

University of Augsburg

At the Faculty of Medicine of the University of Augsburg, at the Chair of **Model-based Environmental Exposure Sciences (MBEES)**, a position is available **from 1 August 2026 at the earliest**, for a

Postdoctoral Researcher (m/f/d)

to be filled at **100% of the regular working hours** in a **fixed-term appointment for one year**. Remuneration will be in accordance with **pay grade E13 TV-L**, subject to the fulfillment of personal and collective bargaining requirements. The position is suitable for part-time work.

The Faculty of Medicine at the University of Augsburg is a young faculty with research priorities in **Environmental Health Sciences (EHS)** and **Medical Information Sciences (MIS)** and pursues a forward-looking, internationally attractive profile.

The Chair of Model-based Environmental Exposure Sciences (MBEES) is part of the **Environmental Health Sciences Institute (EHSI)** and conducts research on the interactions between the physical environment and human health. A particular focus lies on the development and application of environmental and human behavior modeling systems to quantitatively assess current and future environmental exposures and to investigate their impacts on population health. The chair's work provides a scientific basis for evidence-based decision-making in public health and environmental policy.

The advertised position is embedded in the **EU Horizon project PUREPOLIS**. PUREPOLIS is an ambitious European research project aiming to improve urban health through the development of advanced, data-driven, and participatory tools. Multiple environmental exposures (air, noise, water, soil) are linked to health risks in order to optimize zero-pollution strategies for cities. To this end, PUREPOLIS integrates real-time monitoring, health impact assessments, digital twins, and dynamic policy tools. The project involves **19 partners from 9 European countries**, with MBEES being one of the project partners.

Your Responsibilities:

- Establishment and application of an **agent-based model** (e.g., MATSim or an in-house Python implementation) to represent the daily activities of the entire population in the project case studies **Nantes (France)** and **Valencia (Spain)**
- Calculation of **population-based environmental exposures** to air pollutants and noise based on agent-based modeling
- Collaboration with epidemiology partners to estimate **population-wide health burdens**
- Integration of the agent-based model into a **dynamic intervention and scenario assessment tool** to evaluate mitigation strategies for policy and administrative decision-makers
- Active participation in a large European collaborative research project with regular scientific exchange
- Participation in project meetings and presentation of results at national and international conferences
- Publication of research results in international, peer-reviewed scientific journals

Your Profile:

- Completed degree in the natural sciences with a **doctoral degree (PhD)** in a relevant field
- Proven scientific expertise and publication record in **agent-based modeling** (e.g., MATSim)
- Very good programming skills in a high-level language, ideally **Python**
- Excellent command of **English**, both written and spoken
- Knowledge of **German** is an asset
- Independent, structured, and results-oriented working style, as well as the ability to work in a team
- Interest in **interdisciplinary research** at the interface of environment and health

We Offer:

- A flexible working environment within a dynamic and international research group
- Participation in a high-profile **EU-funded research project** with diverse cooperation partners
- A stimulating research environment at a growing Faculty of Medicine
- Opportunities for scientific profile development, international networking, and publication

The required qualifications must be documented in the application materials by appropriate certificates.

The University of Augsburg is committed to promoting gender equality in professional life and explicitly encourages women to apply. The University of Augsburg places particular emphasis on the compatibility of family life and career. For more information, please contact the faculty's representative for the equality of women in science and the arts. Applicants with severe disabilities (m/f/d) will be given preference in the case of otherwise essentially equal suitability, qualifications, and professional performance.

Applications including the usual documents (curriculum vitae, certificates), **combined into a single PDF file**, should be sent to **Prof. Dr. Christoph Knote** (sekretariat-mbees@med.uni-augsburg.de) **no later than**

February 22nd, 2026

Data protection information pursuant to Art. 13 GDPR - <https://www.uni-augsburg.de/de/jobs-und-karriere/hinweise/>.

This English translation of the job advertisement is provided to help you understand the original German one.

Please note that only the German version of the job advertisement is legally binding, which can be found on the website: <https://www.uni-augsburg.de/de/jobs-und-karriere/stellenangebote>.