review,' Australian Journal of Mechanical Engineering, Taylor and Francis, 2018. [[Link](#)]
28. Renjith C R, Rathish Raghupathy, **Dhanesh G. Mohan**, 'Optimization of Process Parameters for Friction Stir Lap Welding of AA6061-T6 and AA7075-T6 Aluminum Alloys Using Taguchi Technique', IJRSTS, Vol.3, 2016. [[Link](#)]
29. **Dhanesh G. Mohan\***, S Gopi, 'A Review on Friction Stir Welded T-Joint,' International Journal of Science Technology & Engineering, 2016. [[Link](#)]

## CONFERENCES

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1. L. Selvarajan, R. Sasikumar, **Dhanesh G. Mohan**, P. Naveen Kumar, Muralidharan Velusamy, 'Investigations on electrochemical machining (ECM) of Al7075 material using copper electrode for improving geometrical tolerance', Materials Today: Proceedings, Science Direct, International conference on Materials and Manufacturing Methods, National Institute of Technology, Trichy, 2019. [[Link](#)]
2. L. Selvarajan, R. Rajavel, B. Prakash, **Dhanesh G. Mohan**, S. Gopi, 'Investigation on spark electrical discharge machining of Si<sub>3</sub>N<sub>4</sub> based advanced conductive ceramic composites', Materials Today: Proceedings, Science Direct, International conference on Materials and Manufacturing Methods, National Institute of Technology, Trichy, 2019. [[Link](#)]

3. **Dhanesh G. Mohan\***, S Gopi, '*Study on the Mechanical Behaviour of Friction Stir Welded Aluminium Alloys 6061 with 5052*', The 8th Industrial Automation and Electromechanical Engineering Conference, Institute of Engineering and Management, Thailand, 2017. [[Link](#)]
4. Yasin k, S Gopi, **Dhanesh G. Mohan**, '*Influence of Process Parameters in Friction Stir Welded Aluminium Alloy 6082-T6 in Various Working Conditions*', International Conference on Recent Innovations in Production Engineering, conducted by MIT, Anna University, Chennai, 2017.
5. **Dhanesh G. Mohan\***, V Sritharan, S Gopi, '*Dissimilar metal T-Joint*', ICMACE, International conference conducted by Tamizhan college of Technology, Nagercoil, 2014.
6. **Dhanesh G. Mohan\***, '*Study on Nanometre Storage Unit*', National conference conducted by Hindustan College of Technology, Coimbatore, 2012.
7. **Dhanesh G. Mohan\***, '*Recent Trends in Green Manufacturing*', ADVAY, International conference conducted by ToC H Institute of Science and Technology, Ernakulam, 2012.

#### SCIENCE MAGAZINE ARTICLES

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1. Article title '*3D Printing for children – How it enhances their studies and life*', Scientific India, May 2022, ISSN 2349 - 1418. [[Link](#)]
2. Article title '*Nanometre storage unit*', Science India, volume 16, issue 4, April 2013 pages from 41 to 43, ISSN 0972-8287.
3. Article title '*Nanobots: A substitute for human blood*', Science India, volume 15, issue 6, June 2012, pages from 4 to 8, ISSN 0972 8287.

#### HONOURS AND AWARDS

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1. Received postdoctoral research fund (\$ 55,000.00) from National Natural Science Foundation of China (NSFC) to conduct experiments on the extrusion control for high-quality printing on big area additive manufacturing.
2. Received collaborative research funding from National Research Council, Canada (\$ 40,000.00) for collaborative research on additive manufacturing on ceramic materials using LPBF and EBPF with the University of Quebec in Trois-Rivieres, Trois-Rivières, Canada.
3. Received collaborative research funding from MAESTRO: advanced grants, Poland (\$ 28,000.00) for collaborative research on hybrid friction stir welding with the Faculty of Mechanical Engineering and Shipbuilding, Gdańsk University of Technology, Poland.
4. Received collaborative research funding from TEQIP – II, India (\$ 10,000.00) for collaborative research on filler-induced dissimilar metal joining using the FSW method.
5. Received postdoctoral research fund (\$ 6,500.00) from Shandong University postdoctoral council for researching laser and ultrasonic vibration-assisted friction stir welding.
6. Received Class – A International Postdoctoral Fellowship from China Postdoctoral Council.
7. Received Research Excellence Award (2020) from Institute of Scholars.
8. Best paper award in the 8<sup>th</sup> Industrial Automation and Electromechanical Engineering Conference, Institute of Engineering and Management, Bangkok, Thailand, August 16 to 18 - 2017.
9. Travel fellowship from Science and Engineering Research Board (SERB, India) to attend an international conference in Thailand.
10. University Grants Commission (UGC) Senior Research Fellowship (SRF).
11. University Grants Commission (UGC) Junior Research Fellowship (JRF).
12. Ph.D. research funding (8,000.00 USD) from UGC to establish induction-assisted friction stir welding setups for joining AISI 410 stainless steel.
13. Ph.D. research funding (\$ 5,000.00) from TEQIP – II.
14. Post-Graduate fellowship from TEQIP – I for ME.

## RESEARCH IMPACTS

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1. Process optimization was conducted for preventing bridge defects in big area additive manufacturing for Farsoon Industries, Hunan, China.
2. Extension to hybrid friction stir welding (Induction, Ultrasonic GTAW, and Laser) conducted in 2014 was carried out by Oak Ridge National Laboratory, USA, TRA-C industrie, France, and STIRWELD, France.

## PRESENTATIONS AND INVITED LECTURES

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1. Oral presentation on the topic '*High Entropy Alloys for Additive Manufacturing*', at 2<sup>nd</sup> Edition of International Conference on Materials Science and Engineering, organised by MATERIALS-2022, Chicago, USA, on March 28<sup>th</sup> - 30<sup>th</sup>, 2022.
2. Keynote speaker on the topic '*Quantum Dots for Additive Manufacturing*,' at 6<sup>th</sup> World Congress on Nanomaterials (CPD Accredited), organised by Allied Academies, Welling, England, on January 14<sup>th</sup>-15<sup>th</sup>, 2022.
3. Keynote speaker on the topic '*The Potency of Hybrid Friction Stir Welding on Mechanical and Corrosion Resistance Properties of Weldments*,' at 8<sup>th</sup> International Conference on Metallurgy Technology and Materials on 01-08-2020 and 02-08-2020 at Xian, China.
4. Webinar on '*Efficacy Investigation on the effect of Induction in –situ heating assisted Friction Stir Welding on microstructure, microhardness, and corrosion resistance properties of AISI 410 Stainless Steel Joints*' on 22-07-2020 at GMT +1, Organized by Longdom International Conference on Material Science and Nanotechnology, London, U.K.
5. Webinar on '*Welding Technology*' on 13-05-2020, 11.00 A.M to 11.55 A.M (IST), organized by Marwadi Education Foundation Group of Institutions, Rajkot, Gujarat, India.
6. Webinar on '*Research Opportunities Abroad*' on 30-04-2020, 11.00 A.M to 12 P.M (IST), organized by SNS College of Engineering, Coimbatore, Tamilnadu, India.

## PROJECT WORKS

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### Postdoctoral Research Work

- Researching Extrusion control for high-quality printing on Big Area Additive Manufacturing systems for enhancing geometric fidelity of parts produced on BAAM to help enable high-quality printing on this process and examine and understand the multi-resolution printing, extrusion diversion, and feed-forward extruder control.
- Postdoctoral research on Laser-Assisted Friction Stir Welding and Ultrasonic Vibration Assisted Friction Stir Welding to study and understand the mechanical, metallurgical, corrosive, and microstructural properties of these methods on metals like steel alloys, magnesium alloys, and aluminium alloys.

### Ph.D. Research Work

- Ph.D. research work entitled 'Effect of Induction Assisted Friction Stir Welding on AISI 410 Stainless Steel'.  
*Description:* This new hybrid welding method helps to enhance the joint strength in the cost-effective and pollution-free method. This method also helps to increase the tool life too.

### ME Projects

- ME phase two project entitled 'Optimization of process parameters in friction stir welding on dissimilar aluminium alloys (AA6061 and AA5052) T - joint by Using Box-Behnken Design'.
- ME phase one project entitled 'Optimization of friction stir welding process parameters for dissimilar aluminium alloys (AA6061 and AA5052) using the Taguchi method'.

### B. Tech Projects

- Involved in a project entitled 'Co-generation of power' as the main project for B Tech.
- Involved in a mini project entitled "Automatic tack guided vehicle" as a mini project for B Tech.

### General projects

- Involved in a project entitled 'Coconut tree climbing machine' for Kerala State Industries Department.
- Involved in a project entitled 'Air-condition Jacket' for Kerala State Industries Department.

## TEACHING PROFICIENCY

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*The subjects undertake for teaching are as follows:*

At Institute of Materials Joining, Shandong university, Jinan, China (as postdoctoral research fellow), 2020 - 2021.

*Theory Classes:*

- 20MSU-07: Advanced Manufacturing Technology (P.G)
- 21WESU-03: Welding Metallurgy (U.G)

At Department of Production Engineering, Government College of Technology, Coimbatore, Tamilnadu, India (as Teaching Research Associate). 2014 - 2019.

*Theory Classes:*

- 16PBS2Z3: Materials Science
- 16PPC3O5: Foundry and Welding Technology
- 16PPE010: Advanced Welding Technology
- 16PPE017: Supply Chain Management
- 16PPE019: Lean Manufacturing

*Practical Classes:*

- 16PES107: Engineering Graphics
- 16PPC407: Machine Drawing

At Department of Mechanical Engineering, Government College of Technology, Coimbatore, Tamilnadu, India (as Teaching Assistant). 2012 - 2014.

*Theory Classes:*

- 12M506: Hydraulics and Pneumatic Controls
- 12M7E8: Welding Technology

*Practical Classes:*

- 12M309: Manufacturing Technology Laboratory-I
- 12M209: Engineering Graphics & Drafting Lab
- 12M708: Manufacturing Technology Lab-II

At Sree Buddha College of Engineering, Pattoor, Alappuzha, Kerala, India (Lecturer in Mechanical Engineering). 2010 - 2012.

*Theory Classes:*

- 08.303: Fluid Mechanics and Machines
- 08.403: Metallurgy & Material science
- 08.802: Industrial Engineering

*Practical Classes:*

- 08.110: Engineering Workshops
- 08.407: Fluid Mechanics & Machines Lab

## PROJECT GUIDANCE / THESIS SUPERVISOR

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*Co-supervisor for Ph.D., research. (At Shandong University)*

1. *Candidate:* Najib Ahmad Muhammed, *Thesis title:* "Study of capabilities of ultrasonic vibration on the surface, electrical and mechanical behaviours of aluminium to copper dissimilar friction stir welds", 2021.
2. *Candidate:* Sachin Kumar Saxena, *Thesis title:* "Examining mechanical and metallurgical properties of ultrasound added additive manufacturing for metals and composites", 2020.

*Co-supervisor for P.G., students. (At Government College of Technology)*

1. *Candidate:* A.Sasikumar, *Thesis title:* "Study of magnesium and chromium fillers in friction stir welded dissimilar joint of AA6082 and AA5052", 2019.
2. *Candidate:* Sabu John, *Thesis title:* "Development of a method for recycling fibreglass composite wind turbines", 2018.
3. *Candidate:* P Subhasree, *Thesis title:* "Predicting tensile strength of double side friction stir welded 6082-T6 aluminium alloy by a mathematical model", 2018.

4. *Candidate:* K Lokanathan, *Thesis title:* “Optimization of process parameters for friction stir welding of 6082-T6 aluminium alloy by Taguchi method”, 2017.
5. *Candidate:* P Ahammed Samir, *Thesis title:* “Magneto Abrasive Flow Machining”, 2016.

Supervisor for U.G., students (*At Sree Buddha College of Engineering*)

1. *Thesis title:* “Study and modelling of waste plastic reinforced bricks”, 2011.
2. *Thesis title:* “Design and fabrication of four-way hacksaw”, 2010.

## PROFESSIONAL MEMBERSHIPS

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- Member of Materials Research Society (USA)
- Member of American Welding Society (USA)
- Member of The Minerals, Metals and Materials Society (USA)
- Member of International Institute of Welding
- Member of Indian Society for Technical Education (India)
- Member of Indian Society of Mechanical Engineers (India)
- Member of Indian Welding Society (India)
- Member of The Institution of Engineers (India)
- Member of Society of Automotive Engineers (India)

## RESEARCH COLLABORATIONS

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- Faculty of Mechanical Engineering and Ship Technology, Gdańsk University of Technology, 80-233 Gdańsk, Poland.
- Department of Mechanical Engineering, Wichita State University, Wichita, United States.
- Additive Manufacturing of Functional Materials Research Group, Center for Engineering Innovation and Research, Faculty of Science and Engineering, Telford Innovation Campus, University of Wolverhampton, Telford TF29NT, United Kingdom.
- Department of Mechanical Engineering, University of Quebec in Trois-Rivieres, Trois-Rivières, Québec, Canada.
- Technological Institute of Industrial Maintenance, Cégep de Sept-Îles, Sept-Îles, Québec, Canada.
- Processing of Functional Materials, Leibniz Institute for Materials Engineering – IWT, 28359 Bremen, Germany.
- Laboratory of the Technological Processes, Adam Mickiewicz University, Centre for Advanced Technology, Poznań, Wielkopolskie, Poland.
- Department of Production Engineering, Government College of Technology, Coimbatore, Tamilnadu, India.
- Metallurgical and Material Engineering Department, Jadavpur University, Kolkata 700032, India.
- Department of Mechanical Engineering, Pandit Deendayal Energy University- PDEU, Gandhinagar, Gujarat 382007, India.
- Department of Mechanical Engineering, Coimbatore Institute of Technology, Coimbatore, Tamilnadu, India.
- Department of Materials Engineering, Azarbaijan Shahid Madani University, East Azarbaijan, Tabriz, Iran.
- Department of Mechanical Engineering, Government College of Engineering (GCE), Bodinayakkanur, Theni, Melachokkanathapuram, Tamilnadu 625582, India.
- Department of Mechanical Engineering, Anna University Regional Campus, Coimbatore, Navavoor, Coimbatore, Tamil Nadu 641046, India.
- Department of Materials Engineering, Nitte Meenakshi Institute of Technology, Bengaluru, Karnataka, India.
- Department of Materials Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab 144011, India.
- Department of Mechanical Engineering, Cape Peninsula University of Technology, Cape Town, South Africa.

## PROFESSIONAL SERVICES

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### Consulting Experiences

- Designed friction stir welding tools and fixtures for the Department of Mechanical Engineering, Kumaraguru College of Technology to weld AA 7075 Aluminium Alloy plates for lap Welding. 2017, (Value: 50,000 INR).
- Designed carpet cleaner for Premier Lab Solutions, Coimbatore. 2014, (Value: 2,50,000 INR)
- Designed Coconut Skin Peeler for Marshall-Fowler Engineers India Private Limited, Coimbatore. 2014. (Value: 4,25,000 INR)
- Engineering and Materials Consult for Gyrotech Marine Services LLC – Dubai, UAE.



### **Editorial Board Member**

- Advances in Materials Science and Engineering
- Chinese Journal of Mechanical Engineering
- Journal of Adhesion Science and Technology
- Frontiers in Manufacturing Technology
- Advances in Materials
- Journal of Material Science and Technology Research
- Materials Science & Technology
- Journal of Engineering Trends and Technology
- International Journal of Mechanical Engineering

### **Guest Editor**

- Title: *'Advances in Metal-based Hybrid Process of Additive Manufacturing'*, Metals, MDPI
- Title: *'Fusion and solid-state welding for on similar and dissimilar metals'*, Materials Research Express, IOP Science

### **Conference Chair/Committee Member:**

- 1<sup>st</sup> Conference of Applied Mechanics in Aeronautics, École Supérieure De l'Aéronautique, ALger, Algeria.

### **Journals Reviewed**

- Advanced Engineering Materials
- Australian Journal of Mechanical Engineering
- Nanotechnology Reviews
- Materials Research Express
- Indian Journal of Engineering and Materials Sciences
- Journal of Material Science
- Journal of Adhesion Science and Technology
- Corrosion Engineering, Science and Technology
- Advances in Materials Science and Engineering
- Engineering Research Express
- Physica Scripta
- Surface Review and Letters
- Advances in Science and Technology Research
- Proceedings of the Institution of Mechanical Engineers

### **WORKSHOPS ATTENDED**

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- Attended an International level workshop on the topic "Computational Fluid Dynamics" at the National Institute of Technology, Trichy.
- Attended TEQIP sponsored National level workshop on the topic "Cryogenic Techniques" at Government College of Technology, Coimbatore.
- Attended TEQIP sponsored National level workshop on the topic "Patenting Procedure" at Government College of Technology, Coimbatore.

### **COMPUTER SOFTWARE PROFICIENCY**

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- Minitab –17
- Design Expert – 11
- Computer-Aided Design
- Fusion 360
- Solidworks
- Ansys (Workbench and Fluent)
- LaTeX
- All windows and IOS packages.

## OTHER

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### Language Proficiency

- English
- Malayalam
- Tamil
- Hindi

### Hobbies and Interests

- Reading
- Cycling
- Travelling

## REFERENCES

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### Prof. Dr. ChuanSong WU

Professor & Dean  
Institute of Materials Joining  
Shandong University  
17923 Jingshi Road, Jinan, 250061  
China  
Office Tel.: +86 (0531) 88392711  
Mob: +86 13808932039  
wucs@sdu.edu.cn

### Prof. Dr. S. Gopi

Associate Professor  
Department of Production  
Engineering,  
Government College of  
Technology, 641013  
Coimbatore, Tamilnadu, India.  
Mob: +91 9500655335  
gopi@gct.ac.in

### Prof. Dr. Sasan Sattarpanah Karganroudi

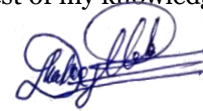
Professor  
Department of Mechanical Engineering  
University of Quebec in Trois-Rivieres,  
Trois-Rivières  
Québec, G9A 5H7  
Canada.  
Mob: +1 8196684177  
sasan.karganroudi@itmi.ca

## DECLARATION

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I hereby declare that all the information given above is true and correct to the best of my knowledge.

Place: Jinan



Dr. Dhanesh G Mohan. ME, Ph.D., Postdoc., P.E., C.Eng.