

Subashini.L

M-11, Housing Board,
Vilva Nagar,
Cuddalore-607 001.
Tamil Nadu, India.



Mobile: +91 76758 24850.

E-mail ID: lakshmanan.subashini@gmail.com

Educational Qualifications:

Ph.D. Materials Engineering, 2020

University of Hyderabad (External Registration from International Advanced Research Centre for Powder Metallurgy and New Materials, **ARCI**, Hyderabad, Telangana)

Thesis: “Laser- MIG Hybrid Welding of thick sections of High alloy steels in a Single pass”

B.E. Metallurgy, 2011

PSG College of Technology, Coimbatore, Tamil Nadu

CGPA- **8.48/ 10**

XII HSC, 2007 with **93.58%**

SRV Girls Higher Secondary School, Rasipuram, Tamil Nadu

X Matriculation, 2005 with **89.54%**

St.Mary’s Matriculation Higher Secondary School, Cuddalore, Tamil Nadu.

Research Fellowships:

- Awarded *fellowship from INAE* under the scheme, “Mentoring of Engineering Students by INAE Fellows” in the year 2010-11. Under the fellowship, worked in Indira Gandhi Centre for Atomic Research (**IGCAR**), Kalpakkam from May-June, 2011 on a research project “Optimization of Welding Process for Mod. 9Cr-1Mo steel using Genetic Algorithm” under the mentorship of late Dr. Baldev Raj, Ex-Director IGCAR.

- Awarded **Junior ARCI Fellowship** from the International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad for the duration 2012- 2014.
Awarded **Senior ARCI Fellowship** from the International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad for the duration 2014- 2018.
Worked in the Centre for Laser processing of Materials in the area of Laser- MIG hybrid welding of thick sections of high alloy steels (Ph.D. thesis) under the guidance of late Dr. G.Padmanabham, Director- ARCI

Areas of Interest:

- Laser material processing
- Welding technology and welding Metallurgy
- Microstructural characterisation using advanced characterisation techniques
- Evaluation of mechanical properties of materials using different techniques
- Failure analysis
- Understanding the structure property co- relation of material systems

Technical Proficiency:

- Operation of Laser, MIG, Laser-MIG hybrid welding systems
- Microscopic techniques – Optical, Stereo, Electron microscopy - SEM and TEM
- Analysis of Electron Back- Scattered Diffraction (EBSD) data, micro- XRD patterns
- Operation of Small- Angle X-ray Scattering (SAXS) equipment
- Mechanical testing- Hardness test, Tensile test, Impact test and K_{IC} Fracture toughness evaluation
- Modeling: Neural networks, ANFIS and Genetic Algorithm

Research Publications:

International Journal Publications

1. L. Subashini and M. Vasudevan, “Adaptive Neuro-Fuzzy Inference System (ANFIS) Based Model for Predicting the Weld Bead Width and Depth of Penetration from the Infra-Red Thermal Image of the Weld Pool”, *Metallurgical and Materials Transactions B*, Vol 43B, Page- 145-154, February 2012.

2. L. Subashini and P. Madhumitha, M. Vasudevan, "Optimization of Welding Process for Mod. 9Cr-1Mo steel using Genetic Algorithm", *International Journal of Computational Materials Science and Surface Engineering*, Vol. 5, No. 1, Page- 1-15, **2012**.
3. L. Subashini, K. V. Phani Prabhakar, Ravi C. Gundakaram, Swati Ghosh and G. Padmanabham, "Single- pass Laser- Arc Hybrid Welding of Maraging Steel Thick Sections", *Journal of Materials and Manufacturing Processes*, Vol 31(16), Pg 2186- 2198, **2016**.
4. L. Subashini, K. V. Phani Prabhakar, Swati Ghosh and G. Padmanabham, "Comparision of Autogenous Laser and Laser-MIG Hybrid Welding of M250 Steel thick sections- Understanding role of filler wire addition" *International Journal of Advanced Manufacturing Technology* 107, Pg 1581- 1594, **2020**. <https://doi.org/10.1007/s00170-020-05113-3>
5. L. Subashini, K. V. Phani Prabhakar, Swati Ghosh and G. Padmanabham, "Effect of Joint Design on Microstructure and Mechanical Properties of Laser- MIG Hybrid Welded M250 Steel Joints", (communicated)

Full Papers in Conference Proceedings

6. L. Subashini, K. V. Phani Prabhakar, G. Padmanabham, "Laser-MIG Hybrid Welding of Maraging Steel", *Proceedings of the Conference of Metallurgists* ISBN: 978-1-926872-24-7, Published by the Canadian Institute of Mining, Metallurgy and Petroleum, Sep 28- Oct 1, **2014**.
7. L. Subashini, K. V. Phani Prabhakar, G. Padmanabham, Swati Ghosh Acharyya, "Laser Arc Hybrid Welding of 10mm Thick Maraging Steel Plate- A Comparison With Multi-pass MIG Welding", *Proceedings of the 2nd International Conference On Advances In Cutting, Welding & Surfacing* , Page 77-87, August 5-7, **2015**.
8. L. Subashini, K. V. Phani Prabhakar, Swati Ghosh and G. Padmanabham, Laser-MIG Hybrid Welding of Cr-Mo Steels, *Asia Steel International Conference*, Pg 143, Bhubaneshwar, 6-9, February **2018**.

Presentations in Conferences

9. M. Vasudevan, L. Subashini, “Computational Intelligence Based Models For Predicting Depth of Penetration from Infra- Red Thermal Image of Weld Pool”, *Proceedings of the IIW2011- International Conference on Global Trends in joining, Cutting and Surfacing Technology*, Chennai, India, 21-22 July, **2011**, ISBN 978-81-8487-152-4, paper IC_36.
10. L. Subashini, K. V. Phani Prabhakar, G. Padmanabham, Swati Ghosh Acharyya “Investigation of Microstructure and Properties of Laser- MIG hybrid welded Maraging Steel” in the *Workshop on Advances in Welding & Surface Engineering*, IIW Hyderabad, 17th Oct **2014**.
11. L. Subashini, K. V. Phani Prabhakar, G. Padmanabham, Swati Ghosh Acharyya “Fusion and Microstructural characteristics of Laser- MIG hybrid welded Maraging steel”, *IIM, NMD ATM*, Pune, 12-15th Nov **2014**.
12. L. Subashini, E. Anbu Rasu, K. V. Phani Prabhakar, G. Padmanabham, Swati Ghosh Acharyya “Laser- MIG hybrid welding of 12mm thick Reduced Activation Ferritic Martensitic (RAFM) steel”, *Workshop on Advances in Materials Joining Technologies*, IIW Hyderabad, 29th May **2015**.
13. L. Subashini, E. Anbu Rasu, K. V. Phani Prabhakar, G. Padmanabham, Swati Ghosh Acharyya, “Preliminary Investigation on Laser- MIG Hybrid Welding of Ferritic Martensitic Steels”, *International Conference on Applications of Lasers in Manufacturing*, New Delhi, 9-11 September, **2015**.
14. L. Subashini, K. V. Phani Prabhakar, Swati Ghosh Acharyya, G. Padmanabham, “Laser Hybrid Welding of Thick Plates of High Alloy Steels”, *International Institute of Welding- 6th Welding Research and Collaboration Colloquium*, Hyderabad, 7-9, April **2016**.

Recognitions:

- **Research Excellence Award** from Institute of Scholars, 2020
- **Best oral presentation** in the 2nd International Conference on Advances in Cutting, Welding & Surfacing conducted by IWS at CIT, Coimbatore, August 5-7, 2015.
- **First in Poster presentation** in the Workshop on Advances in Materials Joining Technologies conducted by IIW Hyderabad at Hyderabad, 29th May 2015.
- **Best Poster presentation** in the Workshop on Advances in Welding & Surface Engineering conducted by IIW Hyderabad chapter at Hyderabad, 17th Oct 2014.

References:

Director,

International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI)

Hyderabad, Telangana, India

Dr. M. Vasudevan, Scientific Officer 'H'

Head, AWPMS, MTD & Professor, HBNI

Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu, India

Email: dev@igcar.gov.in

Dr. Swati Ghosh Acharyya, Assistant Professor

School of Engineering Sciences and Technology

University of Hyderabad, Hyderabad, Telangana, India

Email: swati364@gmail.com

PERSONAL DETAILS:

HUSBAND NAME	:	S.JAYAGANESH
DATE OF BIRTH	:	12-12-1989
NATIONALITY	:	INDIAN
PASSPORT NO	:	K0352360
MARITAL STATUS	:	MARRIED
LANGUAGES KNOWN	:	ENGLISH, TAMIL & TELUGU
ADDRESS	:	M-11, HOUSING BOARD, VILVA NAGAR, CUDDALORE-607 001. TAMIL NADU, INDIA.

DECLARATION:

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

(SUBASHINIL)