



## **Post-doctoral position Uncertainty Quantification in 2D morphodynamic models**

**Saint-Venant Laboratory for Hydraulics, Université Paris Est  
(joint research unit between Ecole des Ponts ParisTech, EDF R&D and Cerema)  
Location: EDF Lab Chatou (France), 6 quai Watier 78401, Chatou, France**

The Saint-Venant Laboratory for Hydraulics is a joint research unit between Ecole des Ponts ParisTech (ENPC), Electricité de France R&D (EDF R&D) and Cerema. The laboratory has a unique position in the field of applied fluid mechanics, at the interface between academy and industry.

We are seeking to fill a 18 month post-doctoral position on Uncertainty Quantification in 2D morphodynamic models. The aim of this post-doctoral position is to develop an operational tool for simulating navigation hydraulic conditions in the Gironde estuary. The numerical tool, based on TELEMAC set of softwares (open-source code, [www.opentelemac.org](http://www.opentelemac.org)), must be able to deliver the real time flow depth with uncertainty and confidence intervals. Of particular interest is the uncertainty related to sediment transport parameters that are generally poorly defined in literature.

Successful applicant should, by the start of the appointment, have a Ph.D., or equivalent experience in Applied Mathematics, Applied Physics, Computer Sciences or Mechanical/Civil Engineering. The use and development of high performance numerical computing codes are highly desirable. The researcher will be employed by Ecole des Ponts ParisTech (ENPC). Salary and benefits will be commensurate with qualifications and experience.

### **About Saint-Venant laboratory and the host research team:**

The Saint-Venant laboratory for Hydraulics is actively engaged in fundamental and applied research. Research activities are organized along three main themes: (A) Waves and marine hazards, (B) Modeling and simulation of free-surface flows, (C) Sediment transport and morphodynamics.

The laboratory has access to a unique variety of facilities, such as 8000 m<sup>2</sup> of experimental facilities and high-performance Computational Fluid Dynamics models for flow and transport processes, including the open-source Telemac-Mascaret modelling system (<http://www.opentelemac.org>). The laboratory is located on the EDF Lab site in Chatou (France), about 15 km from Paris downtown (6 quai watier, 78401 Chatou).

More information about our laboratory can be found at: <http://www.saint-venant-lab.fr>

### **How to apply:**

Applicants should send to Dr. Cedric GOEURY and Dr. Kamal EL KADI ABDERRAZZAK (see e-mail addresses below): a cover letter and CV. The deadline for application is March 31<sup>st</sup>, 2017.

For additional information, please contact:

- Dr. Cedric GOEURY [EDF R&D], e-mail: [cedric.goeuruy@edf.fr](mailto:cedric.goeuruy@edf.fr)
- Dr. Kamal EL KADI ABDERRAZZAK [Saint-Venant Laboratory for Hydraulics and EDF R&D], e-mail: [kamal.el-kadi-abderrazzak@edf.fr](mailto:kamal.el-kadi-abderrazzak@edf.fr)