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The HYTECH Project and new opportunities for eco-hydraulics in the Marie Skłodowska-Curie Actions within Horizon 2020

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ABSTRACT

Marie Skłodowska Curie actions have proven an extremely successful European initiative over a quarter of a century, enhancing mobility of young scientists within Europe and to Europe from countries worldwide. HYTECH is a EU-Marie Skłodowska Curie Initial Training Programme devoted to the development of young researchers through doctoral studies and research activities in the area of eco-hydraulics and the role of aquatic interfaces. Environmental studies related to natural water bodies are a relatively new area of research, spanning over no more than fifty years. The project is training new technical and scientific figures which can bring innovation in environmental applications and problem solving. The project themes include the transport of inorganic and organic matter, including solutes, colloids and sediments in river flows and across the boundary interfaces. Understanding of transport mechanism is a predestined stepping stone towards the ability to assess the vulnerability of the natural environment to anthropogenic stresses. The crucial role of heterogeneities of the stream geometry, of the nature and composition of interfacial matter, and of transported matter, is emphasized by appropriate experimental and mathematical tools. Direct observations and measurements of transport and ecological processes, using up-to-date instrumentation and investigation procedures, are key components of the research and training programme. The participation of the private sector in the activities guarantees the direct transfer of methods and results into the professional and technical market.