

Name **Meshac R**
Designation Assistant Professor
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- **Research Area**: Wire Arc Additive Manufacturing, Heat Transfer Analysis

- **Educational Qualifications**:

Institution	Qualification	Department	Year
Indian Institute of Technology Palakkad	Master of Technology	Manufacturing Engineering	2021-2023
Thiagarajar College of Engineering	Bachelor of Engineering	Mechanical Engineering	2014-2018

- **Experience:**

Name of Company / Institutions	Designation of Post	From	To	Experience
		DD-MM-YYYY	DD-MM-YYYY	
Tamil Nadu Water & Drainage Board	Assistant Engineer	17-2-2025	10-12-2025	10 Months
Indian Institute of Technology Palakkad	Teaching Assistantship	05-01-2022	30-05-2023	17 Months

- **Professional Activities:**

Teaching Assistant

Teaching the students of IIT about the tensile characteristics of ferrous and non-ferrous alloys and the effect of heat treatment in the mechanical properties.

- **Completed B.E/M.E Projects:**

Experimental and Numerical Investigation of Wire Arc Additive Manufacturing Process

Wire arc additive manufacturing (WAAM) is an additive manufacturing process based on the arc welding process in which wire is melt by an electric arc and deposited in a layer-by-layer manner. At this stage, an attempt is made to model the

WAAM process using a 3D heat transfer model in ABAQUS software. After validating the model with the experimental data, the thermal cycle has to be correlated with the microstructure. From the analysis, desired thermal cycle have found for the better mechanical properties.

Durability Improvement of Leaded Steel through Conversion Coating

Industries working in steel substrates are facing a major problem in corrosion. To prevent corrosion in leaded steels by conversional coatings, a case study from the Titan industry has been studied. The Crown of the watch is the workpiece that we had to coat. Since the component is very small barrel Electro plating is needed. Because of the galvanic couple Fe3+ ion exposure forms iron oxide. With the consideration of oxidation potential, Cerium 3+ ion is selected to prevent thre corrosion.

- **Additional Responsibilities :**

Kho Kho Team Captain.

One of the captains of Kho-Kho House teams in the sports meet of Thiagarajar College of Engineering.

- **List of Seminar / Short Term Course /FDP/ Workshop attended:**

  - Inplant Training on Steam Turbine Principles and Operations at Tuticorin Thermal Power Station.
  - Technical Workshop on Aero-Modeling at National Institute of Technology Tiruchirappalli.
  - Workshop on Advancements in Braking Systems at Government College of Technology.

DECLARATION:

I CERTIFY THAT THE INFORMATION FURNISHED ABOVE IS CORRECT TO THE BEST OF KNOWLEDGE AND BELIEF.

DATE: 15-05-26