UC SANTA BARBARA

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Andrea Estrada

Electrical and Computer Engineering, Materials Scholar to Give 2013 Faculty Research Lecture

John Bowers, professor of electrical and computer engineering and of materials at UC Santa Barbara, will give UCSB's 2013 Faculty Research Lecture on Thursday, October 3, at 4 p.m. in the Engineering Science Building, Room 1001.

Awarded annually, the lectureship is considered the highest honor bestowed by the university faculty on one of its members. Bowers is the 58th recipient of the award. His lecture, titled "The Promise of Silicon Photonics," is free and open to the public. A reception will follow.

Photonics has transformed our work and, indeed, our lives, by enabling the Internet through low-cost, high-capacity fiber optic transmission. In data centers, photonics is replacing electrical cables, thereby allowing for higher and more economical performance. In his talk, Bowers will discuss the evolution of photonics and what the future holds for this technology.

A number of important breakthroughs over the last decade have focused attention on silicon as a photonic platform, and Bowers, who also holds the Fred Kavli Chair in Nanotechnology at UCSB and is director of the campus's Institute for Energy Efficiency, will address progress in this area, highlighting efforts to make lasers, amplifiers, modulators, and photodetectors on or in silicon. He will also discuss the

impact photonic integrated circuits could have on interconnects, telecommunications, and silicon electronics.

Bowers' research is focused primarily on optoelectronics and silicon photonic integrated circuits. He received his master's and doctoral degrees from Stanford University, and worked at AT&T Bell Laboratories and at Honeywell before joining the faculty at UCSB. He is a member of the National Academy of Engineering and is a fellow of the Institute of Electrical and Electronic Engineers (IEEE), the Optical Society (OSA), and the American Physical Society.

The recipient of numerous honors and awards, Bowers has received the OSA/IEEE Tyndall Award, the OSA Holonyak Prize, the IEEE-Laser Electro-Optics and Apps Society William Streifer Award, and a South Coast Business and Technology Entrepreneur of the Year Award. In addition, Bowers and his colleagues received an Electronic Engineering Times' Creativity in Electronics Award For Most Promising Technology for their development of the hybrid silicon laser.

Bowers is also co-founder of the technology companies Aurrion, Aerius Photonics, and Calient Networks.

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