OPPORTUNITIES
TO LIVE, WORK, AND STUDY AT KAUST

Staff Scientist – Visualization (3D/VR)

The KAUST Visualization Core Lab (KVL) is seeking a highly motivated and collaborative scientist with experience working in virtual and augmented reality (VR and AR) to build cutting-edge interactive immersive visualization workflows. The scientist also develops solutions for the effective visualization and exploration of large scientific datasets on a variety of ultra-high resolution tiled-displays and VR environments such as CAVE, semi-immersive display walls, head mounted displays, and AR devices.

KVL advances the KAUST mission by providing cutting-edge visualization and data science services; collaborating with domain researchers to accelerate discoveries through large-data visualization, machine learning and data science; and supporting the needs of KAUST and in-Kingdom entities by providing access to and training on state-of-the-art visualization hardware and software for scientific discovery.

As a member of the KAUST Core Labs, the scientist will work in close collaboration with multiple labs and other stakeholders. They will provide training and support for students and researchers on VR/AR software and hardware facilities in the lab, participate in and organize training seminars and workshops, and provide student mentoring and support in collaboration with KAUST faculty, as appropriate.

Major Responsibilities

- Design immersive visualization workflows resulting from data produced by various facilities at KAUST, e.g., from simulations done at the KAUST supercomputing facilities, image stacks and 3D volumes produced by microscopes (SEM/cryo/TEM/confocal) and other imaging facilities (CT/micro-CT), ocean and environment data collected by ships and AUV's, etc.
- Propose, evaluate, design, deploy/implement, and test new immersive solutions, pipelines, software and hardware
- Provide support and expertise in 3D scientific visualization, image segmentation & 3D reconstruction, and AR/VR solutions to research endeavors across campus.
- Set up custom immersive visualization hardware and software systems based on project requirements
- Work collaboratively with the team and external vendors to maintain and upgrade existing VR systems

Qualifications & Competencies

- Ph.D. degree in computer science or related field with demonstrated relevant expertise
- Familiarity and experience with advanced tools, such as Unity3D/UNREAL Engine, AVIZO, Paraview, MeshLab, ilastik/FIJI, etc.; 3D authoring tools such as Maya/Blender; and large-scale VR systems, like CAVE, immersive display walls, and HMD-based VR systems
- Strong background in programming languages like C/C++/C# and JavaScript, Linux-based operating systems, and interactive graphics, e.g., 2D/3D graphics, image processing, and advanced rendering techniques
- Experience in designing reinforcement learning solutions on VR platforms, VR/AR application design, image segmentation, 3D volume visualization, 3D geometry conversion, mesh simplification, and 3D reconstruction
- Excellent oral and written communication in English
- Proven ability to work with minimal supervision in a multidisciplinary environment
- Some experience in information visualization and visual analytics is an advantage

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About King Abdullah University of Science and Technology

Founded in 2009, King Abdullah University of Science and Technology (KAUST) is a top-ranking graduate research university located on the shores of the Red Sea in Saudi Arabia. The University is dedicated to solving global challenges in the areas of food, water, energy, the environment, health and digital.

KAUST employees enjoy exceptional packages, including competitive salaries and relocation allowances, fully furnished on-campus accommodation, and comprehensive health insurance coverage. KAUST also provides international schools (IB program) and a wide variety of recreation facilities.

The Core Labs at KAUST is a shared research facility comprised of 12 laboratories run by over 240 staff. Its mandate is to promote the scientific ambitions of KAUST and Saudi Arabia by stewarding and developing state-of-the-art facilities and technical expertise and delivering research support, training, collaboration and services to KAUST faculty, students, researchers and partners.

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King Abdullah University of
Science and Technology

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