LabEx OSUG@2020

Observatoire des Sciences de l'Univers de Grenoble

Ce projet est soutenu par le Laboratoire d'Excellence OSUG@2020 (ANR10 LABX56) financé par le programme d'Investissements d'Avenir lancé par l'Etat et mis en oeuvre par l'ANR.

Titre du projet : Visualisation et mesure d'ondes internes focalisées

Volet : AO4 International

Porteur du projet : Natalia Shmakova

Laboratoires impliqués : Laboratoire des Écoulements Géophysiques et Industriels (LEGI); Department of applied Mathematics and Theoretical Physics (DAMPT), University of Cambridge

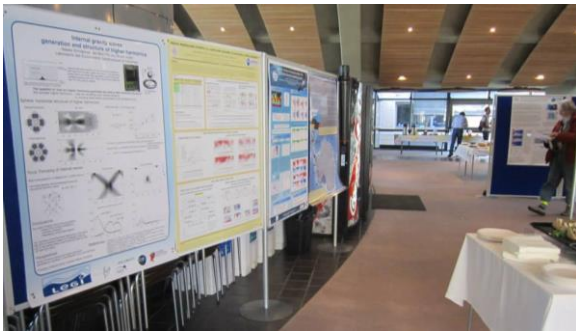
Bilan du projet pour l'année 2014

Bilan d'activité *(1 page max)*

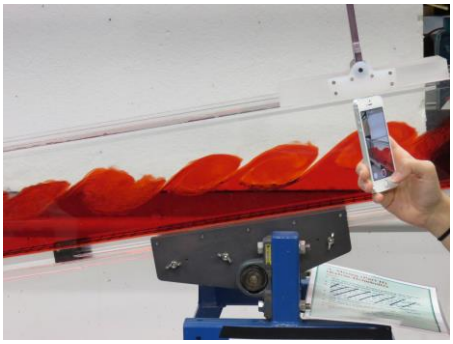
The project gave me a possibility to participate at the Fluid Dynamics of Sustainability and the Environment (FDSE) Summer School, which took place in September 2014 (01/09/14-12/09/14) in Cambridge, UK. This summer school is aimed at Ph.D. students, postdocs and engineers with a background in mathematics, fluid mechanics or environmental science, who wish to learn more about environmental fluid dynamics.
On the first day we had a Poster session where I presented results of my experimental study and was able to meet people working in the same field as me.
The school includes four « core » courses on: fundamentals of fluid dynamics, flow instabilities, environmental fluid dynamics and cryosphere, and atmosphere and ocean. All these lectures were very intense and useful for general fluid dynamic education.
The originality of FDSE school, compared to other similar events, is that the lectures were accompanied by numerous numerical and experimental afternoon sessions, where all of participants had the opportunity to get hands-on experience in the physical processes studied in the lectures. Working in groups we were able to share our experience: groups had been formed with one experimenter, one theoretician and specialist in numerical modelling; we were able try ourselves in a different domain, as an experimenter I got some experience in numerical modelling and helped others with experiments. In addition during this sessions our professors showed us difficult and very beautiful experiments with so called 'ice finger' and gravity currents.
In the end of the summer school each group had to make the presentation of one numerical and one experimental project. In my group we presented experimental study of porous media flows and numerical investigation of Rossby waves.

Illustrations - avec légende et crédit *(à envoyer également séparément)*

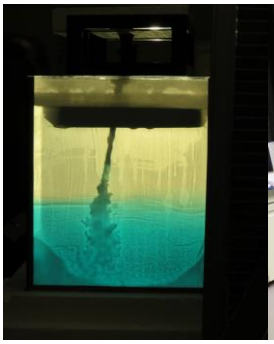
Participants of FDSE SS 2014



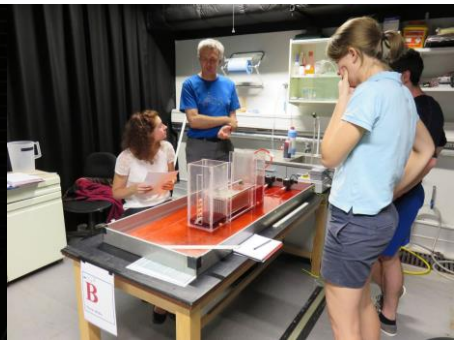
Poster session



Kelvin-Helmholtz instability



Generation of Ice finger



Experimental study of porous media flow

Production scientifique *(articles scientifiques, actes de congrès…)*

- Internal waves : Generation and structure of higher harmonics (FDSE SS Poster session)
- Experimental study of porous media flows (oral presentation)
- Numerical investigation of Rossby waves (oral presentation)

Bilan financier succinct *(avec suivant les cas : co-financements éventuels, équipements achetés, missions, recrutements divers, fonctionnements divers…)*

- Inscription : 2000£ (2500€) (Logement et norriture compris dans l'inscription)
- Transport : 210€
- Visa : 290 € (100 € visa + 30 € Chronopost + 160 € train Grenoble–Paris pour entretien pré-visa)

Annexes si besoin ou lien sur des sites existants et pérennes jusqu'à la fin du Labex (2020)