

CV SIMONE FERRARI

ACADEMIC POSITION

2011 - present: Aggregate professor in Fluid Mechanics

2010 - present: Assistant Professor in ICAR/01, Hydraulics.

TEACHING ACTIVITIES

2018 – present: Micro-climatology of Urban Environment

2011 - present: Fluid Mechanics for Chemical Engineering students.

2010 - 2016: Applied Hydraulics for Civil Engineering students.

2007-2009: Hydraulics 1 for Environmental Engineering students.

2016 – present: Erasmus Coordinator for Civil Engineering

CURRENT RESEARCH INTERESTS

Experimental study of turbulent and turbulent-like flows in the environmental, civil, industrial and biological fields (e.g., sea discharges of brine from desalination plants, interaction of breakwaters with waves, etc.).

Development of non-intrusive image-based velocity, acceleration and concentration measurement techniques.

Flow modeling and control for mixing optimization.

Member of the Scientific Committee of the International Conference EFM – Experimental Fluid Mechanics.

REVIEWER for the international journals:

- "Physics of Fluids" (ISSN: 1070-6631 (Print) 1089-7666 (Online), AIP - American Institute of Physics)
- "Flow Measurement and Instrumentation" (ISSN: 0955-5986, Elsevier)
- "Applied Mathematics and Computation" (ISSN:0096-3003, Elsevier)
- "Stochastic Environmental Research and Risk Assessment" (ISSN: 1436-3240 (Print) 1436-3259 (Online), Springer)
- "European Physical Journal - WoC" (ISSN: 2101-6275, Springer).

AWARDS

- 15 Novembre 2016: invited opening keynote lecturer, with the lecture "Image Analysis techniques for the study of turbulent flows", at the international Conference Experimental Fluid Mechanics 2016, Marianske Lazne (Czech Rep.), 15-18 Novembre 2016.
- 7 November 2006: invited lecturer at the Workshop "Diffusers" of the 4th MWWD (International Conference on Marine Waste Water Discharges and Marine Environment), Antalya (Turkey), lecture title: "Design of diffusers for heavy fluid discharge", published in: C. Avanzini (ed.), Proceedings of MWWD & IEMES 2006 - 4th International Conference on Marine Waste Water Disposal and Marine Environment, Memajans.com (Istanbul – Turkey), ISBN: 9944-5566-0-2.
- November 2004– April 2005: "Marie Curie Host Fellowship" from the European Community (contract number HPMT-CT-2001-00369, fellow reference number HPMT-CT-2001-00369-11) for the experimental research "2D fractal flow controlled by electromagnetic forcing in the laboratory", at the Department of Aeronautics of the Imperial College of Science, Technology and Medicine London (UK).

- October 2005– March 2006: “Marie Curie Host Fellowship” from the European Community (contract number HPMT-CT-2001-00369, fellow reference number HPMT-CT-2001-00369-16 for the experimental research “2D fractal flow controlled by electromagnetic forcing in the laboratory”, at the Department of Aeronautics of the Imperial College of Science, Technology and Medicine London (UK).
- 25 September 2004: invited lecturer at the “Short Course on Hydraulics of the waste water treatment plants outfall-dispersion systems” of the 3rd MWWD (International Conference on Marine Waste Water Discharges and Marine Environment), Catania (Italy), lecture title “Dense discharges”, published in: Short Courses of MWWD & IEMES 2004 - 3rd International Conference on Marine Waste Water Discharges and Marine Environment Proceedings. Catania (Italy), ISBN: 9944-5566-1-0.
- November 2003 – October 2006: three year doctoral fellowship from the Italian Minister of Education.

EDUCATIONAL BACKGROUND

February 2007: European PhD (Doctor Europaeus), from the Scuola di Dottorato di Ingegneria Civile ed Architettura (Doctoral School In Civil Engineering and Architecture) of the University of Cagliari (Italy); thesis title “Lagrangian acceleration measurements via PTVA (Particle Tracking Velocimetry and Accelerometry) on a turbulent-like flow”, supervised by Prof. Giorgio Querzoli (University of Cagliari) e John Christos Vassilicos (Imperial College of Science, Technology and Medicine London).

Postgraduate Courses:

- 30 September 2004, “Short Course on the Cormix software: development and use”, 8 hours, MWWD Organization, Catania (Italy).
- 28 September 2004, “Short Course on Environmental Risk Assessment from Submarine Outfalls”, 8 hours, MWWD Organization, Catania (Italy).
- 24-25 September 2004, “Short Course on Hydraulics of the waste water treatment plants outfall-dispersion systems”, 16 hours, MWWD Organization, Catania (Italy).
- 14-23 Jun 2004 “Transport in Geophysical Flows”, , Grand Combin Organization, ISAC (Istituto di Scienze dell'Atmosfera e del Clima del Consiglio Nazionale delle Ricerche), LMD/CNRS (Laboratoire de Météorologie Dynamique ENS-CNRS - Paris) and CIMA (Centro di Ricerca Interuniversitario in Monitoraggio Ambientale, Università degli Studi di Genova e della Basilicata), Etroubles (Aosta - Italy).
- 8-12 September 2003, “Transport, reaction and propagation in fluids”, International Centre for Theoretical Physics & Istituto Nazionale di Fisica della Materia, Trieste (Italy).
- 8-18 July 2003, “Diffusion phenomena in engineering & environmental flows”, University of Thessaly, Volos (Greece).

February 2003: Five years laurea degree in Hydraulics Engineering, final mark: 110/110, at the University of Cagliari (Italy), with the thesis “Experimental study of the sea discharge of the brine produced by a desalination plant”.