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The University of Ulm (UUlm) and the Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) invite applications for

**6 PhD positions (m/f/d) and 1 PostDoc position (m/f/d)
within the framework of a DFG-funded Research Training Group (RTG)**

hosted at the University of Ulm and FAU. The RTG targets for cutting-edge research in the fields of microwave engineering, radar, communications engineering, and remote sensing.

Scientific Background

The aim of the new RTG is to train and promote young scientists in the fields of radar technology, remote sensing, and communications. In the RTG, new approaches are to be researched by means of which radar sensors on unmanned aerial vehicles (UAVs) can be networked with one another and jointly generate a tomographic image for monitoring geophysical parameters in the bio-, geo-, hydro-, and cryosphere. The proposed cooperative aperture synthesis approach enables novel tomographic radar imaging principles and will be validated by first demonstrations. For radar remote sensing in the geosciences it promises a completely new quality of earth observation in terms of resolution and information content, for instance in ground, vegetation, snow or ice areas. In total, seven young scientists are sought for the following subprojects:

- 1) Ultra-precise wireless UAV localization systems (FAU, Prof. M. Vossiek)
- 2) Multistatic radar networks for imaging (UUlm, Prof. C. Waldschmidt)
- 3) Tomographic imaging and geophysical parameter retrieval (FAU, Prof. G. Krieger)
- 4) Distributed compressed sensing for radar networks (UUlm, Prof. R. Fischer)
- 5) Resource management for UAVs and radar networks (FAU, Prof. R. Schober)
- 6) Wave propagation in inhomogeneous media (UUlm, Prof. C. Damm)
- 7) Flight path optimization of UAVs for radar imaging (PostDoc, UUlm, Prof. C. Waldschmidt)

We are looking for young researchers with outstanding degrees in Electrical Engineering specializing in microwave engineering, communications engineering, signal processing or with a similar background.

Work Environment

We offer a stimulating, interdisciplinary research environment within an enthusiastic team at two internationally-oriented, open-minded and highly ranked universities. The doctoral studies will be embedded in a structured, interdisciplinary program with other young researchers of other disciplines. The UUlm and FAU are family-friendly employers and intend to increase the number of women in research and teaching positions and, therefore, strongly encourage female researchers to apply. In their pursuit of academic excellence, the UUlm and FAU are committed to equality of opportunity and to a proactive and inclusive approach, which supports and encourages all under-represented groups, promotes an inclusive culture, and values diversity. Severely disabled applicants with equal aptitude will be given preferential consideration.

Requirements

- Master's degree or comparable from a first-class university with a grade well above average
- profound knowledge in one of the research areas listed above
- excellent knowledge of written and oral English (C1 and above)

- ability for cooperation and research in an interdisciplinary team
- excellent social skills, high motivation and commitment

Program Details and Contact

The project start date is January 2022, but employment contracts can also be concluded beforehand. This is a temporary position that is at least available for 3 years. Remuneration is based on the collective agreement for civil servants in Germany (TV-L). Prospective applicants should apply with a motivation letter, academic CV, and certificates all appended into a single pdf file to be send to contact@korato.de . Applications will be accepted until July 30, 2021.

More information on the subprojects, the positions and our team can be found at www.korato.de

Contact:

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