Imperial College London

Type: Funded PhD Studentship (Home or Overseas)

Location: Imperial College London, Department of Electrical and Electronic Engineering

Supervisor: Dr Stefan Vlaski

Keywords: Optimisation and machine learning; distributed, federated and decentralised learning; adaptive and multi-agent systems; network science.

Start date: As soon as possible, no later than Autumn 2023.

Deadline: Applications are considered on a rolling basis until filled.

Description:

Our ability to design intelligent machines that learn models directly from data has led to tremendous progress across a plethora of scientific fields in recent years. Examples range from communications and signal processing to medical imaging, genetics, finance and social sciences. The objective of our group at Imperial College London is to develop algorithms that enable provable and efficient learning across various challenging environments. We are based in the Department of Electrical and Electronic Engineering on the South Kensington Campus.

We invite applications for a fully-funded PhD studentship at the intersection of optimisation, machine learning and network science. Projects can focus on any of the following areas:

- Distributed, federated, or decentralised learning for multi-agent systems
- Optimisation for machine learning (e.g., nonconvex, stochastic, large-scale learning)
- Robust, privacy- or communication-constrained learning
- Multi-task and meta-learning
- Statistical or information-theoretic concepts for (distributed) learning

Funding:

The full studentship covers full tuition fees at either Home or Overseas level, and a stipend of approximately £19,668 per annum (tax-free). The student will receive additional support towards further research expenses over the course of the research studentship, including support to attend international conferences.

Eligibility and Application:

Applicants will need to meet general entry requirements and apply through the departmental portal, listing Dr Stefan Vlaski as potential supervisor. Additionally, applicants are expected to demonstrate strong aptitude for analytical reasoning, excellent communication skills, and creativity. Applicants wishing to informally discuss details of their application are invited to email Dr Stefan Vlaski directly. Applications are considered on a rolling basis. The start date is flexible, but no later than Autumn 2023.

About Imperial College London:

Imperial College London is the UK's only university focused entirely on science, engineering, medicine and business and is consistently ranked among the top 10 universities in the world. Imperial has a greater proportion of world-leading research than any other UK university, according to the 2021 Research Excellence Framework (REF). Additional information on the PhD programme in the Department of Electrical and Electronic Engineering can be found here.