

## **Saudi University Announces Special Partnership with Technology Institute at UC San Diego**

*Calit2 Collaborates on Facilities for Researchers Developing Technologies to Benefit Society*

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Doug Ramsey

King Abdullah University of Science and Technology (KAUST) and the University of California, San Diego today announced a special partnership to collaborate on world-class visualization research and research training activities. The partnership is expected to enhance research in areas ranging from solar power to clean water and new medicines.

Under the four-year agreement, the UC San Diego division of the California Institute for Telecommunications and Information Technology (Calit2) will provide expertise in visualization, virtual-reality and collaboration tools to support KAUST's ambitious plan to deploy state-of-the-art technologies for scientific research.

The technologies will allow materials scientists, biomedical researchers, electrical engineers and other researchers to speed development of new technologies. The partnership will also enable collaboration between researchers at KAUST and UC San Diego, whose visualization facilities will eventually be linked via very high-speed networking.

Calit2's development of visualization and collaboration facilities has attracted worldwide attention. The partnership with KAUST will expand the network of elite academic institutions that have access to ultra-high-resolution display and collaboration facilities.

"A research university needs shared facilities that can bring together researchers to collaborate across disciplines," said Nadhmi Al-Nasr, KAUST's interim president. "We look forward to working with our colleagues at Calit2 to provide KAUST students and faculty with the advanced display, virtual-reality and collaboration technologies that are essential ingredients of today's IT-based and computationally intensive education and research environments."

"As one of the youngest top-tier U.S. universities in science and technology, UC San Diego has a particular affinity with the ambitious challenge facing KAUST," said UCSD Vice Chancellor Steven W. Relyea, who was scheduled to represent the university at a meeting in Jiddah, Saudi Arabia, of KAUST partners Oct. 15-16.

About a dozen researchers from Calit2 will prototype and evaluate appropriate technologies for use on the KAUST campus. These will be deployed first in the Applied Mathematics building, a shared-use facility at the core of the new campus. Over time, the visualization tools, displays and services will expand to other parts of the campus and even to its research partners in Europe, Asia, the Americas and the Middle East.

"KAUST and Calit2 share a common interest in using new technology to tear down the traditional walls between scientists, disciplines and even countries," said Ramesh Rao, director of the UCSD division of Calit2 and a professor of electrical and computer engineering in UCSD's Jacobs School of Engineering. "Effective research involves visualizing huge data sets and collaborating on solutions in real time with colleagues who may be down

the hall or around the world. Calit2 has made a substantial investment in visualization and collaborative tools, and we are delighted that KAUST has targeted this area as a critical building block and selected UCSD as a partner in this endeavor."

The proposed KAUST visualization systems would create a world's-best visualization suite. When ready in September 2009, this research facility will host both the world's highest VL6 resolution and brightest virtual environment, and a world-class Multipurpose Room (MPR).

"The combination of all the systems together makes a statement to the rest of the world that KAUST is committed to providing the ultimate scientific visualization suite anywhere on the planet," said Majid Al-Ghaslan, interim Chief Information Officer, who is responsible for the development, support and operation of innovative technology solutions and services that advance learning and discovery at KAUST, including the Shaheen supercomputer, to be built in a joint venture by KAUST and IBM under an agreement announced last month.

KAUST's future visualization facility will be supported by proposed developmental systems that will allow unprecedented flexibility for the researcher/developer to design applications for the world-class facility without tying up larger systems. The new facility will be enhanced with the ability to record signals/sessions from each of the displays digitally in high-definition. This approach will set the KAUST Visualization Facility apart and catapult it beyond visualization suites anywhere in the world. A state-of-the-art spatial audio system would be the first of its kind and would make the KAUST Visualization Facility the world's only known research center for this type of audio system. This system is to be designed in collaboration with Meyer Audio and UC San Diego, recognized as world leaders in this technology.

The KAUST Visualization Cluster would go beyond other international systems through its use of the GraphStream visualization cluster. GraphStream components decrease the physical footprint and reduce the power utilized while gaining the compute power needed to run a best-in-world visualization suite.

**About KAUST** King Abdullah University of Science and Technology (KAUST) is being built in Saudi Arabia as an international, graduate-level research university dedicated to inspiring a new age of scientific achievement in the Kingdom, the region and around the globe.

As an independent, merit-based institution, KAUST will employ many of the best practices from leading research universities and enable top researchers from around the globe and across all cultures to work together to solve challenging scientific and technological issues. The KAUST global research and education network will support diverse talents, both on its campus and at other premier universities and research institutions, through collaborative research agreements, grants, and student scholarship programs.

KAUST will be merit-based, open to men and women from all cultures around the world, and governed by an independent, self-perpetuating Board of Trustees. The core campus, located on more than 36 million square meters on the Red Sea at Thuwal, is set to open in September 2009.

For more information about KAUST, visit [www.kaust.edu.sa](http://www.kaust.edu.sa).

**About Calit2 at UC San Diego** The UC San Diego Division of the California Institute for Telecommunications and Information Technology (Calit2), together with Calit2's division at UC Irvine, house over 1,000 researchers across the two campuses, organized around more than 50 projects on the future of telecommunications and information technology and how these technologies will transform a range of applications important to the California economy and its citizens' quality of life.

Created in 2000 by the State of California to maintain and extend its leadership in critical technologies, Calit2 brings together teams of faculty, student and staff researchers on both campuses with leading California telecommunications, computer, software, and applications companies. They conduct studies in "living laboratories" to investigate how the future Internet will accelerate advances in areas such as environmental

science, civil infrastructure, intelligent transportation and telematics, genomic medicine, new media arts and digital cinema.

For more information about Calit2, visit [www.calit2.net](http://www.calit2.net).

Media Contacts: Doug Ramsey, 858-822-5825 Jeff Weintraub, 202-828-8836

