Ph.D. Position in Optimal Transport and Machine Learning

TU Darmstadt (Germany) Joint with KTH Stockholm (Sweden)

Optimal Transport/Optimization for Machine Learning

New: Open Ph.D. Positions

Ph.D. positions in **optimal transport (OT) and machine learning**, on topics closely related to theory foundation of OT, computational OT, gradient flows, PDE, deep generative models, Bayesian inference, kernel methods, distributional robustness, generalization, optimization, theory foundation of OT for RL and control.

The student will be jointly supervised by:

- **Jia-Jie Zhu** (KTH Stockholm. Topic: OT, optimization, applied math)
- **Jan Peters** (TU Darmstadt. Topic: RL, robotics/control)

The student will have a chance to visit the partner institutions for research and collaboration.

Qualification

The ideal candidate's background is in applied math and/or machine learning (e.g. optimization, analysis of PDE/SDE), with **a master's degree and related research experience**. Those qualifications are demonstrated by high-quality technical reports or publications in relevant venues such as mathematical journals of top ML conferences (NeurIPS/ICML/ICLR/AISTATS/UAI/AAAI/CoL etc.).

The student should have acquired expertise including (but not limited to) one of the following topics during their previous studies:

- Optimal transport (and gradient flow) applications in machine learning and optimization
- Analysis of PDE/SDE with ML applications such as deep generative models
- Kernel methods, interacting particle systems
- Probabilistic machine learning, Bayesian inference, generative models
- Distributionally robust optimization and control

Application and More Details

Inquiries from qualified (see above) candidates are encouraged. Please send the following:

- CV
- Master's thesis (if any), and any previous tech reports or publications related to the position
- Complete transcripts for both bachelor's and master's

to the email address zplusj@gmail.com, with the subject containing `[apply-phd-TUDA-KTH]`.

The position will be open until filled.

Note: Due to the number of inquiries, we can only reply when there is a fit. Please excuse the

delay in response.

The formal application, with two reference letters, can be submitted to the application system here: https://www.ias.informatik.tu-darmstadt.de/Jobs/Application