



MIXING XXIII

June 17 - 23, 2012 • Iberostar Paraiso Beach • Mayan Riviera, Mexico

namf



North American
Mixing Forum

SHORT COURSE: MIXING FUNDAMENTALS AND APPLICATIONS

The short course provides an overview on mixing technology and is designed to give conference attendees exposure to the basic concepts in mixing covering a wide breadth of mixing systems with emphasis on industrial applications. Practicing engineers and students relatively new to mixing operations will acquire a good understanding of the fundamental principles of mixing, the critical issues in mixing research and development, and relevant design and scale-up methodologies.

The course will be delivered by a selected group of world experts in mixing and specific mixing related areas from industry and academia.

Accordingly, the course topics range from commonly practiced mixing terminologies, single and multi-phase mixing, non-Newtonian mixing, reactive mixing, mechanical design issues, speciality mixers, scale-up principles amongst others. Examples will be used to illustrate the application of mixing principles where appropriate. There will be sufficient time for class discussion and questions. This short course will be a great refresher for those interested in mixing technology and will give newer members to the mixing community a foundation to appreciate the more advanced concepts presented throughout the conference.

Who should attend? Engineers, scientists and students involved with mixing practice and who wish to acquire an in-depth and global overview of mixing processes will benefit from attending the short course.

For further information on the Mixing XXIII Short Course contact Dr. Clara Gomez (clara.gomez@coanda.ca)

The Short course will be held on Sunday 17th from 9:00 to 14:00 h. Participants interested will need to consider the arrival on Saturday 16th and an additional hotel night. The short course fee is not included. Students will have free access, however the additional night must be considered.

**MIXING XXIII SHORT COURSE:
MIXING FUNDAMENTALS AND APPLICATIONS
SUNDAY JUNE 17-2012, MAYA ROOM CONVENTION CENTER**

9 am - 2:20 pm (6 lectures, 45 minutes per lecture including discussion with 35 -40 min dedicated to the lecture followed by 5-10 min discussion - 30 min lunch break)

	LECTURE		INSTRUCTOR	AFFILIATION
9:00 - 9:05	Course Intro			
9:05 - 9:40	Lecture 1	"What do you mean by well mixed?" An introduction to mixing measures, definitions, and process specifications.	Suzanne Kresta	U of A
9:40 - 9:50	Discussion			
9:50 - 10:25	Lecture 2	Basics of using CFD for mixing applications	Minyie Liu	DuPont
10:25 - 10:35	Discussion			
10:35 - 10:50	COFFEE BREAK	Speakers and students interaction, additional discussions (15min)		
10:50 - 11:25	Lecture 3	Liquid-liquid mixing	Gustavo Padron	BHR Group
11:25 - 11:35	Discussion			
11:35 - 12:10	Lecture 4	Solid-liquid mixing	Richard Grenville	DuPont
12:10 - 12:20	Discussion			
12:20 - 12:55	Lecture 5	Gas-liquid mixing	Richard Cope/Kishore Kar	The Dow Chemical Co.
12:55 - 13:05	Discussion			
13:05 - 13:35	LUNCH. Restaurante Buffet "El Mercado"	Speakers and students interaction, additional discussions (30 min)		
13:35 - 14:10	Lecture 6	An Introduction to Non-Newtonian mixing	Clara Gomez	Coanda Research
14:10 - 14:20	Discussion			



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LECTURE 1: "WHAT DO YOU MEAN BY WELL MIXED?" AN INTRODUCTION TO MIXING MEASURES, DEFINITIONS, AND PROCESS SPECIFICATIONS

INSTRUCTOR: SUZANNE KRESTA

Dr. Suzanne Kresta is the current President of NAMF and co-editor of the Handbook of Industrial Mixing. She has worked on a wide range of turbulent mixing problems in collaboration with industries ranging from drinking water to mineral processing and production of nano-scale crystals and powders over the last 25 years.

LECTURE 2: BASICS OF USING CFD FOR MIXING APPLICATIONS

INSTRUCTOR: MINYE LIU

Dr. Minye Liu is the current Vice President of NAMF and will be the President after this conference. He has been working in CFD area for near 30 years. He has also worked on a wide range of laminar, chaotic, and turbulent mixing problems in process industries using CFD as the main tool.

LECTURE 3: LIQUID-LIQUID MIXING

INSTRUCTOR: GUSTAVO PADRON

Dr. Gustavo Padron is the project manager of the Fluid Mixing Processes (FMP) industrial research consortium at BHR Group. He has more than 15 years of experience in fluid mixing, has several publications and has given presentations at international conferences on liquid-liquid mixing and nanoparticle dispersion.

LECTURE 4: SOLID-LIQUID MIXING

INSTRUCTOR: RICHARD GRENVILLE

Dr. Richard Grenville has over 25 years of industrial mixing experience. He has been working at DuPont for over 20 years focused on mixing over a wide range of scales, from chemistry labs to large industrial plants. Richard also teaches a course on mixing at Rowan University and is an advisor on the Senior Design project at the University of Delaware. He is a Council Member for the North American Mixing Forum and the organizer of the NAMF Student Award competition.

LECTURE 5: GAS-LIQUID MIXING

INSTRUCTOR: RICHARD COPE

Dr. Richard Cope has spent the last 15 years innovatively applying existing solutions, and developing proprietary custom-designed systems within Dow Chemical laboratories and plants. He has taught in-house process mixing courses on numerous occasions, and is a co-author of the "Fermenter Design" and "Gas-Liquid Contactor" chapters in the Encyclopedia of Chemical Processing by Taylor&Francis.

LECTURE 6: AN INTRODUCTION TO NON-NEWTONIAN MIXING

INSTRUCTOR: CLARA GOMEZ

Dr. Clara Gomez is a project manager at Coanda Research and Development Corporation where she leads the research on industrial non-Newtonian fluid dynamics. She has worked on a variety of non-Newtonian mixing problems for the last 8 years and is also a council member for the North American Mixing Forum.