

## Position opening: Two positions, fully funded for 3 years

FAU Germany - Ref: HEX-BF-0422

# Postdoc or PhD Positions in AR / Computer Vision / HCI

The newly established Human-Centered Computing and Extended Reality (HEX) Lab at Friedrich-Alexander University Erlangen-Nürnberg (FAU) invites applications for two positions, **starting ~August 1st, 2022**. Successful candidates will be embedded in a publicly funded project (subject to the approval of funds). The HEX Lab is part of the Department Artificial Intelligence in Biomedical Engineering and the Department Computer Science at FAU. Our research centers around human-machine interfaces that improve the way we interact with, work with, and communicate through machines. Our research is situated in the area of *(AI-driven) extended reality (AR, VR, MR) user interfaces in the context of physical and mental health*.

### About the project:

The project aim is to design and develop an AI driven assistive augmented reality system for surgical instrument manuals in the operating room using augmented reality and computer vision and thus support medical care. In close interaction with medical and industry experts, **computer vision driven sensing and detection solutions as well as augmented reality visualizations and interfaces have to be developed**. The overall goal is to support medical staff during surgical procedures with an assistive system. The project leaves sufficient room for the candidates to explore their own research ideas for their thesis and postdoc.

### Perspectives and responsibilities:

PhD position candidates will get the chance to achieve their doctorate at FAU. Postdoc candidates will get the chance to pursue their habilitation/postdoctoral qualifications and to mentor PhD students. We encourage interdisciplinary collaborations and abroad visits.

Candidates are responsible to pursue the project's research goals, and are expected to pursue and publish excellent research of the highest quality and to present their works at leading conferences.

### Requirements:

- Master degree in Computer Science, HCI, Medical Engineering/related fields **for PhD applicants**
- PhD degree in these or related fields with an excellent dissertation/publications **for Postdoc applicants**
- Excellent programming skills in the areas of **either** AR/VR/XR (e.g. Unity3D, Unreal Engine, 3DUIs), **or** computer vision (e.g. deep learning, object detection, synthetic data generation), **or both**
- Experience of conducting design studies and/or empirical research in HCI is of benefit
- Very good English language skills in speech and writing are expected

Candidates are expected to pursue and be passionate about foundational, translational, and radical research and describe their motivation and important previous work in the cover letter. Candidates are expected to pursue their goals self-organized. We especially encourage international applicants as well as female/diverse researchers that contribute to the internationality and diversity of our inspiring team.

### Position details:

Successful candidates will be paid according to 100% state wage agreement level TV-L E13 (gross salary range approx. 52K €-75K €, depending on qualification) equalling ~40h work/week. Candidates will be situated in HEX Lab at the Medical Valley Center, Henkestr. 91 in Erlangen, Germany.

Send your application to [hex-application@fau.de](mailto:hex-application@fau.de). Please refer to the reference HEX-BF-0422. Your application should contain: *one page cover letter including the motivation, academic CV, certificates (degrees, school diploma, transcript of records), as well as writing probes (Bachelor/Master Thesis and/or publications)*. Applications will be accepted until the position is filled.

Feel free to reach out in case of any questions to [hex-application@fau.de](mailto:hex-application@fau.de). You can find out more about the HEX Lab at <https://www.hex.tf.fau.de/> and about FAU at <https://www.fau.eu/fau/welcome-to-fau/>