



Welcome to the Fall 2010 edition of the ECEE alumni newsletter! There are a lot of new and exciting developments this semester, including a change in leadership role for the Ira A. Fulton Schools of Engineering. We thought it appropriate, therefore, to introduce our ECEE faculty, their research expertise, and their administrative roles in the program.

We have over 55 full-time faculty members and more than 30 research and affiliate faculty, who provide a high caliber of research, teaching, and mentoring capabilities. We are proud of their contributions and hope that you find opportunities to interact with them in a professional capacity in the near future.

In this edition we present the Solid State and Electronic and Mixed-Signal Circuit Design faculty. The year that they began at Arizona State University is also listed next to their title. In the spring issue we will be featuring the remaining faculty. For more information on our faculty or to contact us, visit <http://engineering.asu.edu/ecee>

## Electronic and Mixed-Signal Circuit Design

This program offers a state-of-the-art educational program in VLSI design, modeling, mixed-signal and radio-frequency (RF) integrated circuits design.



**David Allee**  
Professor, 1991;  
Ph.D., Stanford  
University  
**Expertise:** Ultra-small device fabrication mixed-signal circuit design for analog to digital conversion telemetry.



**Bertan Bakkaloglu**  
Associate Professor, 2004; Ph.D., Oregon State University  
**Expertise:** Mixed-signal IC design, wireless and biomedical instrumentation circuits, integrated power management circuits.



**Jennifer M. Blain Christen**  
Assistant Professor, 2008; Ph.D., John Hopkins University  
**Expertise:** Interfacing CMOS & MEMS with biology via microfluidics; analog circuits for bio-assays/instrumentation.



**Yu Cao**  
Associate Professor, 2004; Ph.D., University of California, Berkeley  
**Expertise:** Physical modeling and design solutions of nanoelectronics, robust nanoscale integration.



**Chaitali Chakrabarti**  
Professor, 1990; Ph.D., University of Maryland  
**Expertise:** VLSI algorithms and architectures for signal processing, low power embedded systems.



**Lawrence T. Clark**  
Associate Professor, 2004; Ph.D., Arizona State University  
**Expertise:** VLSI design including successful RHBD microchips, Intel Pentium, Itanium, XScale processor designs.


**Bahar Jalali-Farahani**

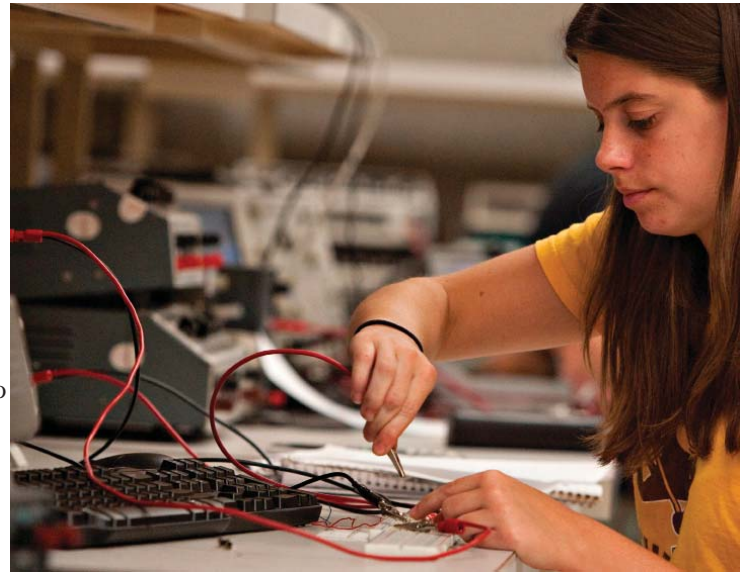
Assistant Professor, 2006; Ph.D., Ohio State University  
**Expertise:** Low power integrated circuits, data acquisition, calibration techniques.


**Sayfe Kiaei**

Professor, 1989; Associate Dean, Ph.D., Washington State University  
**Expertise:** Wireless transceiver design, RF and mixed-signal ICs.


**Sule Ozev**

Associate Professor, 2008; Ph.D., University of California, San Diego  
**Expertise:** Test and reliability for RF/analog circuits, process variability analysis, variability tolerant circuits.



## Solid State Electronics

The program offers courses in the areas of semiconductor devices and materials, characterization, photonic/photovoltaic devices, semiconductor processing/intelligent control, nanoelectronics, molecular electronics, transport, and computational electronics as well as occasional specialty courses.


**Hugh Barnaby**

Associate Professor, 2004; Ph.D., Vanderbilt University  
**Expertise:** Semiconductors for hostile environments, device-oriented circuit design, radiation effects, sensors.


**Junseok Chae**

Assistant Professor, 2005; Ph.D., University of Michigan  
**Expertise:** MEMS, sensors/actuators, micro-packaging, bio-sensors.


**David Ferry**

Regents' Professor, 1983; Ph.D., University of Texas  
**Expertise:** Quantum effects in submicron semiconductor devices, scanning gate microscopy of mesoscopic devices.


**Gennady Gildenblat**

Professor, 2006; Ph.D., Rensselaer Polytechnic Institute.  
**Expertise:** Physics and modeling of semiconductor devices, semiconductor transport physics, integrated circuit technology.


**Stephen Goodnick**

Professor, 1996; Ph.D., Colorado State University  
**Expertise:** Computational electronics, quantum and nanostructured devices, high-frequency and optical devices, energy conversion devices.


**Michael Goryll**

Assistant Professor, 2007; Ph.D., RWTH Aachen University, Germany  
**Expertise:** Silicon-based biosensors involving cell membrane ion channels, electronic instrumentation for biophysical measurements.

## Support Electrical Engineering

Support the success and innovation of the School of Electrical, Computer, and Energy Engineering by donating. Your donation will help us to continue providing the best possible education and renowned opportunities in research, learning and innovation through cutting edge technology.

To make a donation of any amount:

- Call Charles A. Silver at 480.965.9449
- Go online to [www.asufoundation.org](http://www.asufoundation.org) and click the gold "Invest in ASU" button. On the next screen, click "Ready To Give." Then select "Engineering, Ira A. Fulton Schools of." When asked to "Select an associated fund", select "Electrical Engineering."
- Mail your gift to – Cynthia Moayedpardazi, PO Box 875706, Tempe, AZ 85287-5706. Check should be payable to "Arizona State University" with "Electrical Engineering" noted on the memo line.



### Paul Johnson Named Dean of the Ira. A. Fulton Schools of Engineering

The Ira A. Fulton Schools of Engineering at ASU will be led by a new Dean starting in 2011. Paul Johnson, executive dean of the Schools and professor in the School of Sustainable Engineering and the Built Environment, has been named dean of the Fulton Engineering Schools. Johnson came to ASU as an associate professor in 1994, and became full professor in 2003. He later served as associate dean of research for the Schools, university associate vice president of research, and since 2006 he has been the executive dean of the schools. His expertise is focused on the application of contaminant fate and transport fundamentals to subsurface remediation and risk assessment problems, and he is an expert in groundwater remediation and risk assessment. The School of Electrical, Computer and Energy Engineering is pleased to welcome Paul Johnson as Dean of the Schools.



**Christiana Honsberg**  
Professor, 2008;  
Ph.D., University of Delaware  
**Expertise:**  
Photovoltaics, ultra-high efficiency solar cells, and silicon solar cells.



**Michael N. Kozicki**  
Professor, 1985;  
Ph.D., University of Edinburgh  
**Expertise:**  
Nanoionics, electrochemical mass transport devices, low-energy memory, self-healing conductors.



**Ying-Cheng Lai**  
Professor, 1999;  
Ph.D., University of Maryland at College Park  
**Expertise:** Nonlinear dynamics, solid-state electronics, complex networks, signal processing, and computational biology.



**Cun-Zheng Ning**  
Professor, 2006;  
Ph.D., University of Stuttgart  
**Expertise:**  
Semiconductor nano-optoelectronics, surface plasmons, nanolasers, nanowires, detectors, solar cells, and LED lighting.



**Stephen M. Phillips**  
Professor, Director of the School, 2002;  
Ph.D., Stanford University  
**Expertise:** Applied systems and control: integrated microsystems, neural interfaces, gas turbine engines, networks.



**Ronald Roedel**  
Professor, 1981;  
Ph.D., University of California LA  
**Expertise:**  
Semiconductor materials and devices with a special interest in modeling devices made from large bandgap materials.



**Marco Saraniti**  
Professor, 2007;  
Ph.D., Technische Universitaet Muenchen, Germany  
**Expertise:**  
Computational electronics and biophysics.



**Dieter Schroder**  
Regents' Professor, 1981; Ph.D., University of Illinois  
**Expertise:**  
Semiconductor devices, photovoltaics, defects, characterization, low-power electronics, device modeling.



**Brian Skromme**  
Professor, 1989;  
Ph.D., University of Illinois  
**Expertise:**  
Compound semiconductor materials and devices, especially wide bandgap materials and devices.



**Nongjian Tao**  
Professor, 2001;  
Ph.D., Arizona State University  
**Expertise:** Chemical sensors, biosensors, molecular and nanoelectronics.



**Trevor J. Thornton**  
Professor, 1998;  
Ph.D., Cambridge University  
**Expertise:**  
Nanostructures, molecular electronics and sensors, MEMS\ silicon-on-insulator MESFETs.



**Dragica Vasileska**  
Professor, 1997;  
Ph.D., Arizona State University  
**Expertise:**  
Semiconductor device physics, semiconductor transport, heating effects, current collapse in GaN HEMTs.

*Did we miss you? Keep in touch with us, please email your career updates to [askee@asu.edu](mailto:askee@asu.edu)*

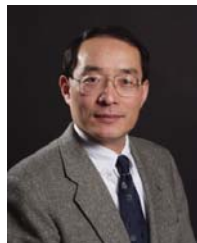


**Hongbin Yu**

Assistant Professor,  
2005; Ph.D.,  
University of Texas,  
Austin

**Expertise:**

Nanostructure and  
device fabrication  
and characterization,  
quantum size effect,  
surface and interface.

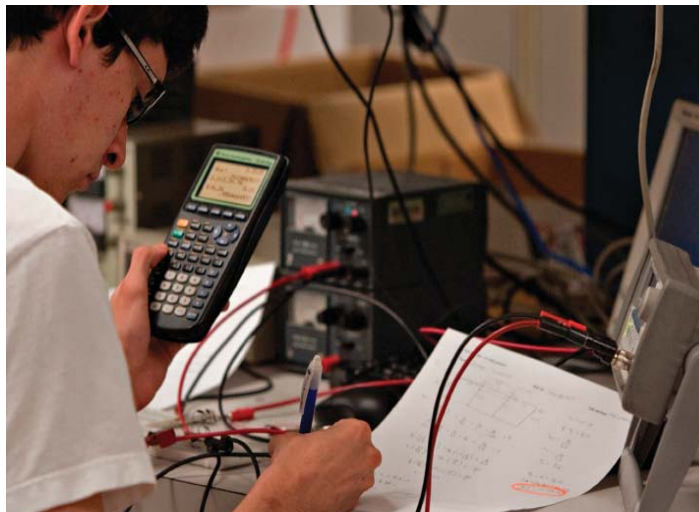


**Yong-Hang Zhang**

Professor, 1986;  
Ph.D., Max-Planck-  
Institute for Solid  
States and University  
Stuttgart, Germany


**Expertise:**

Semiconductor  
optoelectronic devices  
and materials.



## ECEE Annual Report

Check out the School of Electrical, Computer and Energy Engineering Annual Report on our website at <http://engineering.asu.edu/ecee/publications>.

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