

Curriculum vitae



Personal information

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Education and Work experience

July, 8th 1991: Degree in Mechanical Engineering *cum laude*

March, 1995: PhD in Theoretical and Applied Mechanics

November, 1994: Researcher in Hydraulics at the Engineering Faculty of Roma TRE University

March, 2004: Associate Professor in Hydraulics at the Engineering Faculty of Roma TRE University

March, 2009: Successful candidate in the open competition Administrators (AD5) in the buildings sector environmental technology management. OJ C 248 A of 23/10/2007

January, 2013: Full Professor in Hydraulics at the Engineering Faculty of Roma TRE University

Teaching and tutorial Activity

- a. **Basic courses:** Hydrodynamics for Mechanical Engineers;
- b. **Advanced courses:** Hydraulic Modelling, Advanced Hydrodynamics for Mechanical Engineers, Environmental Hydrodynamics for Civil Engineers;
- c. **Master courses:** Dispersion and diffusion of pollutants;
- d. **PhD Courses:** Numerical hydrodynamics;

- e. **Special courses:** Training courses for technical high school professors;
- f. **International teaching activity:** Courses and lectures given in the framework of the Socrates EU Teaching Staff Mobility Programme at the Polytechnic University of Catalunya, Barcelona, Spain (2004-2010)
- g. **International teaching and research activity:** Sabbatical leave at the Technical University of Berlin (September 2011-february 2012).
- h. **International teaching activity:** Courses and lectures given in the framework of the Socrates EU Teaching Staff Mobility Programme at the Technic University Berlin (May, 2013)
- i. Tutoring students both in their learning process and in final dissertation work.
- j. Member of the Examination Committee of the final PhD exam of David Velasco at the Politechnic University of Catalunya
- k. President of the Examination Committee of the final PhD exam of Anna Mujal at the Politechnic University of Catalunya
- l. Tutor of the PhD Student Mohamed Mahgoub at the Technical University Berlin

Research activity.

- a. Sloshing of free surface liquids in moving containers;
- b. Unsteady two phase pipe flows;
- c. Local scour phenomena in fluvial streams downstream of hydraulic structures;
- d. Dynamics of environmental flows (gravity currents).
- e. Lattice Boltzmann modelling of environmental flows

Management and implementation of research projects:

- a. PRIN 2013/2016 – Production of energy from osmosis in coastal environment (coordinator)
- b. February-May 2013: joint Research Project between Technip and University Roma TRE on the transient's analysis in a pipe network.
- c. March-May 2012: joint Research Project between ACEA and University Roma TRE on the analysis of the behaviour of a hydraulic damper for the prevention of the fall of bodies .
- d. PRIN 2008/2010 – Modelling and measurement of the interaction between an open channel flow and sediments at different spatio-temporal scales.
- e. PRIN 2002/2004 - Modelling of stratified fluid systems, open channel and varying celerity pipe flows
- f. Hydraulic Research Group – Department of Civil Engineering Sciences, University RomaTRE - 2004-2009
- g. PRIN 1994/1995 - Dynamics of vortex motion
- h. PRIN 1996/1997 - Nonlinear dynamics of liquid motions
- i. PRIN 1997/1999 - Turbulent modelling of open channel flows
- j. CNR -Young researchers project - 2000 - Interfacial waves in a two phase liquid system
- k. PRIN 2000/2002 - Interactions between whirling and turbulent flows and infrastructure in hydraulic engineering

Management of entrusted tasks

- b. President of the Committee for the National Qualifying Examination of Professional Engineers. Year 2006.
- c. Member of the Committee for the National Qualifying Examination of Professional Engineers. Year 2008.
- d. Member of the Committee for the National Qualifying Examination of

- Professional Engineers. Year 2009.
- e. Member of the Committee for the National Qualifying Examination of Professional Engineers. Year 2010.
 - f. Member of the Committee for the National Qualifying Examination of Professional Engineers. Year 2011.
 - g. Member of the Committee for the National Qualifying Examination of Professional Engineers. Year 2012.
 - h. Assessor at the Court of Rome for Hydraulic and Mechanical Engineering
 - i. Expert evaluator for the Innovation Pole “Renewable Energy and mini hydro” of the Piemonte region - funded by the EFRD 2007-2013.

Personal skills and competences

Mother tongue(s) **Italian**

Other language(s)

Self-assessment

	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
English	Good	Good	Good	Good	Good
German	Fair	Good	Fair	Fair	Fair
French	-	Fair	-	-	-