

Name SURNAME Francesca Malpei		
Function:	Full Professor	
Institution:	Politecnico di Milano	
	<input type="checkbox"/> Funding Agency <input type="checkbox"/> Programme Manager	
Email:	francesca.malpei@polimi.it	
Phone:	+39 0223996434 (office), 0039 3292128225 (mobile)	
Division	DICA	
Areas of Expertise:		
<p>Francesca Malpei holds a M.Sc. in Civil Engineering in 1987, Ph.D in Environmental Engineering at Politecnico di Milano. Associated professor in 2005 and full professor from January 2016, holds a chair of Wastewater Treatment Engineering at the School of Civil and Environmental Engineering, M.Sc. Degree. From 2003, her research activity was focused on anaerobic processes. Author or co-author of more than 110 papers/book contribution, 41 on Scopus, H index:12</p>		
Short Description of your Institution:		
<p>Politecnico di Milano is the first technological university in Italy. POLIMI has got a long term experience in EU funded projects management (261 projects in the FP7 and 57 in the H2020 framework). The Department of Civil and Environmental Engineering (DICA) is the 5th in Europe and the 13th is the word according to the QS ranking. Within the DICA labs, 2 are fully equipped to sustain research activities in the environmental engineering field (http://www.dica.polimi.it/laboratori/labamb/ and http://www.fabbricabioenergia.polimi.it/images/docs/laboratorio.pdf), the second one fully dedicated to anaerobic digestion. A crossflow membrane filtration unit cell for ultrafiltration NF and RO (GE Water & Process Tech.-Sepa CFII) and a hollow fibber filtration unit cell (0,02 um) are available. Pilot plants are also available to tests innovative treatment processes (membrane bioreactors, anaerobic digestion).</p>		
Role in the project:		
<p>The POLIMI research group will participate to the WP2.1, WP 2.3 and WP 3.3. In WP2.1 lab-scale membrane filtration tests will be performed. Optimal module configuration, cut-off and operating conditions (P, backwash, fouling control) of UF of raw wastewater, as a pre-treatment to the following NF and to maximize recovery rate will be studied. NF and RO membrane performance will be also tested. TMP behaviour will be analysed and modelled as a function of operating conditions (P, flux) and time of filtration. In WP 3.3 effectiveness of anaerobic digestion of retentates will be tested, as a possibility to recover energy from biogas production. UF retentates will be characterised and BMP (Biochemical Methane Potential) will be performed on a long term basis (60day) by a volumetric device, at different dilution to detect any inhibiting factor, in mesophilic and thermophilic conditions. BMP of streams generated from biocatalysis processes will investigated as well.</p>		

August 10, 2016