



AdaPtive micROfluidic- and nano-enabled smart systems for waTEr qUality Sensing

Acronimo: **PROTEUS**

Call: **H2020-ICT-2014-1**

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Abstract: PROTEUS is a project funded by the Horizon 2020 framework program for research of the European Commission. PROTEUS is one of the only 10 projects funded in 2015 with 4M€, of which UNIPG has received 430k€, over a total of 106 projects submitted under the call ICT-2 Smart System Integration. Its objective is to develop an innovative self-powered wireless sensor network for the water monitoring. In particular, the wireless sensor node will integrate chemical sensors based on carbon nanotube, MEMS sensors, smart software with event prediction and energy harvesting system for self-powering capability. The main challenge of PROTEUS, with respect to the state-of-art commercial devices, is to provide a more efficient, miniaturized (10x smaller) and maintenance-free technology with capability to capture the energy for the ambient to feed itself. UNIPG with the NiPS research group at the Department of Physics and Geology is part of the PROTEUS consortium, which includes 4 academic institutions and 5 small medium enterprises. Due to its long-standing and recognized expertise in the field, NiPS has the key role to develop a novel energy harvesting system to provide autonomy to the PROTEUS technology. PROTEUS mix competences from integrated smart systems area, Internet of Things, cloud computing, long range wireless sensors and energy harvesting in the field of water utilities. The award of PROTEUS demonstrates the research excellence carried on at UNIPG in the context of the European Union.

Official website: <http://www.proteus-sensor.eu/> University of Perugia participates to PROTEUS with the Department of of Physics and Geology.