

## PERSONAL INFORMATION Tommaso Pacetti

JOB APPLIED FOR  
POSITION  
PREFERRED JOB  
STUDIES APPLIED FOR

Environmental Engineering

## WORK EXPERIENCE

January 2019- December 2019

**Postdoc Research Fellow**

University of Urbino (Italy)

Agrismart project. Evaluation and mapping of Ecosystem services aiming at developing an environmental reporting in the districts of Lugela, Derre, Namarroi e Gilé in Zambezia – Mozambico

May 2018- ongoing

**Consultant**

Sogesid c/o Ministry of Environment

Member of the Creiamo PA project team for strengthening the administrative and technical capacity of the competent authorities for the management and sustainable use of water resources

Febraury 2018- ongoing

**Lecturer**

University of Florence

Lecturer of hydraulic plants

January 2018- December 2018

**Postdoc Research Fellow**

University of Florence (Italy)

Water-Energy-Land Nexus analysis for integrated water management.

February 2015 -January 2017

**Scientific Consultant**

CERAFRI –Center of Research and Advanced Education for Hydrogeological Risk Prevention, University of Florence(Italy)

Water footprint analysis for oil and wine production in Tuscany (ISO 14046 and Water Footprint Network) using SimaPro.

November 2014- December 2014

**Internship**

ICU (Beirut-Lebanon)

- Internship within the Accbat project for the improvement of water demand management and increase of water resources availability, through re-use of urban treated wastewater in the Beka valley

January 2014- December 2014

### Technical Consultant

ProGeo engineering s.r.l. (Arezzo)

- Member of E<sup>2</sup>STORMED project (Med Programme). E<sup>2</sup>STORMED aims to improve energy efficiency in the urban water cycle and in buildings by promoting the use of innovative storm water solutions such as Sustainable Drainage Systems (SuDS) in Mediterranean cities  
**Business or sector** Water-Energy management

May 2014- August 2014

### Internship

Departamento de Ciencias Agroforestales, Universidad de Huelva (Spain)

- Water resources management for irrigation district of Palos de la Frontera. Setting up forecasting artificial neural networks (ANN) models to optimize the use of water and energy in agriculture.

**Business or sector** Water resources management

January 2014- June 2104

### Internship

CERAFRI research centre (Retignano , Lucca )

- Investigating the possibilities of implementing WF case study within the framework of Water energy nexus (Master thesis research topic)

**Business or sector** Water resources management

February 2011- July 2013

### Technical Consultant

Pisa municipality (Via degli Uffizi 1, Pisa)

- Member of WADI Project (EU Ciudad Programme) technical team for Water master plan drafting and river training structures design. The project aims to create a Master Plan for surface water for Jericho municipality. The project is based on joint work between Palestinian and Italian partner municipalities (Jericho and Pisa) in order to develop appropriate plans for surface water management and flood control.

**Business or sector** Hydraulic Engineering-Water resources management

January 2010-October 2010

### Internship

Engineering Without Borders (Via di Santa Marta 3, Firenze)

- Member of "Tulkarem project" technical team. The internship was based on the study of Tulkarem (Palestinian Territories) hydrological situation and analysis of issues relating to water resource management. The training activities were supported by two major local partner: Municipality of Tulkarem and An Najah University in Nablus. During the placement was performed an on-site mission to gather data and to implement an hydraulic simulation model of the water network of the city

**Business or sector** Environmental engineering and hydraulic modelling

November 2014-> May 2018

### International PhD in Civil and Environmental Engineering

Università degli Studi di Firenze – TU Braunschweig

- Investigation of water energy land ecosystem nexus for watershed integrated management.

The PhD research activity was focused on water resources management and its possible integration with ecosystems land management in resource scarcity scenarios. During the thesis I develop methodologies for water related ecosystem services assessment, also exploring water food nexus in developing countries. Grade: Outstanding (summa cum laude)

October 2010->December 2013

### MSc in Environmental engineering

Università degli Studi di Firenze, Facoltà di Ingegneria, via di Santa Marta 3 – 50139 Firenze

- Life cycle assessment and water footprint assessment (ISO 10040-14046) Integrated water resources management Energy system management Water resources management in semiarid zones River morphodynamics River and irrigation structures design Operations research Advanced Hydrology Design of water treatment plants Applied Economics
- 35 ECTS were obtained at UNESCO-IHE (Delft) during the Erasmus Program (2011)
- Master Thesis: Water energy nexus: the case of biogas production from energy crops evaluated by Life cycle assessment and Water Footprinting. Master Thesis Grade: 110/110, cum laude

2/9/2013 – 6/9/2013

### ISES 2013- International school on energy systems

Forschungszentrum Jülich (D)

- Strategies and challenges of today's and future energy systems management. Possible transformation process towards sustainability.

8/7/2013 – 12/7/2013

### International summer school on Life-Cycle Approaches to Sustainable Regional Development

University of Salento, Ecotekne, Lecce (IT)

- LCA approach in agriculture, industry, transport, services and administration. In particular, relying on the bases of the Life-Cycle Approach, Carbon Footprint and Water Footprint have been analyzed

5/9/2011 – 9/9/2011

### Intensive course on "River and Coastal measurements"

CERAFRI, Retignano (IT)

- Sediment load measurements, river discharge measurements, GPS surveying

4/7/2011 – 23/7/2011

### Hydroinformatics for decision support systems special course

UNESCO-IHE, Delft (NL)

- System analysis in water resources planning and management

25/4/2011 – 15/5/2011

### Urban Flood Modelling and Disaster Management special course

UNESCO-IHE, Delft (NL)

- Theory and practice of flood risk estimation and modelling of floods in urban areas

## BSc in Environmental engineering

Università degli Studi di Firenze, Facoltà di Ingegneria, via di Santa Marta 3 – 50139 Firenze

- Engineering physics Analysis of ecological systems Geographic information systems Water resources management Structural analysis and design Sanitary/environmental engineering River engineering Hydrology Hydraulic structures
- Thesis: Water resources assessment and distribution systems analysis for Tulkarem region, Palestine. Thesis Grade: 107/110

### List of publications

- Pacetti, T., Castelli, G., Mazzanti B., Cecconi L., Tilli L., Caporali E., Bresci E. (2018) Water Values: participatory water ecosystem services assessment in the Arno river basin. Atti Convegno Nazionale di Idraulica e Costruzioni Idrauliche - IDRA 2018
- Castelli, G., Pacetti, T., Foderi, C., Castro Magnani, M., Kempff, Y.,... & Salbitano, F. (2018, April). Towards Landscape Ecohydrology: linking historical landscape patterns and ecosystem services provision in Bolivian sub-Andean region. In EGU General Assembly Conference Abstracts (Vol. 20, p. 12558).
- Pacetti, T., Willaarts, B., Caporali, E., & Schroeder Esselbach, B. (2017). Evaluating the hydrological functioning and the supply of water provisioning services to support the ecosystem-water-food-energy nexus in the Arno river basin. In EGU General Assembly Conference Abstracts (Vol. 19, p. 13951).
- Pacetti Tommaso, Enrica Caporali and Maria Cristina Rulli (2017). Floods and food security: A method to estimate the effect of inundation on crops availability. In: Advances in Water Research 2017
- Pacetti Tommaso, Enrica Caporali and Boris Schroeder Esselbach (2017). valuating the supply of hydrologic ecosystem services to support the water–food–energy Nexus in the Arno river basin. Atti convegno SWAT 2017, Varsavia
- Pacetti Tommaso, Enrica Caporali and Boris Schroeder Esselbach (2017). Trade-off analysis of water ecosystem services at the watershed scale. Atti convegno IDRA 2016, Bologna
- Pacetti, T., Lombardi, L., & Federici, G. (2015). Water–energy Nexus: a case of biogas production from energy crops evaluated by Water Footprint and Life Cycle Assessment (LCA) methods. Journal of Cleaner Production.
- “History and geography of water”: an online interdisciplinary course on water value (2015). World Engineering Education Forum. Florence, 20-24 September
- Tommaso Pacetti, Enrica Caporali, Laura Zanchi, Giorgio Federici (2015) Comparing Water Footprint impact methods: a case study on biogas production from energy crops. EXPO 2015 conference, LCA for “Feeding the planet and energy for life”
- Water-Energy Nexus: the Water Footprint of biogas production in a changing climate.(2015) Rome 2015 – Science symposium on climate, FAO, Rome
- Pacetti, T., Lombardi, L., & Federici, G. (2014) L'integrazione di Life Cycle Assessment e Water Footprint per la valutazione delle bioenergie in “I nuovi orizzonti dell’LCA: verso un approccio sistemico e integrato alla progettazione di prodotti, processi e servizi . Atti del VIII Convegno Scientifico dell’Associazione Rete Italiana LCA, Firenze, 19-20 giugno 2014 “ ENEA 2014. (ISBN 978-888286-306-7)

## PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
Spanish	B1	A2	B1	A2	-

## Communication skills

Team work experiences: Board Member of Ingegneria Senza Frontiere (Engineering Without Borders) O.N.L.U.S.(2009 - 2010 and 2013) ISF is a no-profit Organization that intends to carry on training activities on the themes of appropriate technologies and sustainable development and to establish sustainable and durable connections between technicians and students from Italian Universities and beneficiaries in Developing Countries

## Organisational / managerial skills

Organization of several academical meeting and seminar on water management.  
Organization conferences and meetings working with Engineering Without Borders.  
Coordination of several international youth camp in Europe (Hungary, Germany, England) organized with Tavarnelle Town Twinning Committee

## Job-related skills

Hydrological modelling, geographic information systems development, remote sensing data analysis. Capable of organising and carrying out hydraulic measurements in rivers

## Computer skills

Expert in hydrological modelling software (SWAT, Hec-Hms)  
Familiar with Microsoft Office programs  
Knowledge of LCA software (Simapro)  
Knowledge of Matlab and Simulink software  
Knowledge of hydraulic simulation software: Hec-ras (Usace), Epanet(Usepa)  
Experience with GIS and CAD software, both developed during university courses  
Limited experience with Mike 21(DHI), Mouse (DHI), Sobek (Deltares), Iric (Usgs), Statistica (Statsoft) developed during university courses at Unesco IHE Capable of using both Windows and Linux – Ubuntu OS

## Other skills

- Classical guitarist