MHRD
Govt. of India

सत्यमेव जयते

GIAN
GLOBAL INITIATIVE OF ACADEMIC NETWORKS

Program on
MULTI-SCALE MODELING OF ADVANCED MATERIALS

June 16 – 29, 2019

By
International Faculty

Prof. Samit Roy
Chair Professor, Aerospace Engineering and Mechanics
University of Alabama, Tuscaloosa

Course Coordinator

Dr. Vinay Agrawal
Associate Professor,
Department of Civil Engineering, MNIT Jaipur

Dr. Mahesh Kumar Jat
Professor & Head,
Department of Civil Engineering, MNIT Jaipur

Organized by-
Department of Civil Engineering
Malaviya National Institute of Technology Jaipur-302017

ABOUT THE GIAN COURSE

The Ministry of Human Resource Development (MHRD), Government of India has launched an innovative program titled "Global Initiative of Academic Networks (GIAN)" in higher education, in order to garner the best international expertise into our system. As a part of this, internationally renowned academicians and scientists are invited to augment the country's academic resources, accelerate the pace of quality reforms and elevate India's scientific and technological capacity to global excellence. More details on GIAN courses can be seen at http://www.gian.iitkgp.ac.in/.

OVERVIEW OF THE PROGRAM

Today's requirement for the highly effective and efficient material, which should be concerned with the eco-friendly world of finite resources, has led advanced composites to be one of the most important material in the high technology revolutionary world. Multi-scale modeling (MSM) combines existing and emerging methods from diverse scientific disciplines to bridge the wide range of time and length scales that are inherent in a number of essential phenomena and processes in engineering environment.
In this course, the instructor will share his extensive experience in collaborating with NASA, the Army, the Air Force, DRDO, ISRO, etc. on challenging research projects related to Multi-Scale Modeling of Advanced Materials. The GIAN course on Multi-Scale Modeling of Advanced Materials is designed to enable participants to be able to design a nano-particle-reinforced composite component spanning over many length-scales and time-scales, based on the fundamental principles of physics, chemistry, thermodynamics and mechanics

PROGRAM OBJECTIVES

The primary objectives of the course are as follows:

- Exposing participants to the fundamentals of multi-scale modeling,
- Building in confidence and capability amongst the participants in the application of MSM in Advanced Materials,
- Providing practical information and exposure to powerful and sophisticated modeling tools,
- Enhancing the essential background of the participants to understand the physics and relate it to the required mechanics and mathematics and emphasizes systematic solution approaches so as to apply them correctly and efficiently to the required problem.

TEACHING FACULTY

Prof. Samit Roy is the William D. Jordan Chair Professor of Aerospace Engineering and Mechanics at University of Alabama, Tuscaloosa. Before moving to an academic position, he was a Senior Research Engineer at the Southwest Research Institute (SWRI), San Antonio, Texas. Dr. Roy has authored 64 journal papers, 12 book chapters, 1 text book, and more than 80 conference papers. Prof. Roy's research interest is directed toward multi-scale modeling and failure prediction of fiber reinforced polymer composites and structural adhesives subjected to environmental conditions, using the finite element method.

Eminent Faculty from NITs and IITs

WHO SHOULD ATTEND

- Civil Engineers interested in obtaining improved knowledge for the conceptual and detailed modeling analysis of composite materials through MSM.
- Graduate and undergraduate students from any Engineering majors and employees of the Civil, Mechanical or Aerospace Industry who are interested regarding design and modeling of advanced materials and nano-particle reinforced composite materials.

HOW TO REGISTER

- Stage – 1: One time Web (Portal) Registration: Visit GIAN Website: http://www.gian.iitkgp.ac.in/GREGN/index and create login User ID and Password. Fill up the blank registration form and do web registration by paying Rs. 500/- online through Net Banking/Debit/Credit card. This provides him/her with life time registration to enroll in any number of the GIAN courses offered.
- Stage – 2: Course Registration (Through GIAN Portal): Log in to the GIAN portal with the user ID and Password created. Click on "Course Registration" option given at the top of the registration form. Select the Course titled "MULTI-SCALE MODELING OF ADVANCED MATERIALS" from the list and click on "Save" option. Confirm your registration by Clicking on "Confirm Course".

COURSE / REGISTRATION FEES

- Participants from abroad: US $500
- Industry/ Research Organizations: Rs. 30,000/-
- Academic Institutions: Rs. 10,000/-
- Students: Rs. 2,000/-

The above fee includes all instructional materials, use of computer facilities for tutorials, internet facility and refreshments.

Boarding and lodging will be provided in the Institute Guest House on payment basis subject to availability.

PAYMENT OF FEES

Account Title: Registrar MNIT Jaipur
Bank & Branch: ICICI Bank, MNIT Branch, Jaipur
Account No: 676805000011
IFSC Code: ICIC0006768

PATRON

Prof. Uday Kumar Yaragatti
Director, MNIT Jaipur

Course Coordinator

Dr. Vinay Agrawal
Associate Professor,
Department of Civil Engineering, MNIT Jaipur

Dr. Mahesh Kumar Jat
Professor & Head,
Department of Civil Engineering, MNIT Jaipur

ABOUT THE MNIT JAIPUR

Malaviya National Institute of Technology Jaipur is one of the NITs established by Govt of India to promote technical education in the country. MNIT campus spreads over 325 acres of lush green area in the central location of Jaipur city. The Institute offers undergraduate and post graduate courses (M.Tech./M.Sc. & Ph.D.) to about 4500 students in almost all the leading fields of Engineering, Technology, Management and Sciences. The Institute has renowned faculty and labs with state of the art equipments. The Institute is actively engaged in research, consultancy and developmental activities besides imparting technical education.

ABOUT THE CIVIL ENGINEERING DEPARTMENT

Civil engineering discipline was introduced at Malaviya National Institute of Technology (then Malaviya Regional Engineering College), Jaipur, in 1965. It is equipped with world class laboratories, especially material testing, hydraulics, survey, road material testing, and soil testing laboratories. Right from its inception, the Department has been doing its best to bring about excellence in academics.

The department is equipped with latest facilities and equipments for extensive training to both the undergraduate and postgraduate students. In addition to that these are also used for numerous research, consultancy and testing works.

For Correspondence

Prof. Mahesh K. Jat or Dr. Vinay Agrawal
Department of Civil Engineering, MNIT Jaipur
JLN Marg Jaipur - 302017
Email: vagarwal.ce@mnit.ac.in; mkjat.ce@mnit.ac.in

REGISTRATION FORM

Course on

MULTI-SCALE MODELING OF ADVANCED MATERIALS

(June 16 – 29, 2019)

Malaviya National Institute of Technology Jaipur 302017, Rajasthan

Name: Mr./Ms/Dr._____

Designation: _____

Department: _____

Organization: _____

Address for Correspondence: _____

_____

_____

E-mail ID: _____

Field of Specialization: _____

Experience: _____ (in years)

Details of fees _____Cash/DD/NEFT

Signature _____ Date _____

RECOMMENDATION OF THE SPONSORING AUTHORITY:

The applicant is hereby sponsored and will be permitted to attend the GIAN Program, if selected.

Date: _____ Signature and Seal of Sponsoring Authority