

# Open Postdoctoral Position in Complex Infrastructure Systems

*Hiring Organization*  
Princeton University

*Job Location*  
Princeton, New Jersey

*Starting Date*  
Spring 2023

*Application Deadline*  
Applications will be reviewed continuously until the position is filled.

Dr. Jürgen Hackl in the Department of Civil and Environmental Engineering at Princeton University is looking for highly motivated and talented applicants whose research background falls into one or more of the following three areas:

- ▶ **Network Analysis**, e.g., spatial-temporal networks, multilayer/multiplex networks, random graph models, network dynamics, higher-order-networks.
- ▶ **Machine Learning**, e.g., Graph ML, deep and recurrent neural networks, generative models, reinforcement learning, online machine learning.
- ▶ **Computational Modeling**, e.g., natural hazard, deterioration, transportation, risk and reliability, probabilistic modeling, infrastructure systems, digital twins.

**Qualifications:** Candidates must hold a recent Ph.D. degree and first-author publications in peer-reviewed journals/conferences in the field of Civil Engineering, Mathematics, Computer Science/Engineering, Physics, Electrical Engineering, or other related fields. Additionally, candidates with a background in the following areas: network analysis, statistical modeling, machine learning, and computational modeling are preferred. Excellent programming skills are expected. Previous experience with Python, PyTorch, or CUDA is an advantage. Strong team working and critical thinking skills, aptitude for independent and creative work, as well as fluent English written and presentation skills are essential.

**Application instruction:** The application should include: (i) A letter of intent describing yourself, your research background and interests, and why you would be suitable for the position (max three pages); (ii) Your CV and publication list; (iii) The names and contact information of at least three references (email address and phone number); (iv) A copy of your Ph.D. certificate; (v) Any unpublished work that you would like to present in support of your application. The application should be written in English. Send your application to the following email address (hackl@princeton.edu) with the subject heading "Prospective Postdoctoral Candidate <Your Name>". You are welcome to submit your application as soon as possible, ideally before **January 3, 11:59 pm EST**; applications will be reviewed continuously until the position is filled. The successful candidate should ideally start the position in Spring 2023, but starting date is negotiable.

**About the Supervisor:** Dr. Jürgen Hackl is an Assistant Professor at Princeton University. He received his doctorate in Engineering Science from ETH Zurich. His research focuses on complex infrastructure systems, intelligent risk and resilience assessments to climate change, as well as integrated solutions to future challenges facing our cities and society. His research interests lie at the interface between formal methods in network sciences and their integration with prevailing simulation methods, such as digital twins. Additional information can be found on his website.

Should you have questions about the position, please get in touch with Prof. Dr. Jürgen Hackl via email (hackl@princeton.edu).

Princeton University is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.