Postdoc Position

Railway Dynamics

Full time (40h)

€ 56.800 gross/year

*according to the standard personnel costs and salaries of the Austrian Science Fund FWF

COMPLEXITY SCIENCE HUB VIENNA

The Complexity Science Hub Vienna is a young research institution dedicated to a deeper quantitative and predictive understanding of complex systems for the betterment of society. We provide an exciting, creative, bureaucracy-free environment for open-minded visionaries who want to make a change and are brave enough to step out of mainstream science.

POSTDOCTORAL POSITION IN COMPLEX SYSTEMS — RAILWAY DYNAMICS

POSITION

We search for an excellent scientist with a PhD degree or equivalent in physics, mathematics, computer science, or related field. Knowledge of network analytics and experience with agent-based simulations is a plus. The successful candidate will work in the research group of integrated mobility, in close connection with researchers at the Hub and experts at the Austrian national railway company ÖBB. You must have a critical, open-minded and collaborative spirit.

YOUR PROFILE

You should have some research experience at PhD level, or equivalent in handling and analyzing big data. You must be proficient in English both written and spoken, knowledge of German is a plus. We expect you to have the ability to independently carry out data-intensive research as exemplified by your past works that showcase your strong programming, modelling, and mathematical skills.

YOUR RESPONSIBILITIES

The project will focus on the following research tasks:

- analysis of railway mobility data
- statistical characterization of important observables
- software maintenance of an agent based railway simulation
- study of risk and resilience of railway networks

WE OFFER

A position in a dynamic, creative, internationally oriented, appreciative, and open working environment. The Hub hosts scholars with a wide variety of backgrounds and is an excellent place to acquire and/or deepen skills in data science, data visualization, as well as mathematical modeling and computational social science. The variety of projects at the Hub will allow the successful candidate to engage in new and timely topics and to collaborate with world renowned scientists. This position is integrated in a multidisciplinary project that aims to design strategies to reduce the impact of delays in the Austrian railway system. This project will use complex systems approaches to mobility networks. The activities can span from agent-based simulations and optimization, to the analysis and characterization of temporal networks. A small parallel project using machine learning techniques is already in place.

APPLICATION

To apply, please submit your CV, a motivation letter that includes your vision (What is your vision for the project? What would you like to discover in your future scientific life?) as well as any additional material that helps us understand that you are the right person for this position, with the subject line "Postdoc Railway Dynamics" to applications@csh.ac.at. We will start evaluating applications from June 15, 2022. Also include names and full contact addresses of at least one colleague who is willing to write a letter of recommendation for you.

CSH is committed to the principle of equal employment opportunity for all applicants. All employment decisions are therefore based on job requirements, qualifications, merit, and organizational needs. We strongly encourage individuals from underrepresented groups to apply.

The CSH Vienna processes your personal data in accordance with the law www.csh.ac.at/data-protection/