PROF. ARMANDO DI NARDO, PH.D.

ACADEMIC CURRICULUM VITAE

armando.dinardo@unicampania.it

1. EDUCATION and ACADEMIC CAREER

- 2001: degree cum laude in Civil Engineering
- 2002: scholarship for PhD course 2005: PhD in "Civil Network and Environmental systems" at University of Naples
- 2010: assistant professor in Hydraulic Infrastructure at Department of Civil Engineering of University of Campania Luigi Vanvitelli.
- From 2015: Coordinator of an European Action Group of EIP (European Innovation Partnership) on Water, titled CTRL+SWAN (Cloud Technologies & ReaL time monitoring + Smart Water Network). The Action Group, a consortium with more than 200 partners, is devoted to the development of innovative sensors and technologies to integrate and implement into water distribution networks, with the broaden goal to introduce the new paradigm of SWAN as a key subsystem of the notion of Smart City.

2. PUBLICATIONS

- Coauthor of more than 170 publications on national and international Journals on the following main research topics: optimal management and protection of water resources; optimal partitioning of water supply network; optimal management of water reservoir; optimal design of permeable reactive barrier. The research uses some innovative techniques: fuzzy logic, heuristic optimization algorithms (GA, graph theory, etc.), linear and non-linear identification models (AR, ARX, ARMAX, neural networks, etc.).
- Google Scholar index: 177 publications, Citations: 1592, H-index: 21
- Scopus index: 81 publications, Citations: 989, H-index: 17

3. ACADEMIC RESEARCH ACTIVITIES

2004/2012: partecipation to research project and grants: - italian MIUR, Cluster C10 (Optimal design of laboratory structures for the reserach on the coastal hydrodynamics and geohydrodynamics); - european project HYDRANET (MEDOCC INTERREG IIIB) - italian project Pugliatech SI.S.CO. (Optimal techniques and methodologies for district design of a water supply network) - italian PRIN project; - italian PON project DI.MO.DI.
Experimental activities: experiments carried out at a) Laboratory of the Department of Civil Engineering of Second Univesity of Naples concerning: - Oscillatory flow velocities through vegetation fields b) pilot site of Monterusciello, Pozzuoli (NA, Italy), concerning: - Calibration and partitioning of a water distribution network.

4. TEACHING ACTIVITIES

- From 2001 to 2010: co-lecturer for the courses of Hydraulic Infrastructure at Second University of Naples;
- From 2007 responsible of the courses of Water System Management, Hydraulic and Water Treatment Systems and Building Hydraulic Systems at University of Campania Luigi Vanvitelli.

5. OTHER ACADEMIC AND RESEARCH ACTIVITIES

- From 2010 to 2017: ERASMUS and International delegate of Faculty of Engineering of Second University of Naples.
- From 2014: Cofounder of Environmental Technologies srl an university spin off focused on research and development in Environmental remediation.
- From 2018: Member of MedHydro srl an academic spinoff focused on Engineering Research with Remotely Piloted Aircraft (RPA).
- From 2019: Cofounder of ARTEMA srl an academic spinoff focused on Mixed and Augmented Reality.
- 2019: Copyright registration of SWANP (Smart Water Network Partitioning and Protection) an innovative hydraulic software for optimal partitioning and protection of water distribution network.

Attached a list of publications that show the research areas of interest

Aversa, 16 October 2020

Scuola Politecnica e delle Scienze di Base
Dipartimento di Ingegneria

Real Casa dell'Annunziata
Via Roma 29
81031 Aversa (CE)

T.: +39 081 5010204/362
F.: +39 081 5010463/290

dip.ingegneria@unicampania.it
dip.ingegneria@pec.unicampania.it
www.ingegneria.unicampania.it

List of 15 publications that show the research areas of interest

1. Giudicianni, C., Herrera, M., Di Nardo, A., Greco, R., Creaco, E., & Scala, A. (2020). **Topological Placement of Quality Sensors in Water-Distribution Networks without the Recourse to Hydraulic Modeling**. *Journal of Water Resources Planning and Management*, *146*(6).
2. Di Nardo, A., Di Natale, M., Di Mauro, A., Martínez Díaz, E., Blázquez Garcia, J. A., Santonastaso, G. F., & Tuccinardi, F. P. (2020). **An advanced software to design automatically permanent partitioning of a water distribution network**. *Urban Water Journal*, *17*(3), 259–265.
3. Giudicianni, C., Herrera, M., di Nardo, A., & Adeyeye, K. (2020). **Automatic Multiscale Approach for Water Networks Partitioning into Dynamic District Metered Areas**. *Water Resources Management*, *34*(2), 835–848.
4. Di Nardo, A., Di Natale, M., Gargano, R., Giudicianni, C., Greco, R., & Santonastaso, G. F. (2018). **Performance of partitioned water distribution networks under spatial-temporal variability of water demand.** *Environmental Modelling and Software*, *101*, 128–136.
5. Giudicianni, C., Di Nardo, A., Di Natale, M., Greco, R., Santonastaso, G. F., & Scala, A. (2018). **Topological taxonomy of water distribution networks**. *Water (Switzerland)*, *10*(4).
6. Santonastaso, G. F., Di Nardo, A., Di Natale, M., Giudicianni, C., & Greco, R. (2018). **Scaling-laws of flow entropy with topological metrics of water distribution networks**. *Entropy*, *20*(2).
7. Di Nardo, A., Giudicianni, C., Greco, R., Herrera, M., & Santonastaso, G. F. (2018). **Applications of graph spectral techniques to water distribution network management**. *Water (Switzerland)*, *10*(1).
8. Di Nardo, A., Natale, M. D., Santonastaso, G. F., Tzatchkov, V. G., & Alcocer-Yamanaka, V. H. (2014). **Water network sectorization based on graph theory and energy performance indices**. *Journal of Water Resources Planning and Management*, *140*(5), 620–629.
9. Di Nardo, A., Bortone, I., Di Natale, M., Erto, A., & Musmarra, D. (2014). **A heuristic procedure to optimize the design of a permeable reactive barrier for in situ groundwater remediation**. *Adsorption Science and Technology*, *32*(2–3), 125–140.
10. Di Nardo, A., Di Natale, M., Santonastaso, G. F., & Venticinque, S. (2013). **An Automated Tool for Smart Water Network Partitioning**. *Water Resources Management*, *27*(13), 4493–4508.
11. Bortone, I., Di Nardo, A., Di Natale, M., Erto, A., Musmarra, D., & Santonastaso, G. F. (2013). **Remediation of an aquifer polluted with dissolved tetrachloroethylene by an array of wells filled with activated carbon**. *Journal of Hazardous Materials*, *260*, 914–920.
12. Cavallo, A., Di Nardo, A., De Maria, G., & Di Natale, M. (2013). **Automated Fuzzy Decision and Control System for reservoir management**. *Journal of Water Supply: Research and Technology - AQUA*, *62*(4), 189–204.
13. Di Nardo, A., Di Natale, M., Guida, M., & Musmarra, D. (2013). **Water Network Protection from Intentional Contamination by Sectorization**. *Water Resources Management*, *27*(6), 1837–1850.
14. Di Nardo, A., & Di Natale, M. (2011). **A heuristic design support methodology based on graph theory for district metering of water supply networks**. *Engineering Optimization*, *43*(2), 193–211.
15. Erto, A., Lancia, A., Bortone, I., Di Nardo, A., Di Natale, M., & Musmarra, D. (2011). **A procedure to design a Permeable Adsorptive Barrier (PAB) for contaminated groundwater remediation**. *Journal of Environmental Management*, *92*(1), 23–30.