

CURRICULUM VITAE OF MICHELE IERVOLINO

BIOGRAPHY

Born in Napoli (I) on April 24th, 1978.

EDUCATION AND ACADEMIC CAREER

- December 2001: Laurea degree with honours in Environmental Engineering at University of Napoli "Federico II".
- April 2002: scholarship for the XVII PhD Course in Civil Networks and Environmental Systems at University of Napoli "Federico II".
- September 2003 to January 2004: visiting PhD student at Unitè Génie Civil et Environmental (GCE), Faculté des Sciences Appliquées, Université Catholique de Louvain (B).
- February 2005: PhD in Civil Networks and Environmental Systems at University of Napoli "Federico II", curriculum Hydraulic and Environmental Engineering.
- December 2008: Assistant Professor of Hydraulics at the Department of Civil Engineering, Industrial Design, Building and Environment of University of Campania "Luigi Vanvitelli" (formerly named Faculty of Engineering, Second University of Napoli).
- August to September 2015: Visiting Professor at the Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile (CHL).
- November 2018: Associate Professor of Hydraulics at the Department of Engineering of University of Campania "Luigi Vanvitelli".

ACADEMIC ACTIVITY

PARTICIPATION TO RESEARCH PROJECTS AND GRANTS

- April to September 2005: research grant at the Department of Hydraulic and Environmental Engineering of University of Napoli "Federico II" concerning development of mathematical and numerical models for unsteady solid transport and fluvial morphology simulations.
- April to September 2005: research grant at the Department of Civil Engineering of the Second University of Napoli concerning formulation and application of numerical models of solid transport in coastal areas subject to erosion.
- April 2006 to March 2007: research grant at the Inter-departmental Center for Research in Environmental Engineering of the Second University of Napoli concerning formulation and application of numerical models to the study of leakage in water supply networks. Grant funded by EU within the HYDRANET Project (INTERREG MEDOCC IIIB-4.4).
- October 2007 to January 2008: research grant at the Inter-departmental Center for Research in Environmental Engineering of the Second University of Napoli concerning models for the optimization of district-metered water supply networks. Grant funded by the SISCO Pugliatech Research Project.
- Scientific Coordinator of the project "Simulation of urban inundation by sediment-laden flows through multi-domain techniques", funded by Academic Research Fellowship of Second University of Napoli for 2009.

EXPERIMENTAL ACTIVITY

Experiments carried out at the Laboratory of the Department of Hydraulic and Environmental Engineering, University of Napoli "Federico II":

- Velocity profiles in free-surface turbulent uniform flow by Ultrasonic Doppler profile;
- Calibration of a measuring method for colored/fluorescent dye in a steady flow by digital image analysis;
- Velocity profiles in turbulent free-surface flow with an abrupt change of bottom roughness by laser Doppler anemometry.

Experiments carried out at the Laboratory of the Unitè Génie Civil et Environmental (GCE), Faculté des Sciences Appliquées, Université Catholique de Louvain (B) concerning:

- Temporal evolution of the local scour in a free-surface flow at a sill by acoustic profiler, capacitive profiler and digital image analysis.
- Nickpoint migration in a loose bed channel with sudden channel increase by acoustic profiler and capacitive profiler.
- Formation of an alluvial deposit downstream of a hypercritical flow in a loose bed channel ending in a basin by acoustic profiler and capacitive profiler.

OTHER ACADEMIC ACTIVITIES

- Secretary of the Napoli section of the IAHR Student Chapter. Delegate of the IAHR Student Chapter during XXX and XXXI IAHR Congress (2003 and 2005).
- May 2004: participant to the "Web-Based Collaborative Engineering in Hydroscience" project HYDRO-WEB (2004 edition) promoted by dr. F. Molkenthin of BTU Cottbus, in the University of Napoli "Federico II" team.
- May 2005: tutor of the University of Napoli "Federico II" participating to the "Web-Based Collaborative Engineering in Hydroscience" project HYDRO-WEB (2005 edition) promoted by dr. F. Molkenthin of BTU Cottbus.
- President of the Napoli section of the IAHR Student Chapter from 2005 to 2007.
- Member of the Organising Committee of Quarto Seminario su "La ricerca delle perdite e la gestione delle reti di acquedotto" (Aversa (I), 2009).
- Member of the Scientific Committee of Quinto Seminario "La diagnosi e la gestione dei sistemi idrici" (Roma (I) 2011).
- Member of the Organising Committee of the 2nd Hydrology, Ocean and Atmosphere Conference (HOAC 2014), Beijing, 2014.
- Member of the Second University of Napoli Local Organising Board of the Erasmus Mundus with Asia project EMMAsia 2014
- Secretary of the Board of Civil and Environmental Engineering Courses since November 2009.
- Delegate of Assistant Professors in the Faculty Council from 2009.
- Delegate of Assistant Professors in the Scientific Committee of CIRIAM (Inter-Departmental Center for Research in Environmental Engineering) from 2009.
- Member of the Scientific Committee of the PhD Programme in Engineering Applications of Physics and Mathematics from 2016.
- Delegate of Assistant Professors in the Joint Committee of the Department from 2016.
- Department Delegate for Research Quality and Evaluation from 2017.

EDITORIAL ACTIVITY

MEMBER OF EDITORIAL BOARD:

- Austin Journal of Hydrology
- Open Journal of Modern Hydrology
- Civil Engineering Journal
- Journal of Novel Achievements in Civil Engineering
- Journal of Civil Engineering and Materials Application
- Cogent Engineering

REVIEWER:

- Acta Mechanica
- Advances in Civil Engineering
- Advances in Water Resources
- Applied Mathematical Modelling
- Applied Mathematics and Computation
- Applied Water Science
- Austin Journal of Hydrology
- Cogent Engineering
- Computer & Fluids
- Fluids
- Environmental Processes
- European Journal of Mechanics B/Fluids
- Hydrology and Earth System Sciences
- International Journal of Computational Methods
- Journal of Applied Fluid Mechanics
- Journal of Hydraulic Engineering
- Journal of Hydraulic Research
- Scientific Reports
- The European Physical Journal Plus
- Water

TEACHING

UNDERGRADUATE COURSES:

- Academic years 2002/3 and 2003/4: tutor for the courses of Hydraulics and Environmental Hydraulics at the Faculty of Engineering of University of Napoli "Federico II", 50 hours for academic year.
- Academic year 2004/5: co-lecturer in Hydraulics at the Faculties of Engineering and Geology of the University of Sannio.
- Academic years 2004/5 to date: co-lecturer for the courses of Hydraulics, Hydraulics II and Environmental Hydraulics at the Faculty of Engineering of the Second University of Napoli.
- Academic year 2005/6: lecturer in a 40-hours seminar in Environmental Hydraulics.
- Academic year 2006/7: lecturer of the course of Hydraulics at the Faculty of Engineering of the University of Cassino.
- Academic year 2006/7: lecturer of the course "Laboratory of computer science applied to the management of water systems at the Faculty of Engineering of Second University of Napoli.

- Academic year 2007/8: lecturer of the course of Hydraulics at the Faculty of Engineering of the University of Cassino.
- Academic year 2009/10: lecturer of the course of Hydraulic Design.
- Academic year 2010/11: lecturer of the course of Hydraulic Design.
- Academic year 2011/12: lecturer of the course of Basic Hydraulics.
- Academic year 2013/14: lecturer of the course of Environmental Hydraulics (Master Programme).
- Academic year 2014/15: lecturer of the course of Environmental Hydraulics (Master Programme).
- Academic year 2015/16: lecturer of the course of Environmental Hydraulics (Master Programme).
- Academic year 2016/17: lecturer of the course of Environmental Hydraulics (Master Programme).
- Academic year 2017/18: lecturer of the course of Environmental Hydraulics (Master Programme).
- Academic year 2018/19: lecturer of the courses of Environmental Hydraulics (Master Programme) and of Basic Hydraulics (Undergrad Programme).

PHD COURSES

- April 2006: seminar for the PhD course in Ingegneria delle Reti Civili e dei Sistemi Territoriali), Università degli Studi di Napoli “Federico II”, concerning: “Stability of differential equations”.
- May 2008: seminar cycle (9 hours) for the PhD course in Scienza ed Ingegneria del Mare, Università degli Studi di Napoli “Federico II”, concerning: “Basic Course of Numerical Hydraulics”.
- July 2015: seminar (8 hours) for the PhD course in Ingegneria Civile, Meccanica e Biomeccanica, Università degli Studi di Cassino e del Lazio Meridionale, concerning: “Normal mode analysis for the study of free-surface instability in open-channel flows”.
- May 2016: seminar (2 hours) for the PhD course in Earth Sciences and Fluid Mechanics, concerning: “Unstable Open Channel Flows of Non-Newtonian Fluids”.
- May 2018: seminar (8 hours) for the PhD course in Metodi, modelli e tecnologie per l’ingegneria (Dipartimento di Ingegneria Civile e Meccanica), Università degli Studi di Cassino e del Lazio Meridionale, concerning: “Normal mode analysis for the study of free-surface instability in open-channel flows”.

INVITED LECTURES

- September 2015: “Unstable Open Channel Flows of Non-Newtonian fluids” at the Universidad de Chile.

FIELDS OF ACTIVITY

- Two-Phase models for fast geomorphic flows
- Non-Newtonian Fluids over impermeable and permeable bottom
- Surface Instability of Open-Channel Flows: linear and non-linear analysis
- Pulsating flow through Porous Media in Nonlinear regime
- Flood prediction for clear-water and debris flows

CONTACTS AND BIBLIOGRAPHIC REFERENCE IDs

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