Postdoc (f/m/x) in Machine Learning for Scientific Modeling

Affiliations: Technical University of Munich (TUM) & Helmholtz Munich

Niki Kilbertus invites applications for a fully funded Postdoc position. We're looking for an independent researcher with a clear research agenda in machine learning for scientific modeling, ready to take the next step toward leading their own group.

About us and the role

Our group operates across the Helmholtz Munich Campus [maps] and the TUM Garching campus [maps], and all members are affiliated with both institutes. As a postdoc, you will set and drive your own research agenda in close collaboration with Niki, group members, and external partners. You will have full freedom (and are expected) to bring your own research problems and a compelling agenda, proactively involve PhD and Master's students, and help shape the group's scientific direction. You will also help with the group's day-to-day operations in a supportive, light-touch role. Niki's main goal is to enable your transition to a permanent role in academia.

We focus on methods-driven ML for scientific modeling, currently emphasizing the integration of data-driven and mechanistic approaches for dynamical systems, causality, and ML for science more broadly. We publish at core ML venues and collaborate on applications in biomedicine, climate, and physics. Find out more at nikikilbertus.info.

How you'll succeed

We hire for potential, research taste, independence, and demonstrated leadership, not checklists.

- Be curious and audacious, ask questions, and relentlessly strive for understanding.
- Value the social and collaborative nature of science, be proactive, eager to share ideas, give and receive feedback, and contribute to the group.
- Lead, don't just participate: define research questions, scope projects, set goals, deliver.
- Own your research: arrive with concrete ideas, get others excited, and mobilize the group.
- Drive papers to top-tier ML venues (e.g., NeurIPS, ICML, ICLR, JMLR) or application journals; handle reviews and camera-ready with minimal oversight.
- Mentor and co-advise PhD and MSc students day-to-day; help them grow and level up their ideas, code, and writing.
- Initiate and manage collaborations inside and outside the group: navigate goals, incentives, commitments, timelines, venues, authorship.
- Pitch in on light admin keeping the group running (a taste of "academic self government").
- **Prerequisite:** (close to) PhD in a relevant field.

What we offer

- Fixed-term fully funded postdoc for 1–2 years.
- Salary according to the German public sector pay (TV-L/TVöD, E14, 100%).
- 30 days paid leave and high flexibility in where and when you work.
- Access to HPC resources (including GPU clusters) at Helmholtz, the Leibniz Supercomputing Centre (LRZ), and the Forschungszentrum Jülich (FZJ).
- Training and networking within the vibrant Munich AI ecosystem including the Munich Centre for Machine Learning (MCML), the Munich Data Science Institute (MDSI), the local ELLIS unit, and more.
- A generous budget for attending conferences, workshops, and summer schools.

How to apply

Please send your application as **a single PDF file** in English to niki.kilbertus@tum.de with the subject line "**Postdoc Application: [Your Last Name]**". The application should contain:

- **Research proposal (1–2 pages):** the problems you want to tackle in the next 1–2 years, why they matter, and how you'll execute.
- **CV with publication list** (highlight 2–3 papers you are most proud of).
- **Two references:** letters of recommendation if already available; otherwise provide names, affiliations, and email addresses of at least two referees.

Applications will be reviewed on a rolling basis and will continue until the position is filled. We recommend applying early. Incomplete applications or those sent as multiple files may not be considered.

Equal opportunity & accessibility

We are committed to promoting a culture of diversity and welcome applications from people regardless of gender, cultural background, nationality, ethnicity, sexual identity, physical abilities, religion or age. Applicants with severe disabilities will be given preference if equally qualified. If you need reasonable accommodations for any part of the process, tell us—no justification required.

Data protection

When you submit an application, we process your personal data under GDPR Art. 13 for the purpose of the application procedure. The relevant privacy notice can be found under https://portal.mytum.de/kompass/datenschutz/Bewerbung/.