

Advanced Course in Liquid Interfaces, Drops and Sprays

Overview

The knowledge of the physics of liquid drops and sprays is essential for many applications, from aeronautics (icing) to oil extraction (effervescent spray, drop collisions in pipes), from electronics (spray cooling, or printing electronics) to agriculture (pesticide distribution), from microfluidics (droplet management) to painting processes (spray coating), from biology (blood droplets, sterilization) to thermal transfer (condensation in heat exchangers), from chemistry (drying tower) to medical applications, and printing technology be it traditional or electronic printing.

This proposed **20 lecture** series is composed of the core topics of an international course (i.e. the International Advanced Course on the Interface, Drops and Liquid Sprays Physics, LIDESP) which is held every year in different locations around the world (e.g. Germany, UK, and Taiwan). In **addition there are 7 hours** dedicated to individual or group technical consultations and lab visits to further enhance the interactions during the visit.

Course Information	Duration: July 11 – July 15, 2016 Total Contact Hours: 24 hours: 4 hours lectures/day, 1 hour tutorial/day, over 1-week Number of participants for the course will be limited to fifty. Course participants will learn these topics through lectures and interactive sessions.
Modules	<i>Introduction and basic concepts:</i> micro- to macro- scale <i>Dynamics of drops deposited on a surface.</i> Sessile drops, spreading law, apparent and real contact angles. Drop shedding, contact angle <i>Surface tension & measurement techniques</i> <i>Applications:</i> Icing and anti-icing techniques, aircraft, helicopter, wind turbine, cables. Anti-icing and de-icing strategies.
You Should Attend If.....	<ul style="list-style-type: none"> ➤ Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories. ➤ Students at all levels (BTech/MSc/MTech/PhD) or Faculty Members from reputed academic institutions and technical institutions.
Fees	The participation fees for taking the course is as follows: Participants from abroad: US \$100 Industry/ Research Organizations: INR 5,000 Academic Institutions: Faculty: INR 3000 Students/Research Scholars: INR 1000. The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with accommodation on payment basis.

The Faculty



Prof. Alidad Amirfazli

Before joining the York University in 2013 as the founding Chair of the Department of Mechanical Engineering, Alidad Amirfazli held the Canada Research Chair in Surface Engineering at the University of Alberta,

Canada where he also served as the Associate Chair for Research (ME) between 2009 - 2012. Amirfazli has produced exciting results in wetting behavior of surfaces, drop adhesion and shedding, understanding and application of super-hydrophobic coatings. He has more than 200 scientific contributions, many in prestigious peer reviewed journals. He is the Editor for the Advances in Colloid and Interface Science and Editorial board member of other journals. Dr. Amirfazli has been the recipient of the Martha Cook Piper Research prize, Killam Annual Professorship, and Petro-Canada Young Innovator Award.

Course Co-ordinator

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