Call for 2 Post-Doctoral Research Positions under Project SEDITRANS

The project SEDITRANS entitled "Sediment transport in fluvial, estuarine and coastal environment" and funded under the Marie Curie FP7-PEOPLE-2013-ITN program of the European Union will provide an elaborate and interdisciplinary training-through-research program to Experienced Researchers (ERs) holders of a recent PhD degree.

Experienced researchers shall, at the time of the relevant deadline for submission of proposals or recruitment by the host organisation, be in possession of a doctoral degree or have at least four years of full-time equivalent research experience. In ITN, experienced researchers shall also, at the time of recruitment by the host organisation, have ***less than five years*** *of full-time equivalent research experience.*

At this time, SEDITRANS invites applications for 2 ER positions to start in 2015. Information about SEDITRANS, the participating partners, the description of the positions and the rules of the program (for example, about eligibility and salary) can be found at the website of SEDITRANS (www.seditrans.civil.upatras.gr). Interested applicants are encouraged to contact directly the corresponding scientist of each position and apply before **December 31, 2014**.

Note that in order to be eligible for these positions, applicants must also meet the **mobility criterion**: *At the time of the relevant deadline for submission of proposals, or recruitment by the host organisation, depending on the action, researchers shall not have resided or carried out their main activity (work, studies, etc) in the country of their host organisation for more than 12 months in the 3 years immediately prior to the reference date. Compulsory national service and/or short stays such as holidays are not taken into account.*

Questions about the program may also be directed to the SEDITRANS coordinator.

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1. Post-Doctoral Position at the University of Patras, Greece

Project title: "Parallel numerical simulations of coastal flows"
Location: Dept. of Civil Engineering, Univ. of Patras, 26500 Patras, Greece
Requirements / eligibility:

- English or Greek Language
- PhD degree in engineering, physics or related disciplines
- Candidates should have skills in scientific computing/programming and computational fluid dynamics using Fortran or C++ language and be able to work in Linux/Unix environment

Objectives:

- Application of parallel code to wave propagation and breaking with bed and suspended sediment load
- Three-dimensional wave breaking in turbulent coastal flows
- Bed and suspended sediment transport induced by waves in coastal flows

Job description:

- Implementation of MPI parallel protocol on existing serial code for wave propagation and breaking over rigid bed

- Incorporation of sediment transport models in the above code and simulation of coastal sediment transport and bed morphology evolution
- Validation of numerical code against experimental measurements for wave breaking and coastal sediment transport
- Documentation of computational test cases
- Preparation and submission of articles in international peer-reviewed journals and/or conferences

Interested applicants are encouraged to send a detailed CV, a statement of research interests, and names of two references to Professor A. Dimas (adimas@upatras.gr).

2. Post-Doctoral Position at Indrostudi, Italy

Idrostudi srl is seeking for a candidate with a PhD degree (or at least 4 years of equivalent research experience) for an Experienced Researcher position within the Marie Curie Initial Training Network "SEDITRANS".

Main tasks of the ER's activity will be:

(1) the development of a software package whose core will be the numerical model developed by the University of Trieste within the SEDITRANS project in order to obtain a valuable tool that could be applied in river and coastal environment for real cases;
(2) Application of the model to erosion problems in an estuarine flow.

The candidate must have proficiency in programming in Fortran, C++, and Java languages, and knowledge of Matlab as well as very good English language skills. A strong interest in hydrodynamic modeling for the analysis of solid transport, in interdisciplinary and application-oriented work, and experience in experimental work are required. Experience with parallel computing with MPI is appreciated.

Apart from independently conducting cutting-edge research leading to publications, the experienced researcher is expected to cooperate with the early stage researchers in the SEDITRANS Initial Training Network.

The position is for twenty months and interaction with research groups of the network and other stakeholders will be encouraged. Interested applicants are encouraged to send a detailed CV, a statement of research interests, and names of two references to Dr. F. Zanello (zanello@idrostudi.it).