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## NanoEngineering Professor Joseph Wang Appointed to SAIC Endowed Chair in Engineering at UC San Diego

NanoEngineering professor Joseph Wang has been named to the Science Applications International Corporation (SAIC) Endowed Chair in Engineering at the University of California, San Diego's Jacobs School of Engineering. Wang is consistently one of the world's most cited engineers and chemists and a recognized leader in multiple fields including nanomachines, nanobioelectronics and sensing technologies. He currently serves as chair of the Department of NanoEngineering and director of the [Center for Wearable Sensors](#) at the UC San Diego Jacobs School of Engineering.

"Joseph Wang is a powerful asset to the Jacobs School of Engineering and to UC San Diego overall. His hard work has been instrumental to both the continued success of our Department of NanoEngineering and to the launch of our Center for Wearable Sensors," said Albert P. Pisano, Dean of the UC San Diego Jacobs School of Engineering.

The SAIC endowed chair was established in 1995 with a gift from J. Robert Beyster to support the work of a faculty member in the Jacobs School of Engineering. J. Robert Beyster is the founder of SAIC, where he also served as CEO and Chairman of the Board.

Robert and Betty Beyster are extremely generous, long-term champions and supporters of UC San Diego. They were awarded the [Chancellor's Medal in 2012](#), one of the highest honors given by the University, in recognition and thanks for more than 35 years of work on behalf of



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UC San Diego to support students, research and the campus.

The Beyster's generosity has resulted in better health care for San Diegans, access to education, new ways of educating business leaders, and leaps in our understanding of fields as diverse as genome sequencing and structural engineering.

In 1995, when Robert Beyster established this endowed chair, he was quoted as saying: "I felt it was time to recognize the importance of educating engineers in order to maintain the U.S. technology base."

"Nearly 20 years later, this statement rings more true than ever," said Pisano.

"I am deeply honored to be the first endowed chair in the NanoEngineering Department and extremely proud to be part of this amazing school of engineering," said Joseph Wang.

## **Nanomachines, Nanobioelectronics and Sensing Technologies**

Joseph Wang's research accomplishments cover vast areas including nanomachines, nanobioelectronics and sensing technologies.

Wang's work in nanobioelectronic sensors is enabling research in the field of wearable sensors for applications for medicine, the military and first responders, security, preventive health care and fitness.

His pioneering research on nanomotors has led to advanced nanomachines and nanorobots for diverse biomedical applications and beyond. For example, Wang's research team recently published on a new method for lithography in which self-propelled nanoscale robots write complex surface patterns needed to manufacture nanoscale electronics and medical devices. His nanorobot projects also focus on accelerated detoxification of chemical and biological agents and on the design of intelligent nanomotors that can be injected into the bloodstream to deliver disease-fighting drugs. His lab, the Laboratory for Nanobioelectronics, includes over 30 active researchers. He is the author of more than 925 peer-reviewed papers that have garnered more than 48,000 citations.

Wang is the author of 10 books, most recently Nanomachines: Fundamentals and Applications, published in September 2013.

## **Center for Wearable Sensors**

Joseph Wang serves as the inaugural director of the Center for Wearable Sensors at the Jacobs School of Engineering. Through this new center, Wang and his colleagues are bringing together top UC San Diego researchers and industry partners to develop advanced wearable sensor systems with real-time feedback designed to enable a wide range of new preventive health, security and fitness applications. Their research efforts are focused on tough questions and technical bottlenecks in areas such as skin-worn sensors, low-power circuits, flexible materials, advanced wireless networks and energy-harvesting technologies.

On Thursday Nov 13, Wang gave a keynote talk “Trillion Sensors on your Skin” at the Trillion Sensors Summit in San Diego. Also on the 13<sup>th</sup>, Wang participated in a Trillion Sensors panel discussion “Closing the Loop in Wellness Care via Trillion Sensors”.

## **Accolades**

Wang is regularly honored for the impact of his scientific research. He was named one of the most influential scientists in the world by Thomson Reuters in 2014 and one of the most influential analytical scientists in the world in 2013 by the magazine Analytical Scientist. He received the ISI Citation Laureate Award for being the most cited scientist in engineering in the world from 1991 to 2001.

He is a Fellow of the Royal Society of Chemistry, a recipient of two American Chemical Society National Awards (in 1999 and 2006), five Honorary Professorships (from Spain, Argentina, China and Slovenia) and the 2012 Breyer Medal of the Royal Australian Institute. His work is regularly highlighted by media outlets around the world.

Links to recent publications, and some of the media coverage that research has generated are available here.

Wang joined the faculty of UC San Diego Jacobs School of Engineering in 2008 to bolster the newly established Department of NanoEngineering, the first of its kind in the nation. He was previously on the faculty of Arizona State University. Wang earned a doctorate in chemistry from Technion, Israel Institute of Technology.

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