JOB PROPOSAL

Position	Postdoctoral fellowship
Research context	**EFFIDRAIN project – 2015/2019** Suez Eau France, carries out missions for public utilities in drinking water and sewer systems by collaborating with local players. Service company and strongly implied at a local scale, customers are key elements for Suez Eau France and, actions and projects are carried out in a sustainable perspective. Based in Bordeaux (France), Le LyRE research centre is specialised in water area. It is one of the five Suez research centres. Its concerns are: 1) water and wastewater systems management, 2) water users and players, and 3) the great water cycle. The candidate will evolve at the interface between academic and industry where scientific issues are tackled in the ultimate goal of operationalisation. Thanks to the collaboration between le LyRE and 4 Spanish partners, an European founding was obtain via the LIFE : Environment and Resource Efficiency in order to realise the EFFIDRAIN project: « *Efficient integrated real-time control in urban drainage and wastewater treatment plants for environmental protection* ». The main objective of EFFIDRAIN is to demonstrate that using real time data of water quantity together with water quality, an integrated strategy of real time control of sewer and wastewater treatment plant can lead to natural receiving body pollution reductions.
Mission	The tasks will mainly deal with configuration, calibration and validation of a sewer model that allows for simulation of hydraulics and wastewater quality of the Atlantic pilot site of Bordeaux. The model was developed at le LyRE. Depending on needs and project advancements, the candidate would have to develop model source code, as a consequence some programing knowledge requirements are to be considered. Innovation is mainly related to water storage and settling/erosion phenomena impact on combined wastewater quality. The simulation platform that will be used in the project is the SWMM software developed by the USEPA and modified at le LyRE. In addition, the candidate could be implied in the coordination of maintenance, treatment and interpretation of data collected from water quality sensors that are installed in various locations in the sewer. Depending on project progresses and candidate motivations, he could also be asked to think about quality-based real time control implementation and environmental gains assessment that such quality-based strategy could provide versus a more classical management based on hydraulics.

Requirements/ Skills	• The candidate must possess a PhD degree in a relevant area for less than 5 years: sewer system modelling, wastewater treatment processes, characterisation and data treatment from online measurement, integrated wastewater system management • Knowledge in urban wastewater system modelling (Infoworks, MikeUrban, SWMM, other software) • Knowledge in programming (SWMM source code in "c") is an advantage • Strong implication/interest for innovation and new tools and methods development • Project management, autonomy, organisation, good relationship skills • Good drafting abilities and scientific communication skills (scientific papers and conferences) • Fluent in French <u>or</u> English is required • Skills in Spanish is an advantage
Contract length	12 months
Location	Le LyRE - Bordeaux (France)
Gross salary	35,000 – 40,000 €/year depending on experience
Contacts	Xavier Litrico (Xavier.Litrico@lyonnaise-des-eaux.fr)
Recruitment process	The application should demonstrate that the profile fits with the objectives and the required skills. The candidate should provide Curriculum Vitae, a letter outlining motivations, a publication list, a recommendation letter from PhD director (or current lab) and a detailed PhD thesis summary