

Dr. Mishra obtained his PhD in fire safety from University of Duisburg-Essen, Germany in the year 2010. After that he worked as Post-Doctoral Scientist at BAM Federal Institute for Materials Research and Testing in Berlin, Germany. He has 21 journal papers, 20 patents and 42 conference papers to his credit. He is also the recipient Early Career Research Award -2016 by Science and Engineering Research Board, Govt. of India. His areas of interests are process and plant safety, industrial accidents, fire, explosion, combustion and CFD modelling.

Objectives:

The primary objectives of the course are as follows:

- i) Introducing participants to the fundamentals of process and plant safety requirements and current trends,
- ii) Bridging the gap between theoretical knowledge and real practices.
- iii) Expert advices on potential hazard scenarios and risk assessment methodologies.
- iv) Providing best possible approaches to mitigate any hazard effectively.
- v) Recommendation to utilize latest computational modelling approaches to assess the risks.
- vi) Providing exposure to practical problems and their solutions, through case studies and live projects in process and plant safety.
- vii) Enhancing the capability of the participants to identify, control and remove safety related problems in a typical process plant.

Modules:

Module A: Introduction to process and plant safety

Module B: Plant safety concepts

Module C: Release scenario and consequence analysis

Module D: CFD Modelling based risk assessment



Prof. habil. Dr.-Ing Ulrich Krause is chair and full professor of Plant Design and Process Safety at Institute of Instrumental and Environmental Technology (IAUT) in Otto Von Guericke University in Magdeburg, Germany, which he joined in 2011.

He studied fluid mechanics and thermodynamics at the Technical University of Dresden from 1980 to 1985 and obtained his Ph.D. in 1989. In 2001, he completed his Habilitation (equivalent to D.Sc.) on heat and mass transfer in dust explosions, also at the Technical University of Dresden, Germany. He was also the head of Division of Fire Engineering at the German Federal Institute for Materials Research and Testing (BAM) in Berlin, Germany, which he joined in 1991. His research interests focus on accidental fires in bulk materials, solid fuels, dust explosions, and on the CFD modelling of fires and explosions. Previously, he also lectured on computational methods in process safety at the Technical University of Berlin. He is member of several European standardization working groups, has authored and co-authored 13 monographs, has published over 67 papers in scientific and technical journals to date, has held several courses on process and plant safety in industries as well as in academia all over the world. Prof. Krause is also the current vice president and head of scientific and technical advisory board of German Fire Protection Association. He is also a member of executive board of DECHEMA ProcessNet "Process and Plant Safety", members of International Association of Fire Safety Science, Intl. Forum for Fire Research Directors etc. Since 2010 Prof. Krause is a member in editorial board of Fire Safety Journal (Elsevier).



Dr.-Ing. Kirti Bhushan Mishra is an Assistant Professor in Department of Mechanical and Industrial Engineering at Indian Institute of Technology (IIT) Roorkee. He is the founder of Technological Risk Research and Analysis Group (TRAG).

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Short term course on **Process and Plant Safety**

December 2-6, 2019.

By

Prof. Dr.-Ing. Ulrich Krause

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Otto von Guericke University Magdeburg
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Course Co-ordinator

Dr.-Ing. Kirti Bhushan Mishra

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About Roorkee:

Roorkee is a part of the State of Uttarakhand and is located at the foothills of Himalayas. The nearest Airports are – Jolly Grant Airport in Dehradun and New Delhi International Airport in Delhi. The place is also within easy reach by road from Delhi (200 km) and Dehradun (70 km). Roorkee Railway Station is on the main line of Northern Railways having direct links to Delhi, Mumbai, Calcutta, Amritsar, Jodhpur and Shri Ganganagar. The place is also within easy reach by road from Delhi (200 km) and Chandigarh (180 km). It is located on Delhi–Haridwar and Delhi–Dehradun bus routes. Roorkee is ideally located near several tourist places, like Dehradun (70 km), Mussorie (100 km), Haridwar (32 km) and Rishikesh (50 km).

For more information contact course coordinator:

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About IIT Roorkee:

Indian Institute of Technology - Roorkee is among the foremost of institutes of national importance in higher technological education and in engineering, basic and applied research. Since its establishment, the Institute has played a vital role in providing the technical manpower and know-how to the country and in pursuit of research. The Institute ranks amongst the best technological institutions in the world and has contributed to all sectors of technological development. It has also been considered a trend-setter in the area of education and research in the field of science, technology, and engineering.

The Institute had celebrated its Sesquicentennial in October 1996 and now completed more than 170 years of its existence. It was converted to IIT on September 21, 2001 by an Ordinance issued by the Government of India declared it as the nation's seventh Indian Institute of Technology, an "Institution of National Importance".

The Institute offers Bachelor's Degree courses in 10 disciplines of Engineering and Architecture and Postgraduate's Degree in 55 disciplines of Engineering, Applied Science, Architecture and planning. The Institute has facility for doctoral work in all Departments and Research Centers.

About GIAN:

Union Cabinet has approved a programme titled Global Initiative for Academic Networks (GIAN) in Higher Education aimed at tapping the talent pool of scientists and entrepreneurs internationally to encourage their engagement with the institutes of Higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence. GIAN is envisaged to catalyse higher education institutions in the country, and that it will initially include all IITs, IIMs, Central Universities, IISc Bangalore, IISERs, NITs and IIITs subsequently cover good State Universities where the spinoff is vast. GIAN is an evolving scheme which will initially include participation of foreign faculty in Institutes as Distinguished / Adjunct / Visiting faculty / Professors of Practice, etc., to participate in delivering Short or Semester-long Courses. Other activities will be included in due course.

Registration form for GIAN Course on **Process and Plant Safety** (2-6 December 2019)

Name: _____

Designation: _____

Address: _____

Phone/Mob: _____

Email: _____

Registration fee (Rs): _____

Accommodation required (Yes/No): _____

Accommodation required for no of days and dates: _____

Accommodation Fee (Rs): _____

Mode of Payment(Cash/DD): _____

DD No: _____ Amount: _____

Registration fee: Participants from abroad USD: 300;

Industry: Rs.15000 ; Research Organization/ Academic

Institute : Rs.10000; Research scholars/ students:

Rs.5000.

Accommodation on sharing basic or single based on availability. Rs 500 per day at IIT Roorkee Guest House.

Note: DD in favor of "Coordinator GIAN, IIT Roorkee".

In case payment is made through NEFT/RTGS follow the account details below:

Account Name : Conference, Seminar and Symposium
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Account Number: 33136732957

IFSC Code: SBIN0001096

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Signature with date