Experienced Researcher Position at the Hydraulics Laboratory K.U.Leuven

Climate change is a hot topic not only in research. It will have and in fact it already has a large impact on many aspects of everyday life. It influences policy making and therefore political decisions, it changes our way of thinking about a sustainable environment and we already need to incorporate it in engineering design. But it is not evident to separate natural from human induced variability and to understand which variables are possibly linked. Statistical methods can offer powerful techniques to help us in interpreting measured and simulated variables (such as sea level, wind speeds, temperature, ..) on the one hand and establishing input variables for impact scenarios (e.g. extreme rainfall for run-off models, extreme storms for coastal defence, ..) on the other hand. Different scales varying from global over regional to nearly local make the problem not any easier.

The challenge is to work out climate change scenario’s for coastal zone impact studies in the Southern North Sea area. Two main tasks are foreseen: i) a literature review on general strategies for establishing scenario’s of sea level rise and storminess that can be used by hydrodynamic, wave and sediment transport models to estimate the impact in the coastal zone and ii) apply the most suitable strategy in order to establish specific scenarios for the Southern North Sea. These specific scenarios will be used by the research partners in the QUEST4D project (QUEST4D QUantification of Erosion and Sedimentation patterns to Trace the natural versus anthropogenic sediment dynamics - http://www.vliz.be/projects/quest4d/) where the possible impact of climate change will be evaluated with respect to a reference scenario.

The work will be carried out in Leuven, but in close collaboration with and with short stays at KNMI in the Netherlands (also a SEAMOCS partner). KNMI is a research institute heavily involved in global and regional scale climate variability.

We are looking for an experienced researcher (> 4 years):

- with proven ability in statistical techniques (multivariate, extreme values, ..) and scientific communication (papers, ..),
- with good computer skills (Linux, Fortran). Experience in handling large data sets is desirable. Affinity with hydrodynamics, waves and/or meteorology is considered a plus,
- with excellent communication skills and very good command of the English language (orally and written)
- who can work independently but is also a team player,
- who is eligible for a Marie- Curie contract (E.U. Citizen or member state + at least 4 years research experience + not having lived for more than 12 months in Belgium in the last 3 years), more details at http://ec.europa.eu/research/fp6/mariecurie-actions/pdf/ rtn_hand.pdf
We offer:

- an interesting challenge and the possibility to work in a multidisciplinary project
- a 1-year contract with all the benefits and advantages of a position in the E.U. Marie-Curie SEAMOCS project (international context, travel allowance, ...);

**Additional information:**

- send your CV and minimum 2 reference letters to prof. Jaak Monbaliu; email: jaak.monbaliu@bwk.kuleuven.be
- SEAMOCS website: [http://www.maths.lth.se/seamocs/](http://www.maths.lth.se/seamocs/)
- closing date: 15 March 2008 or until positioned filled
- starting date: a.s.a.p.

**Hydraulics Laboratory of the K.U.Leuven**


**SEAMOCS**

SEAMOCS (Applied stochastic models for ocean engineering, climate and safe transportation) is a Marie Curie Research Training Network (RTN) financed by the EU. The SEAMOCS initiative links meteorology and statistics with ocean and coastal engineering. The overall goal of research and training is increased marine safety and reduced capital and operational costs of sea transport and major off-shore installations. The consortium consists of three university research groups in ocean and coastal engineering, three university research departments in applied probability and statistics, and three public and private organizations engaged in activities to increase the safety of marine operations. The chosen candidate will have the opportunity to take part in courses and training programs offered by the SEAMOCS partners, and to take advantage of other SEAMOCS activities related to meteorology, statistics and marine safety. Resources are available within the SEAMOCS project for this exchange.