

Dr. Ajmal T. S.

Ph.D., Materials & Additive Manufacturing

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I am currently a research associate and looking for an assistant professor position in the mechanical engineering department with a particular interest in manufacturing engineering, mechanical behavior and design of materials, fluid/solid mechanics. I have working experience in the industry, research, and teaching. I have published three international journal papers (SCIE Indexed/Web of Science) and five conference papers. I am currently working on a DST-funded project titled “Development of guidelines for corrosion prevention of water pipelines” at IIT Bombay.

Education

- 2014–2021 **NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA**, Ph.D., Materials and Additive Manufacturing Engineering
- 2012–2014 **PRIST UNIVERSITY THANJAVUR**, M.Tech., Manufacturing Technology
- 2009–2009 **SUVIDYA INSTITUTE OF TECHNOLOGY MUMBAI**, PG Diploma, Piping Engineering
- 2004–2008 **ANNA UNIVERSITY CHENNAI**, B.E., Mechanical Engineering

Doctoral thesis

STUDY OF FLOW ACCELERATED CORROSION OF CARBON STEEL PIPELINE IN OILFIELD ENVIRONMENT

Designed and fabricated a turbulent flow loop system at *NITK Surathkal* and studied the synergetic behavior of hydrodynamics and corrosion on steel pipe elbow. Effect of Laser Surface Melting (Additive Manufacturing technique) on flow accelerated corrosion and slurry erosion-corrosion behavior of API X70 pipeline steel was studied.

Post-Doctoral Fellowship

- May 2021– **Post-Doctoral Research Associate**, *Aqueous Corrosion Lab.*, Department of Metallurgical Engineering and Materials Science, **IIT Bombay**, *Project title: Development of guidelines for corrosion prevention of water pipelines.*
- Ongoing

Publications

JOURNAL ARTICLES

Ajmal T. S., Arya S. B., and Udupa K. R. (2019). “Effect of hydrodynamics on the flow accelerated corrosion (FAC) and electrochemical impedance behavior of line pipe steel for petroleum industry”, *Int. J. Press. Vessel. Pip.*, 174(March), 42–53, **Impact Factor: 2.028** [Science Citation Index Expanded].

Ajmal T. S., Arya S. B., Thippeswamy L. R., Quraishi M. A., and Haque J. (2020). “Influence of green inhibitor on flow-accelerated corrosion of API X70 line pipe steel in synthetic oilfield water”, *Corros. Eng. Sci. Technol.*, 55(6), 487–496, **Impact Factor: 2.087** [Science Citation Index Expanded].

Ajmal T. S., Arya S. B., Maurya P., and Shariff S.M. “Effect of laser surface melting on slurry erosion-corrosion of API X70 line pipe steel in synthetic oilfield slurry”, *Int. J. Press. Vessel. Pip.*, (**article accepted**).

CONFERENCE PROCEEDINGS

Ajmal T. S., Baskaran T., Abheepsit Raturi, Udupa K. R., Arya S. B., “Study of Flow Accelerated Corrosion at Elbow of 304 Stainless Steel Pipeline in Oil Field Water”, Paper No. IC-23, *International Corrosion Conference and Expo CORCON 2016 (NACE)*, 18-21 Sep. 2016, New Delhi, India.

Ajmal T. S., Baskaran T., Udupa K. R., and Arya S. B., “Flow Accelerated Corrosion at 304 Stainless Steel Pipeline Elbow in Oil Field Water”, Paper No. NTC2016-597, *National Tribology Conference 2016*, 8-10 Dec. 2016, IIT (BHU) Varanasi.

Ajmal T. S., Shashi Bhushan Arya, K. Rajendra Udupa, “Flow Accelerated Corrosion of API X70 Pipeline Steel in Oilfield Water”, *5th CORSYM*, 23-24 March 2018, IIT Madras, Chennai, India. ISBN 9788193342824, 75-76.

Ajmal T. S., Shashi Bhushan Arya, Shariff S.M., “Influence of laser surface modification on flow assisted corrosion (FAC) behaviour of API X70 steel in oilfield water”, *NMD-ATM-2019*, Nov. 13-16, 2019, Trivandrum, India. TCMCRP23, Page No. 323.

Thakur Ashish, Shashi Bhushan Arya, **Ajmal T. S.**, “Study of Flow Accelerated Corrosion on AZ91D Magnesium Alloy Used in Engine Radiator”, *5th CORSYM*, 23-24 March 2018, IIT Madras, Chennai, India.

Workshops, Seminars, and Training Courses

ATTENDED

Workshop on “**Engineering Failure Analysis**” jointly conducted by NITK and Society for Failure Analysis, Hyderabad, held at NITK Surathkal, during *August 1-2, 2014*.

Industry/ Academic – Oriented Technology Refresher Course on “**Cathodic Protection and Pipeline Corrosion**” conducted by the CSIR – Central Electrochemical Research Institute, Karaikudi from *November 10-14, 2014* at CECRI, Karaikudi.

Workshop on “**Research Methodology and Structural Equation Modeling**” conducted by NITK, held at NITK Surathkal, during *November 16, 2014*.

Workshop on “**Non-Ferrous Extractive Metallurgy**” conducted by NITK (TEQIP-II), held at NITK Surathkal, during *February 25-26, 2015*.

Global Initiative of Academic Networks (GIAN) Course on “**Materials in Advanced Applications and Products**” jointly conducted by Ministry of Human Resource Development, Government of India and NITK, held at NITK Surathkal, during *July 11-15, 2016*.

Workshop on “**Materials Processing and Degradation**” conducted by NITK (TEQIP-II), held at NITK Surathkal, during *October 17-18, 2016*.

Workshop on “**Advanced XRD Theory, Practical and Training**” conducted by NITK, held at NITK Surathkal, during *January 20-24, 2020*.

Online Training program on “**Industrial Corrosion and Control**” conducted by The Electrochemical Society of India, IISc Campus, Bengaluru, held during *December 16-18, 2021*.

WORKED AS ORGANIZING COMMITTEE MEMBER

Workshop on “**Non-Ferrous Extractive Metallurgy**” conducted by NITK (TEQIP-II), held at NITK Surathkal, during *February 25-26, 2015*.

Workshop on “**Materials Processing and Degradation**” conducted by NITK (TEQIP-II), held at NITK Surathkal, during *October 17-18, 2016*.

Courses

Ph.D., Materials and Additive Manufacturing Engineering

Advanced Physical Metallurgy, Materials Characterisation, Mechanical Behaviour and Design of Materials, Research Methodology.

M.Tech., Manufacturing Technology

Theory of Metal Cutting, Casting Technology, Mechanical Metallurgy, Computer Integrated Manufacturing Systems, Metrology and Non-Destructive Testing, Production Management, Welding Technology, Quality Control and Reliability Engineering, Computer Aided Process Planning, Composite Materials, Metal Forming Process.

Professional Experience

2021–present **Research Associate, IIT Bombay**

2014–2019 **Teaching Assistant**, Department of Metallurgical and Materials Engineering, NITK, Surathkal., Assisted in guiding the post-graduate and under-graduate projects, and Extractive metallurgy Lab.

2010–2012 **Mechanical Engineer**, Piping Engineering Division, Nasser S. Al Hajri Corporation, Saudi Arabia, Planning and execution of pipeline fabrication and construction, Worked with **NCP north plot project** (Ethylene Cracking Furnace), and **Saudi Aramco Total Refinery Project** in Al Jubail.

Industrial Exposure (Training/Visit)

BHEL Trichy-High Pressure Boiler Plant (1 month internship), **Cochin Port Trust-Dry Dock (1 week in-plant training)**, **Neyveli Thermal Power Station (visited)**, **HAL Bangalore-Aircraft Division (visited)**, **Salem Steel Plant (Visited)**.

Personal

Gender	Male
Date of Birth	27 November 1986
Nationality	Indian
Languages	Malayalam (Mother Tongue), English (Fluent), Tamil (Conversational), Hindi (Conversational)
Marital Status	Married

References

Dr. Shashi Bhushan Arya, *Research Guide*

Assistant Professor, Department of Metallurgical and Materials Engineering

National Institute of Technology Karnataka, Surathkal, Mangalore 575025, India

Email: sbarya@nitk.edu.in

Dr. S.M. Shariff, *Research Collaborator*

Scientist-F, Center for Laser Processing of Materials

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

Hyderabad, 500005, India

Email: knl.sms@gmail.com

Declaration

I declare that the above-furnished information is accurate to my knowledge.



Ajmal T. S.