

Technical experts for lecture
On
“Computational Methods and Analysis For Engineers”



Prof. Ravindra D Gudi
IIT Bombay



Prof. Tanmay Basak, IITChennai



Dr. Senthil
Murugon S., Associate Prof. , IIT
Guwahati



Dr. Gaurav Manik, Associate
Prof. ,IIT Roorkee



Prof. K.N.S. Kasi Viswananda, NIT
Warangal



Prof. Syed Fahad Anwer,
ZHCET-AMU



Dr. Vimal Kumar, Associate Prof.,
IIT Roorkee



Prof. Sachin L. Borse,
ICER, Pune



Dr. B. Srinivasa Babji , Ex. Digital
Services Lead in Industrial
Automation, ABB Bangalore



Prof. Jalesh Purohit, Dharamsinh
Desai University, Nadiad



Prof. Kannan A., IIT Chennai



Prof. Sharad Bhartiya, IIT
Bombay

CHIEF-PATRON



Professor (Dr) Lalit Kumar Awasthi,
Director,
Dr B R Ambedkar National Institute of Technology,
Jalandhar

PATRON



Dr Sangeeta Garg,
Associate Professor & Head,
Department of Chemical
Engineering,
Dr B R Ambedkar National
Institute of Technology,
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CONVENER



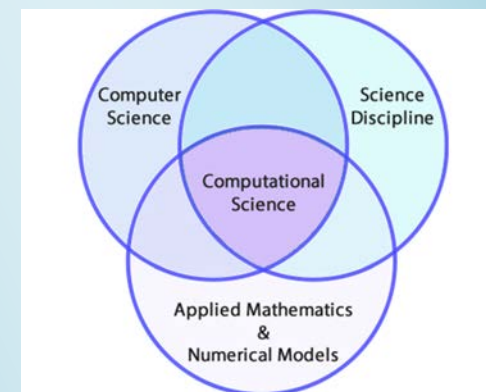
Dr. Anurag Kumar Tiwari
, Assistant Professor,
Department of Chemical
Engineering,
Dr B R Ambedkar National
Institute of Technology,
Jalandhar

ORGANIZING COMMITTEE

- Dr A Mukhopadhyay
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- Dr Deepak Sahu
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- Ms. Jyoti Sharma

One Week Online
Short Term Course
(TEQIP-III SPONSORED)
On

**“Computational Methods and
 Analysis for Engineers”**



(November 18-22, 2020)

Organized by



COURSE COORDINATOR



DR. RAJ KUMAR ARYA
ASSOCIATE PROFESSOR
DEPARTMENT OF CHEMICAL ENGINEERING
DR. B.R. AMBEDKAR NATIONAL INSTITUTE OF
TECHNOLOGY , JALANDHAR, PUNJAB

ABOUT NIT, JALANDHAR

Dr B.R. Ambedkar National Institute of Technology Jalandhar (NITJ) was established in the year 1987 as Regional Engineering College and was conferred the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Human Resource Development, New Delhi. The Government of India has declared the Institute as an “*Institute of National Importance*” under an act of Parliament in 2007.

As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute offers B Tech, M Tech, M Sc, MBA and PhD programmes in several disciplines of Engineering, Technology and Sciences.

ABOUT THE DEPARTMENT

The Department was established in 1990 and has been playing a vital role in the development of Chemical Engineering education and research by offering B.Tech, M. Tech and PhD programmes. Its Alumni are occupying eminent positions in chemical industries, research and academic institutions in India and abroad. The Department has established state-of the art laboratories with sophisticated equipment for undergraduate courses and research work. The Department recently received coveted FIST grant of Rs. 155 Lac from Department of Science and Technology, New Delhi to augment post graduate research.

OBJECTIVES OF THE COURSE

In our day to day engineering problem solving procedures as we proceed to formulate solutions we tend to end up with different types of equations. These equations could be a nonlinear equation, a system of non-linear equations, linear algebraic equation, a system of linear algebraic equations, linear ordinary differential equation, a system of linear ordinary differential equations, non-linear ordinary differential equation, a system of non-linear ordinary differential equations, a system of coupled ordinary differential equations, a system of coupled non-linear ordinary differential equations, partial differential equations (linear and non-linear) or a system of coupled partial differential equations (linear and non-linear).

Questions linger in our minds whether the generated answers are correct or wrong, and thus these equations need to be analyzed and solved using some efficient techniques which would give an answer close to the analytical solution. This short term course has been designed with an aim to give hands-on experience to students, scholars and researchers of chemical engineering specially those working in the modeling and simulation field on the usage of various computational techniques, their applications and limitations.

WHO CAN ATTEND THIS STC

Registration is open to: academia, industry and R & D laboratories. Interested participants may apply by filling in the Google Form with payment proof on or before 16th November 2020.

REGISTRATION FEE

Academia	Rs.100/-
Industry participants	Rs.200/-

Registration fee (Non refundable) should be paid through Paytm OR Google Pay: +91-9819588825 following the payment, screenshot of the same needs to be uploaded during registration. There is no registration fee for NITJ students and employees.

Registration link for NITJ :

<https://forms.gle/xwvAPQRD36KKwySEA>

Registration link for others:

<https://forms.gle/XxB46qonxH25h2TS8>

E-CERTIFICATES WILL BE ISSUED TO THE REGISTERED PARTICIPANTS ONLY.

CONFIRMATION OF PARTICIPATION

On receiving the Google form and fee remittance receipt, participants will be sent confirmation of their participation through email by 16th **November, 2020**. As the programme will be conducted online, the number of participants in the STC would be limited to 200. Candidates are therefore advised to register early to avoid disappointment.

For any queries related to the STC, kindly contact: aryark@nitj.ac.in, or +91-9819588825



Dr. B. R. Ambedkar National Institute of Technology, Jalandhar
Department of Chemical Engineering
One Week Online Short Term Course



on

“Computational Methods and Analysis for Engineers” November 18 to 22, 2020

Registration link for NITJ : <https://forms.gle/xwvAPQRD36KKwySEA> , Registration link for others : <https://forms.gle/XxB46qonxH25h2TS8>

Date and Time	10:00 – 11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00
18-11-2020 Wednesday		Linear Regression Analysis by Prof. Ravindra D. Gudi , Department of Chemical Engineering, IIT Bombay				Finite Element Modeling by Prof. Tanmay Basak, Department of Chemical Engineering, IIT Chennai	
19-11-2020 Thursday				Response Surface Methodology and Optimization by Prof. Kannan A., Department of Chemical Engineering, IIT Chennai		Data Analytics in Process Industries by Dr. B. Srinivasa Babji , Consultant , Ex. Digital Services Lead in Industrial Automation, ABB Bangalore	
20-11-2020 Friday	Machine Learning: An introduction with Applications in Chemical Engineering by Prof. Sharad Bhartiya, Department of Chemical Engineering, IIT Bombay			Modeling and Optimization of Membrane Separation Processes by Dr. Senthil Murgon, Associate Professor , Department of Chemical Engineering, IIT Guwahati		Development of DNS solver for Incompressible Flows using Body Fitted Coordinate System by Prof. Syed Fahad Anwar, Department of Mechanical Engineering, Zakir Husain College of Engineering and Technology – Aligarh Muslim University	
21-11-2020 Saturday	Polynomial Interpolation and Least-Square Approximation: Applications in Chemical Engineering by Dr. Vimal Kumar, Associate Professor, Department of Chemical Engineering, IIT Roorkee			Molecular Modelling and Computational Analysis: Applications in Development of Composites and Coatings by Dr. Gaurav Manik, Associate Professor, Department of Polymer and Process Engineering , IIT Roorkee		Solution of Nonlinear Algebraic equations, ODEs and brief about PDEs by Prof. Jalesh Purohit, Department of Chemical Engineering, Dharamsinh Desai University, Nadiad, Gujarat	
22-11-2020 Sunday	Formulation of Governing Equation and Solving with Finite Difference in Heat and Fluid Flow by Prof. Sachin L. Borse, Department of Mechanical Engineering, Imperial College of Engineering and Research, Wagholi, Pune, Maharashtra			Numerical Integration and Differentiation by Prof. K.N.S. Kasi Viswanandham, Department of Mathematics, NIT Warangal		Valedictory	

For any query related to STC, please contact, Dr. Raj Kumar Arya, Course Coordinator , aryark@nitj.ac.in, or +91-9819588825