

SHORT TERM COURSE

On

Computational Materials Modelling & Simulation

(CMMS 2020)

(Under CoE (in Advanced
Materials), TEQIP- III)

February 17 – 21, 2020



Organized By:

Department of Metallurgical and
Materials Engineering
National Institute of Technology
Durgapur

Mahatma Gandhi Avenue
Durgapur-713209, W.B., India
Website: www.nidgp.ac.in

ORGANIZING COMMITTEE

Patron: Prof. Anupam Basu, Director, NIT Durgapur

Chairman: Dr. M.M.Ghosh, Head, Metallurgical and
Materials Engg. Dept., NIT Durgapur

Advisory Committee: Prof. K. S. Ghosh & Prof . J.
Maity

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Dr. M. K. Mondal,
Dr. S. Bera

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Important Dates

Last date for receiving registration form: 07.02.20

Date of confirmation: 10.02.20

Accommodation

Accommodation and travel expenses should be borne by the participants. Limited shared accommodation (Optional) may be availed at the Institute Guest House on payment basis and subject to availability. Participants can also arrange their own accommodation outside the campus. No TA/DA will be paid to the participants by the institute

Registration Form

Short Term Course
on

Computational Materials Modelling & Simulation (CMMS
2020), February 17 – 21, 2020
(Under CoE (in Advanced Materials), TEQIP-III))

1. Name:.....

2. Designation:.....

3. Organisation/Institution:.....

4. Qualification:.....

5. Mailing Address:

6. Phone No.:

7. E-mail ID:

8. Category (Pl. tick):

Industry

Academic Institution / R&D Org.

Student/research scholar

9. Details of D.D. / Net transfer:

Bank

Amount.....

DD No. and Date:

Reference no (NEFT/RTGS).....

Certified that the above information's are true
and correct to the best of my knowledge and
belief.

Date:

Signature of applicant

Place:

Signature and seal of Head of the
Department/Institute

Course Theme

Our society needs a consecutive development in science and technology for betterment of human beings and materials are the building blocks of all kinds of modern technologies. The development of the new materials is essential in order to fulfil the requirements from automotive and aerospace to biomedical applications. Moreover, the in-depth understanding the behaviour of materials from processing to application is also very much essential. As a consequence, the field of materials modelling & simulation emerges as the leading area of research and development in the field of Materials Science and Engineering. There is an utmost need to understand the concept of materials modelling and simulation in order to develop new generation materials. Therefore, different materials modelling & simulation techniques for development of new materials need a thorough review from experts in this field and subsequent transfer of the knowledge-base to various sectors of society.

In this context, Metallurgical and Materials Engineering Department of NIT Durgapur, under the aegis of CoE on Advanced Materials (TEQIP-III), will organize a five-day short term course on “**Computational Materials Modelling & Simulation**” (CMMS 2020). Practicing technologists in industries, academicians and researchers who require enriching their knowledge on relevant issues will be benefitted immensely from the deliberations

Course Content

The proposed topics of discussion in the short term course include but not restricted to:

- **Overview of Materials Modelling & Simulation**
- **Density Functional Theory (DFT)**
- **Molecular Dynamics (MD)**
- **Phase Field Modeling of Solidification Microstructures**
- **Finite Element Analysis (FEM)**

- **Machine Learning in Materials Science**

List of speakers

Dr. Somnath Bhowmick, IIT Kanpur
Dr. Subhradeep Chatterjee, IIT Hyderabad
Dr. Snehanshu Pal, NIT Rourkela
Dr. Ashok Kumar Arya, BARC Mumbai
Dr. M. M. Ghosh, NIT Durgapur
Dr. K. Khan, NIT Durgapur
Dr. M. K. Mondal, NIT Durgapur
Mr. R. N. Ray, Ex-professor, NIT Durgapur
Dr. Abhiram Hens, NIT Durgapur
Dr. N. D. Jana, NIT Durgapur

Eligibility for Participation

The program is open to engineering professionals from industries, faculties from Engineering Institutions / Universities, employees from R&D organizations, students and research scholars.

Registration fee

For Industry Personnel: Rs. 5000/-
For Faculty/ R& D organization: Rs. 3000/-
For Student: Rs. 2000/-
(Registration fees includes Kit, Tea, Snacks and Lunch)

REGISTRATION PROCEDURE

Duly filled-in “Registration Form” forwarded by the competent authority should reach the following address on or before **31.01.2020** along with the demand draft (in ORIGINAL) drawn in favor of “**CEP NIT Durgapur**” payable at Durgapur. Registration fee can also be paid by online transfer in the following account:

Bank: State Bank of India

Branch: R. E. College Branch

Account name: CEP NIT DURGAPUR

Account no: 37850318679

IFSC code: SBIN0002108

Address: Coordinator, CMMS 2020, Department of Metallurgical and Materials Engineering, National Institute of Technology Durgapur, Mahatma Gandhi Avenue, Durgapur-713209, WB, India.

ABOUT THE INSTITUTE & SPONSOR

National Institute of Technology, Durgapur (formerly Regional Engineering College, Durgapur), has a glorious past and illustrious present. It has its foundation in the name of Regional Engineering College, Durgapur, which was instituted to function as a pace setter for engineering education in the country and to foster national integration. It is a fully-funded premier technological Institution of the Government of India and is administered by an autonomous Board of Governors.

Of late, Durgapur city is under tremendous growth in industrial and educational sectors. During the month of February the climatic condition in Durgapur is very pleasant. The average temperature is between 15 and 25 °C.

Technical Education Quality Improvement Programme III (TEQIP-III) is a world bank funded project aiming at improving the technical education of the country and uplifting the research quality. It helps to fund innovative projects in the academic institutions and developing laboratory facilities needed to pursue research activities. **Centre of Excellence (CoE)** on Advanced Materials was set up in NIT Durgapur under the funding of TEQIP - II for research and development of materials for advanced structural and functional applications.

ABOUT THE DEPARTMENT

The Department, which started its journey in the year 1960, presently offers B.Tech. (Metallurgical and Material Engineering), M.Tech. (Metallurgy and Materials Technology) and Ph.D. Program. The Department maintains high level of interactions with other academic institutes (IIT Kharagpur, Jadavpur University, IEST (Shibpur) and NIFFT (Ranchi)), CSIR Laboratories, DSP and other steel plants in India. At present, thirteen highly qualified and dedicated faculty members are serving this Department. The research activities of the Department are centered on B.Tech. and M.Tech. Projects, Ph.D Programmes and sponsored research projects. Many research papers have been published in reputed peer reviewed Journals.