

## **DR. A. SYAMSUNDAR**



### **EDUCATION:**

**CER (Certificate of Excellence in Research)**, Subir Chowdhury School of Quality and Reliability, Indian Institute of Technology, Kharagpur, 2023

**Ph.D., Reliability Engineering**, Reliability Engineering Centre, Indian Institute of Technology, Kharagpur, 2009

**B.E., Mechanical Engineering**, Andhra University, Visakhapatnam, 1984 (First class with distinction and 6th rank out of 229 candidates)

### **AREAS OF WORK:**

Research and Development in the Iron and Steel Sector, Mechanical Maintenance, Reliability and Quality Engineering

### **WORK EXPERIENCE:**

#### **Gayatri Vidya Parishad College of Engineering (Autonomous)**

1. Vice-Principal and Professor of Mechanical Engineering, Administration, Academics, R&D, External Issues and Teaching.

#### **Visakhapatnam Steel Plant**

2. General Manager (Air Conditioning Systems) I/c and Head. Maintenance and servicing of air conditioning equipment of 7.3 MT Steel Plant including Chilled Water Plants, Pumps, Chillers, Air Handling Units, Fan Coil Units, Packaged Air Conditioners, Split Air Conditioners, Window Air Conditioners, Crane Air Conditioners, and Panel Air Conditioners.
3. General Manager (Research and Development) I/c and Head of Research and Development Centre. Setting up of Research and Development Department at RINL-Visakhapatnam Steel Plant, Research and Development activities connected with all areas of an integrated steel works

4. Technical Advisor to the Director (Operations), Executive Director/General Manager (Works), and Executive Director (Maintenance)
5. In-charge mechanical maintenance planning and spares planning of Steel Melting Shops– Implemented Computerised Maintenance Management System; Six Sigma; Total Quality Management System, Reliability Centered Maintenance; Spares planning and Inventory Control; maintenance outsourcing and contracts; ISO 9001, ISO 14001 (EMS) and OHSAS 18001 Systems.
6. In-charge of Operations and Maintenance of Repair Shops, and Gas Cleaning Plant in LD Converters of Steel Melting Shops.

### **Indian Institute of Technology, Madras**

7. Project Associate, Aeronautical Research and Development Board Project on “LPR Turbopump Cavitation Prediction” in the Department of Mechanical Engineering, IIT Madras

### **MEMBERSHIP:**

Member, Gnedenko e-Forum – International Group on Reliability

Member, IEEE Reliability Society

Life Member, Indian Institute of Metals

Life Member, Computer Society of India

Member, Association for Iron and Steel Technology India Member Chapter

Member, Research and Development Operating Committee for the Indian Steel Industry

### **RESEARCH GUIDANCE:**

#### **PhD**

1. **Awarded 2023** for M. B. Venkata Rao, Department of Metallurgical and Materials Engineering, National Institute of Technology, Warangal
2. **Ongoing 2022 onwards** for Maddipati Rajesh, Discipline of Mechanical Engineering, Andhra University Trans Disciplinary Research Hub, Andhra University, Visakhapatnam
3. **Ongoing 2023 onwards** for M. Venkata Subhash, Discipline of Mechanical Engineering, Andhra University Trans Disciplinary Research Hub, Andhra University, Visakhapatnam

#### **MTech**

1. **Ongoing 2021 onwards** for S. Srinivas, Department of Materials and Metallurgical Engineering, Indian Institute of Technology, Kanpur

### **PATENTS:**

**Awarded – 1, Filed – 5** In the areas of development of new steel grade, solid waste management, nano coating of refractories, secondary treatment of steel and environmental improvement.

## **PUBLICATIONS:**

**Book** – As a co-author with Professor K. Muralidharan (2012) *Statistical Methods for Quality, Reliability and Maintainability*, *Prentice Hall of India Pvt. Ltd.*, New Delhi

**Book Chapters** – 4 publications in Springer and IGI Global

**Refereed International Journals** – 16 publications in IJAMT, IEEE Transactions, Wiley, Elsevier, Springer, I Mech E, World Scientific, Oxford Press, Institute of Mathematical Applications, CSIR Journals

**International Conference Proceedings** – 26 publications in international conferences MMRs-2013, 2015, 2017, 2019, 2023 at Stellenbosch, South Africa, Tokyo, Japan, Grenoble, France, Hong Kong, and Murcia, MIMAR at Cambridge University, ICSMC at Colombo, RAMS 2011, RAMS 2017 and RAMS 2018 by IEEE at Florida, USA, ICRESH 2010 and ICRESH 2019 by BARC, Nuclear Power Corporation of India, IIT Bombay, ICONQR by ISI, Kolkata, ICSRE by IIT, Kharagpur and Centre for Reliability, Chennai, Oceans 14, Symposium on Underwater Technology, ICAER 2019, APARM 2020, ESREL 2020 PSAM 15, ISSSR2023, AU TDR-Hub.

**National Seminar/Conference** – 2 Invited Talk as a Guest of Honour at the *National Seminar on Recent Advances In Stochastic Modelling And Its Applications*, Department of Statistics, Andhra University, Visakhapatnam and Key Note Lecture at the Third National Conference on Reliability and Safety Engineering NCRS – 2016, Chennai

## **RESEARCH AND DEVELOPMENT PROGRAMS:**

**R&D Programs** – 50 (Guided) In the areas of product development, process improvement, energy reduction, environment protection and cost reduction of an integrated iron and steel works.

## **VISITS ABROAD:**

**International Conferences** – MMR2023, Murcia, Spain, 2023; ESREL 2020 PSAM 15, Venice, Italy; APARM 2020, Vancouver, Canada, 2020; MMR2019, Hong Kong, 2019; RAMS, Reno, Nevada, USA, 2018; MMR2017, Grenoble, France, 2017; RAMS, Orlando, Florida, USA, 2017; MMR2015, Tokyo, Japan, 2015; MMR2013, Stellenbosch, South Africa, 2013; SLSC, Colombo, Sri Lanka, December, 2011; MIMAR, Sidney Sussex College, Cambridge University, UK, 2011; RAMS, Lake Buena Vista, Florida, USA, 2011

**Training**– Continuous Casting and Steel Melting Shop Maintenance, Bekabad and Novolipetsk, Erstwhile USSR, 1988

## **OTHER ACTIVITIES:**

1. External Examiner for M. Tech. theses (May 2010, April, 2022) and MS thesis (2014) at Subir Chowdhury School of Quality and Reliability, Indian Institute of Technology, Kharagpur.
2. Member, Selection Committee, Post of Assistant Professor, Subir Chowdhury School of Quality and Reliability, Indian Institute of Technology, Kharagpur, August 2021
3. Member, Workshop on Academic and Research Programs for Subir Chowdhury School of Quality and Reliability at IIT, Kharagpur on 8<sup>th</sup> May, 2017 – For Redefining its Vision, Mission, Academic programs, Research activities and Partnerships with Industries and other Organizations
4. Industrial Collaborator for Safety Analytics and Virtual Reality Research Group, Department of Industrial and Systems Engineering, Indian Institute of Technology, Kharagpur
5. Reviewer for papers submitted to ten international journals from Wiley, Elsevier and Emerald, IEEE, Springer, Totem, Book Chapters for IGI Global and to Reliability and Maintainability Symposium, RAMS 2011.
6. Delivered invited lectures at Reliability Engineering Centre, Indian Institute of Technology, Kharagpur on 12<sup>th</sup> May, 2010 and 13<sup>th</sup> March, 2014 and Indian Statistical Institute, Kolkata on 26<sup>th</sup> March, 2013.
7. Delivered a lecture at Virtual International Faculty Development Program on Frontiers of Mathematics by SRM Institute of Science and Technology, Chennai and 1 Decembrie 1918 University, Alba Lulia, Romania on 15<sup>th</sup> July, 2023
8. Member, Project Review Committee Meetings for Government Budgetary Supported Research and Development Projects under Ministry of Steel and Assessor for Research and Development proposals under Steel Development Fund for Ministry of Steel and Mines, Department of Science and Technology (under Ministry of Science and Technology) and Ministry of Railways.
9. Member, Advisory Board, Department of Mechanical Engineering, Anil Neerukonda Institute of Technology, Visakhapatnam and Member, Board of Studies, Department of Metallurgical Engineering, Andhra University College of Engineering (Autonomous), Visakhapatnam
10. Member, Executive Committee, Association of Iron and Steel Technology India Member Chapter, New Delhi and Reviewer/Member, Awards Committee – Association of Iron and Steel Technology T. C. Graham prize, U.S.A. and Indian Institute of Metals awards, India.
11. International Advisory Board and National Steering Committee Member, International Conference on Physical and Mathematical Modelling in Iron and Steelmaking in Honour of Professor Dipak Mazumdar, Kanpur, India, December 2022
12. Program Committee Member, Seventh International Symposium on System and Software Reliability, ISSSR 2021, Chongqing, China, September 2021 and Chair for Multiple Sessions at Ninth International Conference on Mathematical Methods in Reliability, MMR2015, Tokyo, Japan, 2015 and Eleventh International Conference on Mathematical Methods in Reliability, MMR 2019, Hong Kong