

A one day course on Industrial Drying Technologies-Principles & Practice

Venue

National University of Singapore
9 Engineering Drive 1, Singapore 117576
Room No: TBA



Date

October 01, 2011

Chair - Dr. Jeremy D. Lease, Programme Manager - Minerals, Metals and Materials Technology Centre (M3TC), National University of Singapore

Co-ordinator, Technical Program - Dr. Sachin Jangam, M3TC, NUS, Singapore

Organized by

Minerals, Metals and Materials Technology Centre (M3TC)
National University of Singapore, Singapore



Tentative programme subject to minor changes

Time	Topic	Speaker and Institute
0900 - 0905	Introduction speech by Chair Dr. Jeremy Lease, M3TC, NUS, Singapore	
0905 - 0945	Introduction to Drying Principles	Prof. Arun S Mujumdar*, ME/M3TC, NUS, Singapore
0945 - 1015	Classification and Selection of dryers	Prof. Arun S Mujumdar*, ME/M3TC, NUS, Singapore
1015 - 1045	Conventional industrial dryers	Prof. Arun S Mujumdar*, ME/M3TC, NUS, Singapore
1045 - 1100	Tea Break	
1100 - 1130	Energy savings strategies for industrial dryers	Dr. Sachin V Jangam, ME/M3TC, NUS, Singapore and Dr. Chung Lim Law*, University of Nottingham, Malaysia
1130 - 1215	Recent developments and innovative dryers	Prof. Arun S Mujumdar*, ME/M3TC, NUS, Singapore and Sakamon Devahastin, KMUTT, Thailand
12.15 - 1300	Drying of low rank coals and biomass	Dr. Sachin V Jangam*, ME/M3TC, NUS, Singapore and Dr. M Faizal, Sriwijaya University, Indonesia
1300 - 1400	Lunch Break	
1400 - 1430	Introduction to Simposys	Mr. Hafiiz Bin Osman*, ME/M3TC, NUS, Singapore
1430 - 1500	Spray Drying Technology	Prof. A.S.Mujumdar* and Prof. Li Xin Huang Nanjing, China
1500 - 1530	Life Cycle Analysis (LCA) of drying processes	Prof. Arun S Mujumdar*, ME/M3TC, NUS, Singapore and Dr. Nawshad Haque, CSIRO, Australia
1530 - 1600	Impingement drying	Mr. Jundika Candra Kurnia*, ME/M3TC, NUS, Singapore
1600 - 1630	Open Forum: Prof Arun S Mujumdar and all speakers	

* indicates speaker

For registration please contact us with all your information

Registration Form

Prof. Dr. Mr. Ms.

Name

Position

Organization/Institute

Mailing Address

Telephone Fax

Email

Registration fees: Complimentary for postgraduate students, research fellows and faculty members.
Non-academic participants - \$350/person

The number of registrants is limited. Early registration is important to be able to attend this course.

Contact for registration: Please send the duly filled registration form to **Ms. Claire Lee**,
Tel.: +65-65168295, E-mail: englctc@nus.edu.sg

About Speakers



Prof. Arun S Mujumdar has published over 400 papers and is Editor-in-Chief of Drying Technology journal. As world's top contributor to archival literature on drying and editor of over 70 books, author of three books and founding Program Chairman of IDS series started in 1978, he is globally known as Drying Guru. He was professor of chemical engineering at McGill University, Canada until 2000 after which he moved to NUS, Singapore where he is Professor of Mechanical Engineering. [Visit http://serve.me.nus.edu.sg/arun](http://serve.me.nus.edu.sg/arun) for details.



Dr. Sakamon Devahastin is Associate Professor of Food Engineering, King Mongkut's University of Technology Thonburi (KMUTT) in Bangkok, Thailand. His research interests are in drying of foods and biomaterials, from the development of novel drying technologies for heat- and oxygen-sensitive materials, computational fluid dynamics and heat transfer. He has so far published more than 90 papers in referred international journals. He also serves as Associate Editor of Drying Technology Journal



Dr. Chung Lim Law is an Associate Professor with the Department of Chemical and Environmental Engineering, The University of Nottingham, Malaysia Campus. Chung Lim Law has more than 10 years experience in research and development in drying and other areas. Over the years, he has conducted research on preservation of foods, hybrid drying techniques, fluidized bed drying, heat pump drying and intermittent drying.



Dr. Nawshad Haque is a Research Scientist with CSIRO's life cycle assessment (LCA) and techno-economic evaluation team in the process integration research group. He works on process flowsheet modeling, economic and environmental evaluation of process systems for mineral processing industries using various tools and software. He worked for CSIRO Forest Biosciences at Clayton, Australia.



Dr Sachin Jangam received his PhD in Chemical Engineering from Institute of Chemical Technology, Mumbai and is a Research Fellow at NUS working on experimental and modeling of drying processes. He is co-editor of 5 e-books and author of papers on drying including screw conveyor drying, coal and biomass drying, fluid bed drying, etc. He has worked on using heat pump and freeze drying systems. Currently, works for M3TC on low rank coal drying.



Jundika Candra Kurnia has completed PhD at Department of Mechanical Engineering, National University of Singapore. Currently he is working on transport phenomena and deformation behavior of stimuli-sensitive hydrogel. He has published several journal and conference papers. He will possibly be working on Mine ventilation project under M3TC.



Dr. Lixin Huang is a Research Professor and Deputy Director at Institute of Chemical Industry of Forest Products, Chinese Academy of Forestry, Nanjing, 210042, P.R. China. His research interests are heat and mass transfer, drying technology (mainly Spray drying, spray freeze drying and fluidized bed drying), CFD modeling.

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Mr Hafiiz Osman received his bachelor of engineering at NUS in Engineering Science Programme. He has been working as a research engineer with Minerals, Metals and Material Technology Centre (M3TC) at NUS since July 2010. His main research areas include coal drying and numerical simulations using COMSOL and Discrete Element Modeling tools such as EDEM.

This is a unique intensive professional development short course designed to meet the needs of academic and industrial participants. Starting from first principles, participants will learn about selection of industrial dryers, how to make them efficient and thus reduce carbon footprint, carry out life cycle analysis of a dryer and also become familiar with the latest developments in drying technologies. The truly international lecturers represent an extraordinary blend of experience and expertise. Collectively the 10 lecturers from 6 countries have contributed over 500 journal papers, over 300 conference papers, over 75 books and over 200 book chapters to the multi disciplinary field of Drying R&D. Prof. Mujumdar is Editor-in-Chief of the journal Drying Technology (Taylor & Francis) since 1988 and is also the Editor of the widely acclaimed Handbook of Industrial Drying (CRC Press) now in 3rd edition.