Postdoctoral Position in Laboratoire de mathématiques d'Orsay

Location : **Orsay, France**
Discipline : **Applied Mathematics**
Duration : **2 years**
Deadline for applying : **12 january, 2024** (or until the position is filled)

PEPR PDE-AI is a research project funded by the French ANR (Agence Nationale de la Recherche) for 2023-2027. It involves researchers from several institutions, including a group at *Laboratoire de Mathématiques d'Orsay* in *Université Paris-Saclay*. The main topics of this project are the interplay between deterministic applied mathematics (PDEs, control theory, optimal transport, calculus of variations, etc.) and artificial intelligence/machine learning.

The Orsay group of this project seeks a post-doctoral researcher to be hired for two years. The selected post-doc will work under the supervision of the local PI of the PEPR PDE-AI project Quentin Mérigot, possibly in collaboration with faculty from the Numerical analysis/PDE team from the LMO or of the newly created PARMA Inria team (headed by Thomas Gallouët). Collaborations with other member of the PEPR PDE-AI project are also encouraged. The hired post-doctoral researcher will be employed by Université Paris-Saclay, under a fixed-term contract of two years. The salary should be around 2k € per month net of taxes, and the position includes standard social benefits (health coverage, 75% of local travel expenses). No teaching duty is associated to this position. Professional travel expenses will be covered by the PDE-AI project. The starting date would ideally be in the fall quarter of 2024.

Applications are welcome by any scientist with experience in the above-mentioned fields, holding a Doctoral degree, or expecting to get it by the starting date of the contract. Women and underrepresented groups are strongly encouraged to apply. In order to apply, candidates must send their complete CV, the list of their publications with links to retrieve them on the web, and a short research project to both `quentin.merigot@universite-paris-saclay.fr` and `thomas.gallouet@inria.fr`. Applicants are welcome to contact us to prepare their research project. Possible research topics include (but are not limited to) :

— computational or statistical aspects of optimal transport ;
— applications of optimal transport to ML/AI, e.g. sampling and quantization problems, use of Wasserstein distances in inverse problem ;
— construction/study of new optimal transport models ;
— interplay between PDE/numerical analysis and optimal transport (e.g. gradient flows).