



Department of Chemical and Biochemical
Engineering
&
Department of Mathematics



Continuing Education Programme (Online)
on
**Resource Optimization for Process Industries
(ROPI)**
(17th – 19th February 2023)

Patron

Prof. T. N. Singh, Director, IIT Patna

Coordinators

Dr. Nitin Dutt Chaturvedi, IIT Patna

Dr. B. B. Upadhyay, IIT Patna

Important Dates

Last date of Registration & Payment: 16th February 2023

Confirmation and Invitation Link: 16th February 2023

Course Description and Content

The program is intended to focus on basics of convex optimization along with gradient and evolutionary algorithms used for modeling and solutions of real life/industrial problems. Moreover, this online CEP will provide a forum for reviewing and discussing all aspects of resource optimization in process industries including the domains of process system engineering and process integration. The program includes, but is not limited to the following topics:

- Fundamentals of optimization
- Evolutionary algorithms
- Optimization in Data science
- Stochastic and Robust optimization
- Energy Optimization
- Water Conservation
- Heat Exchanger networks
- Carbon Capped production planning
- CFD Applications of optimization
- Supply chain management
- Taguchi Methods/RSM
- Solar thermal applications / Engine performance

Resource Persons

Prof Santanu Bandyopadhyay, IIT Bombay

Prof. S.K.Neogy, ISI, Delhi

Prof. Joydeep Dutta, IIT Kanpur

Prof. Anil K. Agrawal, IIT BHU, Varanasi

Prof. Sudhanshu Shekhar Sahoo, OTR Bhubaneswar

Dr. Rajkumar Saini, RKSTS, Noida

Target Audience

The course is suitable for students, scientists in R&D organizations, faculty members, and professionals involved in research and development of optimization techniques and algorithms in areas of science and engineering.

Fee Payment

Students: Rs 1000

Faculty/Professionals: Rs 2000

The participation fee for the CEP will be accepted only through e-transfer /RTGS/NEFT.

Details for Online Payments:

A/c Name: CEP-IIT PATNA

A/c No.: 40968673047

IFSC Code: SBIN0017164

Bank Name: STATE BANK OF INDIA

Branch Name: IIT Patna Bihta Campus Branch

Registration:

For registration use the following link:

https://docs.google.com/forms/d/e/1FAIpQLScNTe_UphobLVxy4qZlpGNzNwR5IO1pyhJWwNqDagigg0TeCA/viewform?usp=sf_link

Please Make the online payment before the registration as details as registration form requires the screen shot of online payment receipt, date, and reference number of the payment.

Selection Criteria and Certificate Issuing

Selection will be done on First Come First Served basis. An E-Certificate of participation from IIT Patna will be awarded to all participants after successful completion of the course.

Address for Correspondence:

Dr. Nitin Dutt Chaturvedi

Dr. B. B. Upadhyay

Indian Institute of Technology Patna



[Email: ropcep@gmail.com](mailto:ropcep@gmail.com)

Website:

<https://sites.google.com/view/ropi2023/>