



Master class 1 + short course program

Monday 11th June	
9:00-13:00	<p>Room H1*</p> <p>Master class</p> <p>Experimental methods and experimental techniques used in fluid mechanics and river hydraulics</p> <p>Optical laboratory methods, e.g. Particle Image Velocimetry (PIV), Particle Tracking Velocimetry (PTV), Laser Doppler Anemometry (LDA), Phase Doppler Anemometry (PDA), as well as field techniques for the measurement of velocity, sediment concentration, pressure, topography will be object of discussion.</p> <p>Masters: M. Larcher (University of Bolzano, Italy), A. Radice (Polytechnique of Milan, Italy)</p>
13:00-14:00	Lunch
14:00-15:00	Transfer from Trento to Bolzano
15:00-18:00	<p>Noi Laboratoy **</p> <p>Short course</p> <p>Experimental methods and experimental techniques used in fluid mechanics and river hydraulics</p> <p>Concurrently with the master class: “Experimental methods and experimental techniques used in fluid mechanics and river hydraulics” a short course (4-6 hours) on “application of experimental techniques in fluid mechanics” will be offered to the participants. During the short course the non-contact techniques of velocity measurements will be briefly explained. The techniques are: Particle Image velocimetry, laser Doppler velocimetry, Phase Doppler Velocimetry. The aim of the course is to become familiar with the techniques of PIV LDA and PDA, through the explanation of the basic concepts but above all through the direct experimentation on physical models. The students will make direct measurements of speed fields using instrumentation supplied by unibz, under the supervision of the trainers, in order to appreciate their potential and correct application methodologies.</p> <p>Trainers: F. DiFelice (Vasca Navale, Roma, Italy), M. Righetti (University of Bolzano, Italy)</p>
18:00-19:00	Transfer from Bolzano to Trento

* DICAM via Mesiano, 77 (38123) Trento <http://www.dicam.unitn.it/>

** Via A. Volta, 13 (39100) Bolzano <https://noi.bz.it/it/noi-techpark/centri-di-ricerca-1/unibz>



Master class 3 program

Monday 11th June

14:00-18:00	<p>Room H1*</p> <p>3. New challenges in water supply networks</p> <p>The recent paradigms of water-energy-food nexus are changing the conditions of water supply and operation of pipeline network in almost all water sectors, urban supply, irrigation supply and process industry. As a consequence the scientific literature started to focus on a number of new topics that in the past were considered on the border of the hydraulic research, but that now are becoming really promising for scientists and engineers working on smart cities, water resource assessment, renewable energies, and so on.</p> <p>The master class coordinators spent their research activities in the last decade on a number of these new topics.</p> <p>Operation of water networks, including irrigation and process industry. Water supply and leakage control, energy harvesting solutions, eco-design of industrial products for water distribution, integration of water and energy sources, application of ICT techniques to the water sector.</p> <p>Masters: A. Carravetta (University of Naples, Italy); H.M. Ramos (IST- Lisbon, Portugal)</p>
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