

International Workshop on Industrial Crystallization: Principles and Practice

31st May - 1st June, 2024

Name of the Speaker & Affiliation	Proposed topic of Presentation
Prof. Dr.-Ing. Joachim Ulrich Martin Luther University Halle-Wittenberg, Germany	<ul style="list-style-type: none">● Introduction to Industrial Crystallization (Thermodynamic and Nucleation)● Crystallization Growth● Polymorphs and solvates
Mr. Dr.-Ing. Erik Temmel Sulzer Chemtech Ltd, Winterthur, Switzerland	<ul style="list-style-type: none">● Introduction to Melt Crystallization● Industrial Crystallization from Lab to Industrial Scale: Case Studies
Dr. Srividya Ramakrishnan CDMO Drug Substance Aurigene Pharmaceutical Services Ltd.	<ul style="list-style-type: none">● Beyond Reactions: Integrating downstream operations for continuous API manufacturing.
Dr. Thomas Kendall Technobis Crystallization Systems	<ul style="list-style-type: none">● Controlled Crystallization as an approach to the removal of impurities
Prof. C. S. Mathpati Institute of Chemical Technology Mumbai	<ul style="list-style-type: none">● Role of Mixing in Crystallisation Processes
Prof. P.R. Gogate Institute of Chemical Technology Mumbai	<ul style="list-style-type: none">● Ultrasound Assisted Crystallization as a Process Improvement Approach for Pharmaceutical Products
Prof B. N. Thorat Institute of Chemical Technology Mumbai	<ul style="list-style-type: none">● Crystallization, Filtration and Drying of Pharmaceuticals – Case Studies
Mr. Rahul Rane SOPAT GmbH	<ul style="list-style-type: none">● Value of image-based inline particle size measurements to address challenges during production and development of critical applications in Pharmaceutical, Chemical and Food industries.
Mr. Sylvain Querol Head of Business Development, Powder Systems Limited (UK)	<ul style="list-style-type: none">● Scaling up filtration and drying process with the smart lab assistant: GFD Lab Filter Dryer
Dr. Sumant Phadtare Senior Scientist at TATA CHEMICALS Ltd.	<ul style="list-style-type: none">● Role of Crystallization in Synthesis of Inorganic Chemicals
Dr. Sharmistha Pal Datta Dr. Reddy's Laboratory	<ul style="list-style-type: none">● Addressing Crystallization Challenges in Pharmaceutical Development

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@
K. V. Auditorium
Institute of Chemical Technology
(Formerly UDCT)
Matunga East, Mumbai 400 019,
Maharashtra, INDIA.

Registration Details

Registration Fees (**Inclusive of GST**)

- ★ Rs. 20,000/- for Industry Person
- ★ Rs. 15,000/- for Academics (Faculty/Postdoc)
- ★ Rs. 10,000/- for Research Students

Bank Details

Name of Account Holder: Institute of Chemical Technology
Name of Bank & Branch: Bank of Maharashtra, King's Circle (339)
Address of the Branch: Kaverinita Bldg 519, Mahajani Road, King's Circle, Mumbai - 400019

IFSC Code: MAHB0000339
SWIFT Code: MAHBINBBLJR
Account No.: 20019464929
MICR Code: 40014051

Last date for registration: 15th May 2024

Please pay the registration fees and complete the registration form available at the following link: <https://forms.gle/v8NN1iDmsNzcpCT19>

Contact Details:

Dr. M.D. Yadav

(Organizing Secretary)

Assistant Professor, Department of Chemical Engineering, Institute of Chemical Technology (ICT) N.P.Road, Matunga (E), Mumbai – 400019, Maharashtra INDIA
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Department of Chemical Engineering,
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About Institute of Chemical Technology

Established on October 1, 1933 as University Department of Chemical Technology (popularly called UDCT) of the University of Bombay (now Mumbai), with the noble intention of advancing India's knowledge reserves in chemical science and technology, the Institute has grown to become a premier (deemed) university devoted to education, training, research and industrial collaboration in chemical engineering, chemical technology, applied chemistry, pharmacy, biotechnology and bio-processing. Due to its size Institute of Chemical Technology (UIC) on January 26, 2002 and under TEQIP of the World Bank it was granted full autonomy in 2004. Upon strong recommendation of the UGC through a peer review process, the autonomous institute status was finally converted into a Deemed-to-be-University by the Ministry of Human Resource Development (MHRD), Government of India, on September 12, 2008.

Based on its stellar performance over the years, the Government of Maharashtra granted ICT the Elite Status and Centre of Excellence in the State Assembly on April 20, 2012. In November 2017, National Assessment and Accreditation Council (NAAC) Committee visited ICT and graded with A++ CGPA of 3.77 out of 4. ICT has been ranked amongst top ten Engineering Institutes of India and 19th amongst the top universities of the country. It is also recognized at rank 4 amongst the Pharmacy Institutes. In the BRCS QS Universities ranking 2018, ICT ranked at 118; whereas in 2019, ICT was 115 among all BRICS.

On March 2018, ICT for the first time ICT crossed the confines of Maharashtra when the Institute inaugurated the "ICT Mumbai IndianOil Odisha Campus" at Bhubaneswar on March 18, 2018. On May 4, 2018, ICT officially established its third campus at Marathwada Jalna. Our endeavors, extending well beyond the confines of the classroom, is to enhance public welfare and our attempts to dissipate knowledge will spread across a greater multi- and cross-disciplinary platform to conduct research, discovery, technology development, service to industry and entrepreneurship, in consonance with India's aspirations to be a welfare state and spread of activities, it was converted into University Department of Chemical Engineering, ICT Mumbai

Department of Chemical Engineering, ICT Mumbai

The Department of Chemical Engineering of ICT is one of the leading Chemical Engineering Departments in the Country maintaining high standards in teaching, research and industrial liaising. The Department graduates 75-80 B. Chem. Engg., 45-50 Masters students and 25-30 Ph.D. students every year. At present Department has more than 50 Ph.D. students working on various research problems keeping in tune with present day needs.

Major thrust areas:

- Development of Novel Reactors, Reactions and Separation Processes
- Computational Fluid Dynamics for Multiphase Systems
- Analysis of Multiphase Phenomena
- Novel Catalytic Materials and Processes
- Green Technology
- Biotechnology
- Cavitation Phenomena, Sonochemistry



With a rich legacy spanning 43 years, Spinco remains true to its tagline - "Bringing Technology and Enabling Science." Since its inception in 1981, the company has been committed to serving the Indian scientific community, with 'Customerization' or customer delight forming the cornerstone of its corporate culture.

Our dedicated team, consisting of over 1000 Spincoites in sales, service, application, and support, operate from a widespread network of 55+ centres across India. As 'One Spinco', we specialize in handling a diverse range of products in the fields of Chromatography, Mass Spectrometry, Bioresearch, Process Technology and Lab Essentials.

Spinco takes immense pride in its successful track record of introducing state-of-the-art technologies from leading technology providers from all over the world thereby empowering scientific advancements in India and contributing to the nation's progress.

At Spinco, we make a solemn pledge to delight our customers. We achieve this by maintaining an unwavering commitment to excellence across all facets of our operations. Our approach involves harnessing the combined power of people, knowledge, technology, and innovation. This synergy enables us to deliver products of unparalleled quality and provide world-class services, further solidifying Spinco's position as a trusted partner in scientific progress.

Organizing Committee

Chair : Professor V K Rathod, Head of the Department Chemical Engineering, ICT Mumbai.

Convenor : Professor B. N. Thorat, Professor, Department Chemical Engineering, ICT Mumbai

Members:

Dr Manish Yadav, Assistant Professor Department Chemical Engineering, ICT Mumbai

Dr Sachin Jadhav, Assistant Professor Department Chemical Engineering, ICT Mumbai

Dr Yogesh Shinde, Assistant Professor Department Chemical Engineering, ICT Mumbai

Dr Mandar Badave, Assistant Professor Department Chemical Engineering, ICT Mumbai

Dr Vishwanath H Dalvi, Associate Professor, Department Chemical Engineering, ICT Mumbai

Professor C S Mathpati, Professor Department Chemical Engineering, ICT Mumbai

INTRODUCTION TO THE SPEAKERS



Prof. Dr.-Ing. Joachim Ulrich

Professor Joachim Ulrich, Chair of Thermal Unit Operations in Chemical Engineering, has been the Editor of the Journal of Crystal Growth & Design, Chairman and Member of the European Federation of Chemical Engineering and Working Party on Crystallization. He is a Visiting Professor at the University of Rouen/France and a member of Editorial Advisory Board of the Chem. Engg. & Tech. He was also the Chairman of "Fachausschuss Kristallisation" (Working Party on Crystallization of the VDI-GVC/ProcessNet). He was Pro-Vice-Chancellor for research for Martin Luther University and the Chairman of the board of the Luckner Foundation, Halle. Awarded with Honorary doctor (Dr. H. C.) of the University of Szeged, Hungary. There are so far 93 PhD theses supervised and more than 600 papers, books, book contributions, refereed congress contributions and patents published.

Dr. Erik Temmel

Dr. Erik Temmel is presently working at Sulzer Chemtech Ltd., Winterthur, Switzerland as a Project Manager with Industrial Crystallization group. He has worked as Research project manager in the field of crystallization process development at DSM Nutritional Products AG, Sisseln, Switzerland. He has experience in the field of innovative measurement techniques at the Max Planck Institute for Dynamics of Complex Technical Systems, group of Physical and Chemical Foundations, Max Planck Institute for Dynamics of Complex Technical Systems As a Scientific coworker within the group of Physical and Chemical Foundations (Head: Prof. Andreas Seidel-Morgenstern), he has a major contribution. He has worked at Otto von Guericke University Magdeburg, Chair of Chemical Process Engineering under the tutelage of a renowned Professor Andreas Seidel-Morgenstern.



Dr. Srividya Ramakrishnan

Dr. Srividya Ramakrishnan earned her B.Tech in Chemical Engineering from the Indian Institute of Technology, Madras, and Ph.D. from Princeton University. After completing her Ph.D., she joined Unilever Research in New Jersey, and subsequently moved to the Process Research and Development group at Bristol-Myers Squibb. She joined Dr. Reddy's Laboratories Ltd. in 2008, and most recently headed API Process Engineering. She is currently the Global Head - CDMO Drug Substance at Aurigene Pharmaceutical Services Ltd. Srividya has several publications and patents to her credit and is an ASQ-certified Six Sigma Black Belt. In addition, as the Chief Diversity Officer at Dr. Reddy's, she is championing diversity within the organization and has been recognized for Leadership Commitment at UN Women India 2020 WEPs (Women's Empowerment Principles) awards. Srividya is one of the 51 women featured in "WSTEM 2021", an e-book released by the Confederation of Indian Industry (CII) on Indian women in STEM.

Prof. Dr. B. N. Thorat

Professor Bhaskar N. Thorat, is the Founder Director of ICT-IOC, Bhubaneswar with an Entrepreneurial mindset. He and his research students have several start-ups to their credit and have a mission to produce over 100 Entrepreneurs in coming years. Prof. Thorat has in his kitty several international awards including two Bill and Melinda Gates Foundation's top prize; Michael Dell's Social Innovation Award, 2 Millennium Alliance Award of 2 million USD. He credits all these awards to the innovative students of ICT. The notable entrepreneurial students of Prof. Thorat who are contributing immensely are Dr. Vaibhav Tidke, Dr. Tushar Gaware, Shri. Ganesh Bhere, Dr. Nupur Nagwekar, Shri. Swapnil Kokate, Dr. Dilip Jadhav and several others. He believes that there is much more in store for socio- and techno- entrepreneurship and plenty of space is available to be occupied.



Dr. Thomas Kendall

"Dr Thomas Kendall is an application specialist with Technobis crystallization systems with 10 years of experience in solid form and crystallization development in the pharmaceutical sector. PhD in chemical engineering with CMAC at the University of Strathclyde investigating nucleation mechanisms in pharma systems. Previously working for Pharmorphix, Johnson Matthey as a solid form scientist Investigating customer compounds in the pharma and agro sector. Designing and conducting polymorph, salt, and co-crystal screening projects, as well as crystallization development using Process analytical technologies, design of experiments, and modelling software up to Kg scale. Resulting in several patents, webinars, and a book chapter on solid form and crystallization development."



Prof. P.R. Gogate

Dr. Parag Gogate is a versatile Chemical Engineer with research interest based on the use of alternate energy sources for process intensification of physical and chemical processing applications, wastewater treatment, and crystallization. He has contributed extensively to research with outstanding publication record of 460 International journal publications (SCOPUS) along with over 33378 citations (h-index of 97). He has received various awards such as NASI-SCOPUS, Young Scientist/Engineer awards of INSA, ISCA, IEI and INAE, Hindustan Lever Biennial Award for the Most Outstanding Chemical Engineer of the Year of the IChE and the Outstanding Asian Researcher and Engineer given by The Society of Chemical Engineers, Japan.

Prof. C. S. Mathpati

Dr. C. S. Mathpati Professor in Chemical Engineering at Institute of Chemical Technology Mumbai. His research interest are Computational and experimental Fluid Dynamics, Transport Phenomena, Design of Multiphase Reactors, Process modelling and Simulation Bioreactor Design.



Dr. Sumant Phadtare

Senior Scientist at Tata Chemicals Ltd. He is expert at research and development of materials and chemicals for development of new product concepts and technology. He possess Broad in-depth knowledge and strong experience on design, synthesis and application of metals, metal oxides nano-materials and polymer-supported metal nano-particles for biocatalysts, proficient in nanotechnology, materials synthesis and materials characterizations for use in a variety of applications

Mr. Rahul Rane

Rahul Rane is a Chemical Engineer (B.E) and has pursued M.Sc. in "Process Energy and Environmental Systems Engineering" (M.Sc.) from the Technical University of Berlin. He has been working with SOPAT since 2019 as a Sales Engineer for the Asian region. With a strong experience with various processes in the pharmaceutical industry and the benefits that inline photo-optical measurements can offer, Rahul has successfully worked in providing inline particle analysis solutions to in-demand fields like complex-injectables and novel drug delivery systems. Driven by the need of innovation in process analytical technologies, he takes pride in providing cutting edge solutions to SOPAT's Asian prospects.



Mr. Sylvain Querol

With 15 years of experience in the pharmaceutical industry, supporting clients in selecting the right equipment tools for their process challenges. Since joining PSL in 2014, Sylvain has partnered with end-users worldwide to implement the right processing solutions with a strong focus around their solid/liquid separation needs and vacuum tray dryings. With a strong focus on pharmaceutical based projects, his mechanical engineering scholar background has also been a valuable asset in cross-industry applications such as aerospace or precious metal applications".

Dr. Sharmistha Pal Datta

Dr. Sharmistha Pal currently leads the solid form screening group at Dr. Reddy's Lab. She has broad experience of 18 years in solid form and crystallization development in several innovator pharma companies, CROs, and generic business. She has graduated in Pharmaceutical Technology and holds a Ph.D. in Pharmaceutics from University of Minnesota.

