

DHANESH G MOHAN

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

PROFESSIONAL SUMMARY

Motivated Mechanical Engineering Researcher successful at conducting considerable independent research in Material Science, Friction Stir Welding, Hybrid Welding and Corrosion. Bringing seven years of experience in mechanical engineering teaching and research environments and eagerness to advance knowledge through forward-thinking investigations.

SKILLS

- Welding Technology
- Solid-State Welding
- Optimization
- Hybrid Welding
- Scanning Electron Microscope (SEM)
- Energy Dispersive X-ray Spectroscopy (EDAX)
- Transmission Electron Microscopy (TEM)
- X-Ray Diffraction (XRD)
- Corrosion Engineering
- Design Expert
- Materials & Metallurgy
- Online Learning Tools

EDUCATION

Postdoc	Shandong University, Institute of Materials Joining, Jinan, China. <i>Funding Agency:</i> National Natural Science Foundation of China (NSFC) <i>Area of Research:</i> Fabrication of Steel and Aluminium joints using Ultrasonic Vibration Assisted Friction Stir Welding (UVaFSW) and Laser-Assisted Friction Stir Welding (LaFSW) method. <i>Advisor:</i> Prof. Dr. ChuanSong Wu	2019 - Ongoing
Ph.D	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)
M.E	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.Tech	Faculty of Mechanical Engineering Chaudhary Charan Singh University, Meerut, Uttar Pradesh	2004 – 2008 72.03 %
Class XII	Computer Science Government Eravankara V.H.H.S, Mavelikara, Alappuzha State Board of Kerala	2002 – 2004 76.17 %
Class X	B.H.HS.S. Mavelikara, Alappuzha State Board of Kerala	2002 67.17 %

WORKING HISTORY

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

- Researching on Laser-Assisted Friction Stir Welding, Ultrasonic Vibration Assisted FSW to study and understand the mechanical, metallurgical, corrosive, and microstructure properties of these methods on metals like steel alloys, 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 principles of engineering by utilizing group activities and special projects.
- Built and used diverse techniques to assist students with grasp materials and understanding concepts.

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

- Deepened student understanding of principles of engineering 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

1. Application number 201641036726 titled '*Construction of Flexible Focused Microwave Welding*', filed dated September 24, 2018.

LICENSE

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

CERTIFICATIONS

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

PUBLICATIONS

1. **Dhanesh G Mohan***, S Gopi '*Evaluation of Corrosive Behaviour and Microstructure of Hybrid Friction Stir Welded AISI 410 Stainless Steel*', Journal of Materials Science, Springer, (Accepted to Publish), 2020.
2. 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.
3. **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.
4. **Dhanesh G Mohan***, S Gopi, V Rajasekar, '*Mechanical and Corrosion- Resistant Properties of Hybrid-Welded Stainless Steel*', Materials Performance, 57(1):53 - 56, 2018.
5. **Dhanesh G Mohan***, S Gopi, '*Induction Assisted Friction Stir Welding: A Review*', Australian Journal of Mechanical Engineering, Taylor and Francis, 2018.
6. 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.
7. **Dhanesh G Mohan***, S Gopi, '*A Review on Friction Stir Welded T-Joint*', International Journal of Science Technology & Engineering, 2016.

CONFERENCES

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.
2. L. Selvarajan, R. Rajavel, B. Prakash, **Dhanesh G. Mohan**, S. Gopi, '*Investigation on spark electrical discharge machining of Si3N4 based advanced conductive ceramic composites*', Materials Today: Proceedings, Science Direct, International conference on Materials and Manufacturing Methods, National Institute of Technology, Trichy, 2019.
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.
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, Nagercovil, 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

1. Published an article on '**Nanometre storage unit**', Science India, volume 16, issue 4, April 2013 pages from 41 to 43, ISSN 0972-8287.
2. Published an article on '**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

1. Received postdoctoral research fund from National Natural Science Foundation of China (NSFC).
2. Received Class – A International Postdoctoral Fellowship from China Postdoctors Council.
3. Received Research Excellence Award (2020) from Institute of Scholars.
4. Best paper award in the 8th Industrial Automation and Electromechanical Engineering Conference, Institute of Engineering and Management, Bangkok, Thailand, August 16 to 18 - 2017.
5. University Grants Commission (UGC) Senior Research Fellowship (SRF).
6. University Grants Commission (UGC) Junior Research Fellowship (JRF).
7. Ph.D research funding from UGC.
8. Ph.D research funding from TEQIP – II.
9. Post-Graduate fellowship from TEQIP – I for M.E.

PRESENTATIONS AND INVITED LECTURES

1. Keynote speaker on the topic '*The Potency of Hybrid Friction Stir Welding on Mechanical and Corrosion Resistance Properties of Weldments*', at 8th International Conference on Metallurgy Technology and Materials on 01-08-2020 and 02-08-2020 at Xian, China.
2. 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.
3. 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.
4. 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

Postdoctoral Research Work

- Postdoctoral research work 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.

M.E. Projects

- M.E 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'.
- M.E phase one project entitled 'Optimization of friction stir welding process parameters for dissimilar aluminium alloys (AA6061 and AA5052) by 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 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.

PROFESSIONAL MEMBERSHIPS

- 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)

PROFESSIONAL SERVICES

Consulting Experiences

- Designed Friction Stir Welding Tools and fixture for Department of Mechanical Engineering, Kumaraguru College of Technology to weld AA 7075 Aluminium Alloy plates for lap Welding. 2017.
- Designed carpet cleaner for Premier Lab Solutions, Coimbatore. 2014.
- Designed Coconut Skin Peeler for Marshall-Fowler Engineers India Private Limited, Coimbatore. 2014.

Associate Editor

- Journal of Engineering Trends and Technology

Editorial Board Member

- Advances in Materials
- Journal of Material Science and Technology Research

Journals Reviewed

- Australian Journal of Mechanical Engineering
- Materials Research Express
- Indian Journal of Engineering and Materials Sciences
- Journal of Material Science
- Journal of Adhesion Science and Technology

WORKSHOPS ATTENDED

- Attended 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

- Minitab –17
- Design Expert – 11
- Computer-Aided Design
- LaTeX
- All windows and IOS packages.

OTHER

Language Proficiency

- English
- Malayalam
- Tamil
- Hindi

Hobbies and Interests

- Reading
- Cycling
- and Travelling

REFERENCES

Prof. Dr. ChuanSong WU

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DECLARATION

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



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

Place: Jinan