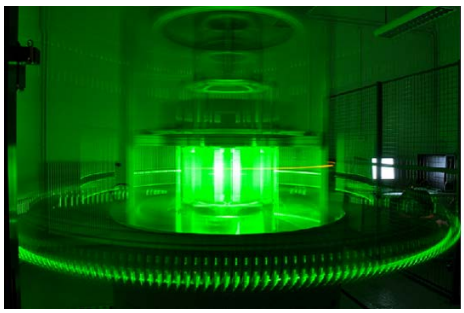
Post-doc position at FAST laboratory in Orsay (France)
starting in 2019

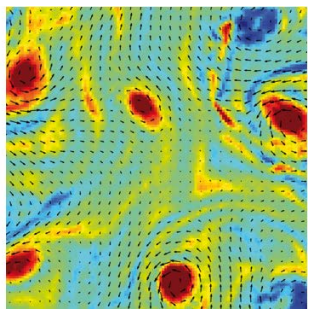
Turbulence and inertial waves in rotating fluids

The post-doctorate fellow will have to run an experimental setup aiming at forcing a turbulent flow under rotation in a regime of inertial wave turbulence. This post-doc position of 18 months (with a possibility of prolongation) is funded by the ANR project DisET developed in collaboration with Institut Néel, LMFA (Ecole Centrale de Lyon) and Laboratoire de Physique de l'ENS de Lyon.

The project will consist in exploring experimentally the regimes of wave-vortex coexistence in rotating turbulence. Experiments will be conducted on the rotating platform of FAST laboratory in Orsay, which is able to carry velocimetry systems using several cameras. Beside the development and realization of experiments, the post-doc will be fully involved in the data analysis and in their comparison to existing theoretical formalism.

The project also involves a collaboration with Mathieu Gibert at Institut Néel (Grenoble) who is running rotating turbulence experiments in liquid helium. The low viscosity of liquid helium will allow us to reach previously unexplored regimes of rotating turbulence.





Left: Rotating platform of FAST.

Right: Horizontal cross-section of a turbulent velocity field measured on the rotating platform.

Candidates should have received a high-level academic formation in statistical and non-linear physics and/or in fluid dynamics. She/he should have obtained a PhD in experimental or theoretical physics, preferentially in the field of fluid mechanics.

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Laboratoire FAST

FLUIDES, AUTOMATIQUE et SYSTÈMES THERMIQUES

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