Karlsruhe Institute of Technology (KIT)
Kaiserstr. 12
76131 Karlsruhe, Germany
USt - IdNr. DE266749428

President: Prof. Dr.-Ing. Holger Hanselka
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KIT – The Research University in the Helmholtz Association

Vacancy number 1000/2021

The Institute for Industrial Information Technology of KIT has a vacancy for the position of an

Post-doctoral Academic Assistant (m/f/d) (TV-L, E13, 50 %)

for a limited period of 28 months starting from October 2021 (pending official funding confirmation).

Research at the Institute of Industrial Information Technology (IIIT) focuses, among other things, on measurement technology (e.g., with imaging methods), signal and image processing, hyperspectral imaging, multisensory/distributed measurement systems, and information fusion using classical methods and machine learning methods, as well as their applications in industrial quality assurance, environment perception, and human-machine interaction.

Within the scope of the advertised position, methods of artificial intelligence for 3D spectral pointclouds classification are to be researched. The research work is carried out in close cooperation with the Helmholtz-Zentrum Dresden-Rossendorf, Helmholtz-Institute Freiberg for Resource Technology (HZDR-HIF, Research Field Energy), Department of Exploration.

Requirements:

• As the PD will spend 14 months at HZDR-HIF and KIT-IIIT, respectively, a parallel application at HZDR-HIF is required
• Degree: PhD in Computer Vision, Artificial Intelligence or related field
• Thorough experience with deep learning-based classification, data fusion, and point-cloud processing including respective coding skills
• Experience in at least two of the following fields: 3D-CNNs, point-nets, spectral image, radar and Lidar processing
• Experience within the application fields of geology/resources/remote sensing and/or autonomous systems/automotive sensors are highly beneficial

Tasks:

• Development of direct 3D-to-3D data registration, fusion and classification algorithms
• Design and optimization of respective code packages
• Validation first on prepared benchmark data, later on independent case studies as proof-of-concept
• Linking the research at both hosting institutions, including repeated visits at both institutes

At IIIT, you can expect an interdisciplinary research environment at the interface between electrical and information engineering, mechatronics, computer science and mechanical engineering, which offers you many scientific freedoms.

Starting date
01.10.2021

Contract duration
for a limited period of 28 months

Contact person in line-management
For further information, please contact Prof. Dr.-Ing. M. Heizmann, E-Mail: michael.heizmann@kit.edu.
Application


Personnel Support is provided by:
Ms Brückner
Phone: +49 721 608-42016,
Kaiserstr. 12, 76131 Karlsruhe

We prefer to balance the number of employees (f/m/d). Therefore we kindly ask female applicants to apply for this job. Recognized severely disabled persons will be preferred if they are equally qualified.