### TWO-DAY WORKSHOP ON

## **COMPOSITE MATERIALS**

February 24-25, 2020

### REGISTRATION FORM

Name: Mr/Ms/Mrs/Dr:
Academic Qualification:
Designation:
Organization:
Institution Address:
Mobile:
E - Mail:
Registration Fee Details:
D.D. No.:
Bank Name:
Accommodation Requirement : YES / NO
Date: Signature

The above information along with D.D may be sent to the coordinators on or before **Feb 14**, **2020** 

### **CHIEF PATRONS**

Dr. T. R. Paarivendhar, Founder Chancellor, SRMIST

Mr. Ravi Pachamoothoo, Chairman, SRMIST

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### **REGISTRATION FEE**

Academic / Industry Participants: Rs.1000/- (Includes participation certificate, workshop kit, lunch, tea & snacks)

Please fill the Registration form and send it before the due date with the DD in favour of "Mechanical Engineering Association" payable at Chennai.

The fee can also be paid online to the below account:

Account name: Mechanical Engineering Association

Account number: 459777734

Bank name: Indian Bank

IFSC code: IDIB000S181

MCIR No: 600019171

Registration Online: https://qrgo.page.link/ZRUkB

Last date for Registration: Feb 14, 2020

### CONTACT:

### Mr. A. Vinoth

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SRM Institute of Science and Technology

Kattankulathur -603203

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# TWO-DAY WORKSHOP ON

# **COMPOSITE MATERIALS**

## Key Speaker Prof. DEBES BHATTACHARYYA

Distinguished Professor
Department of Mechanical Engineering and
Director of the Centre for Advanced Composite
Materials, University of Auckland,
New Zealand

February 24-25, 2020



Organized by
Department of Mechanical Engineering
SRM Institute of Science and Technology

Convener

**Dr. S. Prabhu**Professor and Head

**Co-Convener** 

**Dr. P. Nanda Kumar** Head - Design Division

Co-Ordinator Mr.A.Vinoth

Assistant Professor (Sr.G)
Department of Mechanical Engineering
SRM Institute of Science & Technology
Kattankulathur -603203.
Kancheepuram (DT), Tamilnadu.
http://www.srmist.edu.in/icame-2020

## **ABOUT THE INSTITUTE**

SRM Institute of Science and Technology (Formerly known as SRM University) is one of the top ranking University and most premier engineering destinations in India. It is established in 1985 by the Founder Chancellor Dr. T. R. Paarivendhar, SRM IST is functioning in four campuses located at Kattankulathur, Vadapalani and Ramapuram in Tamilnadu and a fourth campus at Modi Nagar, Ghaziabad with over 50,000 students and 3,200 faculty members, offering wide range of undergraduate, postgraduate and doctoral programs in Engineering, Management, Medicine & Health Sciences, Law and Science & Humanities. The Institution has moved up through international alliances and collaborative initiatives to achieve global excellence. Over 150 students sponsored to 35 foreign Universities like MIT. Carnegie Mellon, UC Davis, Warwick and Western Australia. Now the Institute enjoys an unsurpassed reputation in academic and corporate circles being the preferred manpower source for vision to be recognized as a world - class learning institution. SRM IST has been placed as category A by Ministry of Human Resource Development (MHRD): Government of India, SRM IST is accredited by NAAC with A++ Grade in the year 2018 and has been classified as category I university under section 12B by UGC. QS-IGAUGE has awarded SRM IST with a Diamond university rating and also it has been awarded a Four Star rating by Quacquarelli Symonds ('QS').

### **ABOUT THE DEPARTMENT**

The Department of Mechanical Engineering is one of the pioneering departments of SRM IST. The present faculty strength is 137. About 500 research papers have been published in international journals and about 700 papers in international / national conferences. The department is functionally divided into three areas of specialization: (i) Design, (ii) Manufacturing and (iii) Thermal Engineering. The National Board of Accreditation had accredited the Mechanical Engineering program in 1997, itself. The Mechanical Engineering department at Kattankulathur campus is accredited by Engineering Accreditation Commission of ABET, USA (www.abet.org). The department also offers Doctoral programs in these three areas of specializations. The following were the salient workshops and conferences conducted by Mechanical Department: Short Course on Mechanics of Composite Materials and Structures: 2015, Workshop on Development, Manufacturing and Analysis of Advanced Composites, 2015 and short course on FEM, 2015, National Conference on Advances in Mechanical Engineering (NCAME 2016), Brain Wave Robotics, 2017, International Conference on Advances in Mechanical Engineering (ICAME

2006 & 2018). Various Research facilities available in the department are 51/2 axis CNC Machine, IRB 1410 robot, IRB 360 FlexPicker Vision ABB robot, wear and friction monitor Apparatus, thyristor controlled 64 – segment program electric furnaces, 7 Mill volt He – Ne with spatial filter, vision systems, computerized surface roughness tester, FARO portable CMM, Carl Zeiss CMM, six axes spine simulator, computerized IC

engine test Rig, gas analyzer, Kistler Impact hammer, RPT, solar steam cooking plant and FMS systems, DSC, CFD, Stir Casting, Friction Welding, Composite Equipments.

### **COURSE OBJECTIVES**

The objective of the workshop is to provide the participants a theoretical and practical knowledge in the field of composite materials. This workshop will broadly cover the following topics: Introduction to composites, applications and manufacturing of composite materials, Mechanics of composite lamina / laminate, failure prediction, analysis and design of sandwich structures.

### **WORKSHOP CONTENT**

- ☑ Introduction to composites
- ☑ Manufacturing of composite materials
- ☑ Micro / Macromechanics of composites
- ☑ Failure analysis of composites
- ☑ Various applications of composites / case studies
- Demo on few equipments available in the composite laboratory like compression moulding machine, ball mill, hot press etc.
- Demo on solving composite related problems using FEM Package like Ansys.

### **BIOGRAPHICAL SKETCH OF THE KEY SPEAKER**

Professor Debes Bhattacharyya is a Distinguished Professor in the Department of Mechanical Engineering and has been the founding Director of the Centre for Advanced Composite Materials at the University of Auckland. In 2016, he was felicitated as the Dr. A. P. J. Abdul Kalam Professor by SRM IST in Chennai. India. He also holds an Adjunct Professor position at

Washington State University, Pullman, USA. Professor Bhattacharyya was the Head of Mechanical Engineering Department from 1999 to early 2005. His research interest includes the mechanics and manufacturing of composite materials. He has held visiting positions at various universities in Australia, Canada,

Germany, Hong Kong and the US, and has been awarded a number of international awards. He has delivered > 60 keynote/plenary/invited lectures at international conferences. He is currently the Editor (2) and Associate Editor (1) of three international journals and has served/is serving on the Editorial Advisory Boards of eight journals. Prof.

Bhattacharyya has more than 450 scientific/technical publications including several edited/authored books and a number of book chapters. He has successfully implemented several international patents. He is a Fellow of the Royal Society, NZ and a Distinguished

Fellow of the Institution of Professional Engineers NZ (IPENZ). He is a life member of ASME. For his international academic achievements. He has been awarded an honorary 'Doctor of Engineering' (honoris causa) by the University of Southern Queensland, Australia. In 2012, he was awarded by IPENZ the Supreme Technical (John Cranko) Award for his professional contributions. He is a member of the Executive Council and past President of the Asian-Australasian Association of Composite Materials. He has done extensive consulting in New Zealand and

overseas, and has chaired or served on many panels in New Zealand and Australia. He has been involved in the supervision of more than 110 postgraduate students including about 62 PhD candidates. He has overseen 18 postdoctoral fellows/research associates. He has served as the Reviewer/Assessor for more than 35 international journals and organisations in Australia, Bulgaria, Canada, Hong Kong, Poland, Singapore & NZ. He has been the founding Director of Centre for Advance Composite Materials (CACM) until recently and has raised as The Principal Investigator about \$45M from both private and public sources in NZ and overseas — has established collaborative partnerships with several organisations in Australia, Canada, China, Germany and the US. He served on three government panels (one as Chair and two as Member) in Australia to evaluate the performances of major research centres.