UC San Diego
UC San Diego News Center

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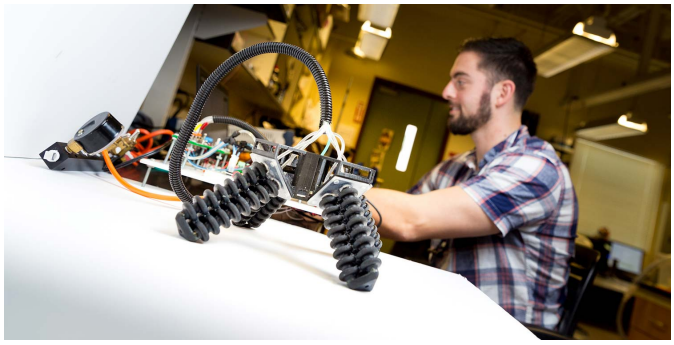
Mechanical Engineering at UC San Diego Ranks First in USA, according to New Ranking from ARWU



Mechanical engineering graduate student Dylan Drotman from the Bioinspired Robotics and Design Lab. This lab is run by mechanical and aerospace engineering professor Mike Tolley. Photo: David Baillot / UC San Diego Jacobs School of Engineering

University of California San Diego ranks first in the nation and second in the world for Mechanical Engineering, according to a new subject area ranking from Academic Ranking of World Universities (ARWU) from ShanghaiRanking.

The new rankings, which are based on five hard-data metrics, place the UC San Diego Jacobs School of Engineering among the top programs in the nation and the world in a wide range of areas. National rankings include: first for Mechanical Engineering; fifth for Civil Engineering; seventh for Biotechnology; 10th for Automation & Control, which includes robotics; 14th for Computer Science & Engineering; 15th for Biomedical Engineering; 16th for Materials Science & Engineering; and 18th for Electrical and Electronic Engineering.

“This new ranking highlights the fact that the Jacobs School of Engineering has many world-class core strengths,” said Albert P. Pisano, Dean of the Jacobs School of Engineering and a professor in the department of Mechanical and Aerospace Engineering. “We have incredibly accomplished and hard-working faculty, students, researchers and staff.”

With $168 million in federal, state and industry research support in FY16, the Jacobs School of Engineering ranks 7th overall, and first among all public engineering schools, for research expenditures per faculty member (U.S. News ranking, published March 2017).

“As a member of the mechanical engineering faculty myself, it’s especially gratifying to be ranked number one in the nation and number two in the world for mechanical engineering,” said Pisano.

“The most interesting feature of this ranking is that it is based on data,” said Carlos Coimbra, professor and chair of the Department of Mechanical & Aerospace Engineering at the UC San Diego Jacobs School of Engineering.

“Everyone in the mechanical engineering department contributed to our number-one ranking,” said Coimbra. “Our leading position in this global ranking is not surprising for those who know our programs well. It reflects our international stature in several mechanical engineering areas including thermo-fluids, combustion, renewable energy, mechanics, materials, controls and biomechanics.”

The subject area rankings are based on a weighted combination of five indicators: the number of papers in top journals for that subject area; the number of staff winning significant awards in that subject area; the average impact of papers from an institution in a particular subject area; the percentage of papers that represent international collaborations; and the total number of papers authored by an institution in a subject area.

“Taken separately, the five criteria appear to paint a rather narrow picture of mechanical engineering. The top journals, for example, only include traditional mechanical engineering areas such as fluid mechanics, heat and mass transfer, combustion and mechanics. But by looking at all these factors together, you get a much more comprehensive look at our large, diverse and accomplished department,” said Coimbra.

“The five criteria allowed for all areas within our mechanical engineering department to contribute. For instance, our faculty in mechanics and materials contributed substantially to the awards earned. By the same token, our renewable-energy faculty, which includes plasmas and solar energy, and also the controls faculty contributed significantly with high impact papers and total number of papers authored by our program,” said Coimbra.

The new ranking also highlights the growing strength in robotics at the Jacobs School and across campus. UC San Diego ranks 10th in the nation in the area of Automation & Control, which includes robotics. The Jacobs School is a long-standing leader in controls engineering, and home to the Cymer Center for Control Systems and Dynamics.

UC San Diego launched the Contextual Robotics Institute in 2015 as a collaboration between the Jacobs School of Engineering and the Division of Social Sciences. The Jacobs School of Engineering went on to recruit world-renowned robotics experts Henrik Christensen, from Georgia Tech, and Todd Hylton, from Brain Corp., to run the interdisciplinary robotics institute. The Jacobs School, and campus more generally, pulled off a large robotics cluster hire in fall 2016. The Jacobs School is in the process of another robotics cluster hire for fall 2017.

The Contextual Robotics Institute's fourth annual international robotics forum will be held on October 27, 2017. This year's theme: AUTONOMOUS DRIVING 2025. Stay tuned for more details.

ARWU Subject Area Rankings

This year, ARWU expanded its subject area rankings from the original 5 categories to 52, which span engineering, natural sciences, life sciences, medical sciences and social sciences. Jacobs School related rankings include:

Mechanical Engineering: first in USA; second in the world

Civil Engineering: fifth in USA; 13th in the world

Biotechnology: seventh in USA; 12th in the world

Automation & Control (which includes robotics): 10th in USA; 19th in the world

Computer Science & Engineering: 14th in USA; 40th in the world

Biomedical Engineering: 15th in USA; 26th in the world

Materials Science & Engineering: 16th in USA; 26th in the world

Electrical and Electronic Engineering: 18th in USA; 25th in the world

UC San Diego also ranked second in the nation and 14th in the world for Marine/Ocean Engineering, highlighting research strengths in the Scripps Institution of Oceanography at UC San Diego.

See all the rankings on the ARWU Subject Area Rankings website:
http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/

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