SRC Scholar and Alum now “Powering a brighter future across Haiti” with Texas Instruments. Read more »

ASCENT PI, Prof. Shimeng Yu, selected as one of three recipients for the DAC Under-40 Innovators Award

The DAC award recognizes top young innovators who have made a significant impact in the field of design and automation of electronics. Prof. Yu’s research expertise is on the emerging non-volatile memories for applications such as deep learning accelerator, neuromorphic computing, monolithic 3D integration, and hardware security. His group has pioneered in the open-source DNN+NeuroSim framework development for compute-in-memory hardware benchmarking. In fact, Shimeng received the inaugural 2019 SRC Young Faculty Award, acknowledging the impact and attention that his work was creating. Read more »

Penn State team wins over $10M for a new DOE Energy Frontier Research Center (EFRC)

A Penn State team, led by Director Susan Trolier-McKinstry and Associate Director Vijay Narayanan has been awarded over $10 million for a new DOE EFRC on 3D Ferroelectric Microelectronics. The Center’s research will focus on the discovery of new ferroelectric materials, probing the origins of ferroelectricity, developing tools to control the functional properties, growing tailored ferroelectrics at low temperatures, integrating the new materials into a variety of memory devices, and developing processes that allow these materials to be stacked in 3D memory arrays. Prof. Abhronil Sengupta, a former SRC student in the C-BRIC research Center, is a Penn State performer on the new team. (Kudos Abhronil!). Other institutional partners are Sandia National Laboratory, Oak Ridge National Laboratory, Purdue University, University of Pennsylvania and University of Virginia. Read more »
Prof. Narayanan wins Geoffrey Marshall Mentoring Award

Prof. Vijaykrishnan Narayanan, the A. Robert Noll Chair of Electrical Engineering and Computer Science at Penn State University and an active SRC, CRISP Center researcher, has been awarded the 2019-20 Geoffrey Marshall Mentoring Award by the Northeastern Association of Graduate Schools. The award is given to an individual who has demonstrated “outstanding support of a graduate student(s) from course completion through research and placement.” Vijay has advised more than 40 doctoral candidates and more than 50 master’s degree students over the past 22 years. “Being a teacher is one of the most powerful ways to influence the lives of many, while at the same time enabling a lifelong learning journey,” Narayanan said. SRC members can learn about Vijay’s SRC students here. Read more »

SRC faculty hires and promotions

Prabhat Mishra (University of Florida) named Research Foundation Professor for 2020-2023

Cynthia Sturton (UNC Chapel Hill) promoted to Associate Professor with tenure

Marco Donato (Harvard) now an Assistant Professor of Electrical and Computer Engineering at Tufts University

Kerem Camsari (Purdue) now an Assistant Professor Electrical and Computer Engineering at UC/Santa Barbara

Mohsen Imani (UC/San Diego) now an Assistant Professor in the Department of Computer Engineering at UC/Irvine

Jae-Sun Seo (Arizona State) promoted to Associate Professor with tenure

José Martinez (Cornell) started a new position as Associate Dean for Diversity and Academic Affairs for the College of Engineering at Cornell University

Jakub Szefer (Yale) promoted to Associate Professor

Elaheh Sadredini (University of Virginia) now an Assistant Professor Computer Science and Engineering at UC/Riverside

Watching anti-ferroelectrics switch for VLSI

ASCENT research presented at the 2020 Symposia on VLSI Technology and Circuits, is featured in Nature Electronics. ASCENT PI, Prof. Asif Khan, and PhD Student Sarah Lombardo, led an international team effort which uses in situ high-resolution transmission electron microscopy to study the nature of electric-field-driven polarization switching in antiferroelectric ZrO$_2$ at the atomic scale. The TEM work was performed at the Oak Ridge National Laboratory’s Center for Nanophase Materials Sciences, a Department of Energy (DOE) User Facility. ASCENT Profs Andrew Kummel, Kyeongjae Cho, and Postdoc, Dr. Kisung Chae, were also involved in the collaborative effort. SRC members can see Sarah’s student profile and resume, here. Read more »