Oreste Fecarotta

Date of birth: 24/10/1983 | **Nationality:** Italian | (+39) 3298055617 | oreste.fecarotta@unina.it |
http://orcid.org/0000-0003-0471-8821 | https://www.scopus.com/authid/detail.uri?authorId=36503779200 |
Via Tevere 35, 80126, Napoli, Italy

WORK EXPERIENCE

12/2021 – CURRENT – Napoli, Italy

ASSOCIATE PROFESSOR IN HYDRAULICS – UNIVERSITY OF NAPLES "FEDERICO II" - DIPARTIMENTO DI INGEGNERIA CIVILE, EDILE E AMBIENTALE

- Research on the energetic optimization of water systems. Performance analysis of turbomachinery. Rheology of water-sediment mixtures. Experimental and theoretical investigation of water structures.
- Teacher of Hydraulics (9CFU) for the bachelor degree in Civil Engineering and Environmental Engineering
- Teacher of "Environmental Fluid Mechanics and Hydraulics" (3 CFU) for the master degree in "Mathematical Engineering"
- Teacher of "Hydraulics for Energy and Environment" (3 CFU) for the master degree in "Environmental Engineering"
- Teacher of "Calculus Laboratory" (3 CFU) for the bachelor degree in "Civil Engineering"

2016 – CURRENT – Naples, Italy

SUPERVISOR OF EXPERIMENTAL TESTS – HELAB - CESMA - UNIVERSITY OF NAPLES "FEDERICO II"

Supervisor of experimental tests at the Hydro Energy Laboratory of CeSMA (University of Naples) for the tests of hydraulic pumps and electric motors according to the new European Standars.

Corso Nicolangelo Protopisani, 80146, Napoli, Italy

11/2018 – 11/2021 – Naples, Italy

ASSISTANT PROFESSOR IN HYDRAULICS (TENURE TRACK POSITION - RTDB) – UNIVERSITY OF NAPLES "FEDERICO II" - DIPARTIMENTO DI INGEGNERIA CIVILE, EDILE E AMBIENTALE

- Research on the energetic optimization of water systems. Performance analysis of turbomachinery. Rheology of water-sediment mixtures. Experimental and theoretical investigation of water structures.
- Teacher of Hydraulics (9CFU) for the bachelor degree in Civil Engineering and Environmental Engineering (2017-2021)
- Teacher of "Complements of Hydraulics" (3 CFU) for the master degree in Engineering of Hydraulic and Transportation systems (2018)
- Teacher of "Environmental Fluid Mechanics and Hydraulics" (3 CFU) for the master degree in "Mathematical Engineering" (2019-2021)
- Teacher of "Hydraulics for Energy and Environment" (3 CFU) for the master degree in "Environmental Engineering" (2020-2021)
- Teacher of "Groundwater hydrology (3 CFU) for the master degree in "Environmental Engineering" (2018-2021)

05/2018 – 08/2018 – Naples, Italy

SCOLARSHIP (REDAWN) – UNIVERSITY OF NAPLES "FEDERICO II" - DIPARTIMENTO DI INGEGNERIA CIVILE, EDILE E AMBIENTALE

Three months scolarship for the european project REDAWN: "study of the integration of new technologies in energy recovery plants with PATs"

- Creation of a database with information of performance and mechanical details of commercial and non commercial PATs
- Creation of the GUI of the database
- Collaboration to the design of hydropower pilot plants.

Via Claudio, 21, 80125, Napoli, Italy

05/2013 – 05/2018 – Naples, Italy

ASSISTANT PROFESSOR IN HYDRAULICS (RTDA) – UNIVERSITY OF NAPLES "FEDERICO II" - DIPARTIMENTO DI INGEGNERIA CIVILE, EDILE E AMBIENTALE

- Research on the energetic optimization of water systems. Performance analysis of turbomachinery. Rheology of water-sediment mixtures. Experimental and theoretical investigation of water structures.
- Teacher of Hydraulics (9CFU) for the bachelor degree in Civil Engineering and Environmental Engineering (2017-2018)
- Teacher of "Complements of Hydraulics" (3 CFU) for the master degree in Engineering of Hydraulic and Transportation systems (2014-2018)
- Teacher of "Groundwater hydrology (3 CFU) for the master degree in Environmental Engineering (2014-2018)

Via Claudio, 21, 80125, Napoli, Italy

06/2012 – 05/2013 – Palermo, Italy

RESEARCH FELLOW ON THE TOPIC "HYDRODINAMIC SIMULATIONS OF HYDRAULIC TURBINES" – UNIVERSITY OF PALERMO

- Study of turbomachinery, such as pumps, PATs and crossflow and development of CFD calculations
- Design and implementation of numerical models (MATLAB and Fortran based) on hydraulic systems for the energy recovery

Piazza Marina, 6, 90133, Palermo, Italy

EDUCATION AND TRAINING

08/2017 – Udine, Italy

ADVANCED PROFESSIONAL TRAINING ON "PRESSURE CONTROL WITH ENERGY PRODUCTION BY PAT (PUMP AS TURBINE) – CISM

Advanced Course of energy management of water networks at the International Centre for Mechanical Sciences (Cism) of Udine

02/2016

ADVANCED COURSE IN "ENERGY OPTIMIZATION OF PUMPS AND MOTORS"

Advanced course at Caprari spa (Modena - MO), Santerno spa (Poggio Piccolo - BO) and Seipee spa (Limidi di Soliera – MO).

10/2008 – 11/2011 – Napoli, Italy

PHD IN HYDRAULIC ENGINEERING – University of Naples "Federico II"

Thesis: "Impiego di pompe come turbine: calcolo fluidodinamico per l'analisi prestazionale e l'inserimento in rete" - Supervisor: prof. A Carravetta - External supervisor: Prof. T. Tucciarelli

06/2009 – Ferrara, Italy

ADVANCED COURSE IN NUMERICAL METHODS FOR THE MODELING OF HYDRAULIC SYSTEMS – University of Ferrara, Dipartimento di ingegneria Meccanica

One dimensional theory of turbomachinery, 3D fluid dynamic model of pumps and turbines in steady and unsteady state.

02/2006 – 04/2008 – Napoli, Italy

MASTER DEGREE IN ENVIRONMENTAL AND LAND PLANNING ENGINEERING – "DIFESA DEL SUOLO" (CUM LAUDE) – University of Naples “Federico II”

Thesis: “Reologia di un miscuglio di acqua e sedimenti naturali: primi risultati sperimentali” - Supervisor: Prof. R. Martino

08/2002 – 01/2006 – Napoli, Italy

BACHELOR DEGREE IN ENVIRONMENTAL AND LAND PLANNING ENGINEERING (CUM LAUDE) – University of Naples “Federico II”

Titolo della Tesi: “Reologia di una colata detritica granulare” – Relatore: prof. R. Martino

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
FRENCH	A1	A1	A1	A1	A1
PORTUGUESE	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

NATIONAL SCIENTIFIC QUALIFICATION (ASN)

National Scientific Qualification (ASN)

On 28/7/2017 has been qualified (ASN) for the sector 08/A1, Fascia II

DRIVING LICENCE

Driving Licence: A

Driving Licence: B

INTERNATIONAL SCIENTIFIC COLLABORATION

Scientific collaborations

He is member of several national and international scientific groups. He actively collaborates with:

- Prof H. M. Ramos, Instituto Superior Técnico di Lisbona, Portugal, and her scientific group.
- Prof T. Tucciarelli, Università degli Studi di Palermo, Italy, and his scientific group.
- Prof. Aonghus McNabola, Trinity College of Dublin, Dublin, Ireland.
- Prof. Stefano Malavasi, Dipartimento di Ingegneria Civile e Ambientale, Politecnico di Milano, Italy and his scientific group
- Research and development of Caprari spa.

RESEARCH PROJECTS

Partecipation to research projects

- Reducing Energy Dependency in Atlantic Area Water Networks (REDAWN), funded by Interreg Atlantic Area (European Regional Development Fund) of EC
- PHUSICOS, Solutions to reduce risk in mountain landscapes - European Union's Horizon 2020
- research and innovation programme under grant agreement No. 776681.
- Energia idroelettrica da osmosi in ambiente costiero (PRIN 2010-2011 – Supervisor: prof. C. Gualtieri).
- Hydroenergy (POR FESR Sicilia 2007-13 - Supervisor: prof. T. Tucciarelli).

REVIEWER OF INTERNATIONAL JOURNALS

Review activities

Geust Editor of the journal MDPI - Resources of the special issue: "Energy Recovery in Water Supply and Distribution Systems".
Reviewer of the following international journals

- Energies – MDPI
- Energy Conversion and Management - Elsevier
- Journal of Hydraulic Engineering – ASCE
- Journal of Hydraulic Research – IAHR
- Journal of Water Resources, Planning and Management – ASCE
- Water Resources Management – Springer

SUPERVISOR OF BACHELOR AND MASTER DEGREE THESIS

Supervisor of several thesis

- Salvia, S. M. (2015), Caratterizzazione idrodinamica di un bacino di dissipazione USBR (Tipo II), Tesi di laurea magistrale in Ingegneria dei Sistemi Idraulici e di Trasporto.
- Scarpato, C. (2015), Analisi sperimentale del dissipatore a risalto USBR (Tipo II), Tesi di laurea magistrale in Ingegneria dei Sistemi Idraulici e di Trasporto.
- Palmieri, P. (2015), Modellazione fluidodinamica di un bacino di dissipazione a Risalto, Tesi di laurea in Ingegneria per l'Ambiente e il Territorio
- Salvia, A. M. (2015), Analisi Sperimentale delle Fluttuazioni di Pressione in Bacini di Dissipazione confinati, Tesi di laurea magistrale in Ingegneria dei Sistemi Idraulici e di Trasporto.
- Morani, M. (2015), Prove sperimentali su modello fisico dello sfioro della diga sul fiume Diamphwe, Tesi di Laurea in Ingegneria per l'Ambiente e il Territorio
- Sorrentino, P. (2013), La progettazione ecocompatibile delle pompe per acqua secondo la direttiva 2009/125/EC, Tesi di laurea specialistica in Ingegneria per L'Ambiente e il Territorio – Difesa del Suolo
- Conte, M. C. (2013), Perdite di carico del flusso in pressione di un miscuglio acqua-sedimenti, Tesi di laurea specialistica in Ingegneria dei Sistemi Idraulici e di Trasporto.
- D'Anna, M. (2012), Analisi Reologica su Miscugli di Acqua e Sedimenti, Tesi di laurea in Ingegneria Civile