

# **Guidelines concerning the improvement of the operation of water supply networks in Cyprus using the 'HYDROGIS' Infrastructure: Local energy losses in T-Junctions**

DIMITRIADIS P<sup>2</sup>., CHAZAPI A<sup>2</sup>., PAPANICOLAOU P<sup>2</sup>., EVLOGIMENOS P.<sup>1</sup>,  
HADJIMITSIS D.G<sup>1</sup>.

<sup>1</sup>Cyprus University of Technology, Department of Civil Engineering and Geomatics, Remote Sensing & Geo-Environment Lab, ERATOSTHENIS Research Centre

<sup>2</sup>National Technical University of Athens, School of Civil Engineering, Department of Water Resources and Environmental Engineering

## **ABSTRACT**

The project entitled 'Upgrade of the hydraulics laboratory for the modeling of water supply networks & design and operation optimization study, HYDROGIS' is funded under the Framework Programme for Research, Technological Development and Innovation of the Research Promotion Foundation in Cyprus (DESMI 2009-2010). One of the main aims of this project is the establishment of guidelines concerning the improvement of the operation of water supply networks and their systems (i.e. pumps, valves, flowmeters) based on the study of the phenomena of local energy losses at different operational phases of the network.

Its scientific challenge extends also to developing the information infrastructure needed for the supervision and management of the networks, as well as defining guidelines for the optimum design of new networks and for corrective interventions in existing ones. The proposed research infrastructure will fill the huge gap between basic and applied research in the area of fluid engineering and fluid machinery, which are of extensive use in the industry and in the society in general.

Guidelines concerning the improvement of the operation of water supply networks are briefly presented and described.