



SRC launches Innovative Materials & Processes for Accelerated Compute Technologies (IMPACT) Center [Read more](#) ».



SEMI 2020 Industry Strategy Symposium recognizes two outstanding SRC students



Two SRC students have been selected from our [Top 10 Student Presentations at TECHCON](#) for recognition at the [SEMI/ISS annual conference](#) in January by a SEMI/ISS panel.

- [Xiaoyu Sun, Georgia Institute of Technology](#), for [XNOR-RRAM: RRAM-based Scalable In-Memory Computing for Deep Neural Networks](#) “ out of ASCENT Center, task #2776.045. Xiaoyu is scheduled to graduate in May, 2020.
- [Amanda Rios, University of Southern California](#), for [Closed Loop Memory GAN for Continual Learning](#) out of C-BRIC Center, task # 2777.001. Amanda plans to graduate in May, 2022. »

CONIX faculty researcher, Hao Li, University of Southern California, speaks at the 2020 World Economic Forum on Deepfake Technologies and Their Implications.



Deepfakes are a new dimension of fake news that pose a danger to democracy and vulnerable groups. Join leading deepfake artist, Hao Li, to explore the known and potential implications of this technology on society and how we need to react. [Read more here](#). Watch the video here: <https://www.weforum.org/events/world-economic-forum-annual-meeting-2020/sessions/deepfakes-seeing-is-believing>. »



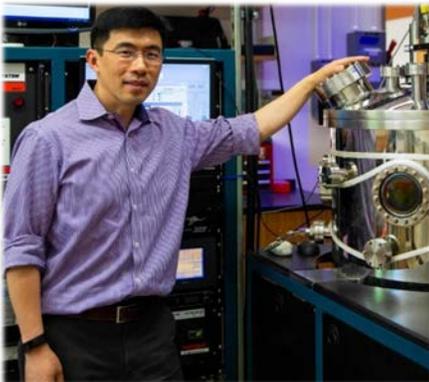
SRC faculty at Purdue University recognized as Outstanding Engineering Teachers.

Congratulations to four active SRC faculty researchers at Purdue - Professors Muhammad Alam, Joerg Appenzeller, Anand Raghunathan, and Timothy Rogers. These four were recently recognized by both students and the ECE Department as [Outstanding Engineering Teachers for summer and fall 2019](#). In addition to their world-class SRC research in GRC, JUMP, and nCORE, they continue to serve as excellent educators that are inspiring the next generation of innovators and their colleagues. Hats off to these fine educators!



New Nonvolatile Memories Shrink Circuits That Search Fast

New kinds of content addressable memory (CAM) may speed searches and enable in-memory computing. At IEDM-2019, Prof. Sayeef Salahuddin and Ph.D. candidate Ava Tan, of the [SRC ENIGMA Project](#), demonstrated a promising Ferroelectric CAM (FeCAM) based on hafnium zirconium oxide (HZO) as the gate dielectric. Their results indicate that FeCAMs are well-suited to meet future computational needs by sealing the gaps between conventional memory, logic, and continued device scaling. [Read more »](#)



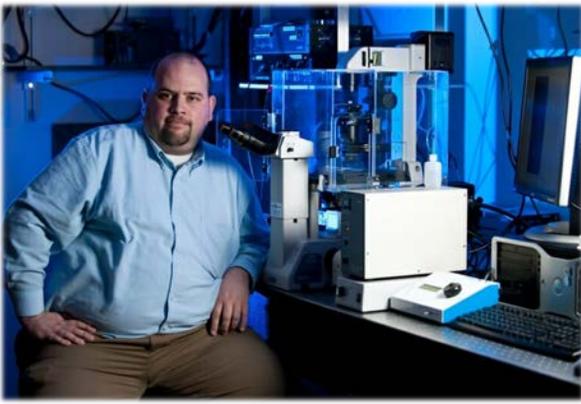
SMART Center PI elected AAAS Fellow

Dr. Kai Liu, Georgetown, has been elected a Fellow of the American Association for the Advancement of Science (AAAS) “for distinguished contributions to the field of nanomagnetism and spintronics, particularly for understanding of magnetic materials and nanostructures.” [Read more »](#)



CONIX debuts LightAnchors – a spatially-anchored augmented reality interface

A CONIX team led by Prof. Chris Harrison has debuted [LightAnchors](#), which allow a user to attach dynamic AR interfaces to devices that contain at least one status light. No special hardware is required, just an app on your phone. More info on LightAnchors can be found on the SRC student page of [PhD candidate Karan Ahuja \(CMU\)](#), the team’s [UIST’19 proceeding](#), or at <http://lightanchors.org>. A YouTube introduction to the LightAnchors concept is [here »](#)



CRISP PI and University of Wisconsin Professor will make “Workhorse” microscope more powerful

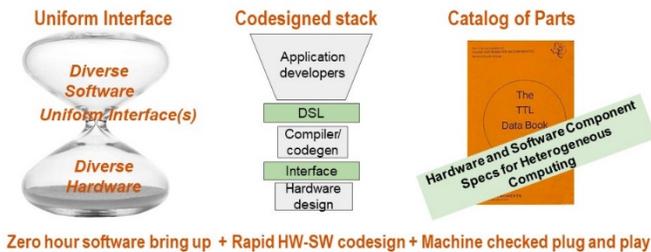
Kevin Eliceiri, professor of medical physics and biomedical engineering at the University of Wisconsin–Madison, plans to improve the architecture and infrastructure of μ Manager, an open-source software package for control of automated microscopes. Eliceiri has received a \$200,000 grant for his work from the [Chan Zuckerberg Initiative](#). [Read more](#) »



SRC Professor receives IEEE honor

Professor Naofal Al-Dhahir, University of Texas/Dallas, received the Signal Processing Communications Electronics Technical Recognition Award from IEEE. Dr. Al-Dhahir led the theory and development of equalization algorithms for single-carrier and multicarrier broadband wired and wireless communication modems. [Read more](#) »

DARPA’s I-USHER authored by JUMP faculty



Zero hour software bring up + Rapid HW-SW codesign + Machine checked plug and play

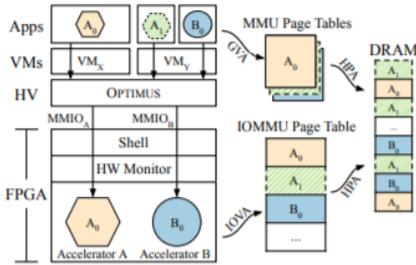
As part of a DARPA ISAT study, Prof. Sarita Adve (ADA), Ras Bodik (CONIX), and Luis Ceze (CRISP) have authored a report entitled *I-USHER: Interfaces to Unlock the Specialized Hardware Revolution*, arguing for new hardware/ software interfaces that can enable the revolution promised by hardware specialization. The I-USHER study identified the opportunities and challenges in developing such interfaces. [Read more here](#) and [here](#) »

Rising Star of the STARnet Program named New Director of Princeton Keller Center

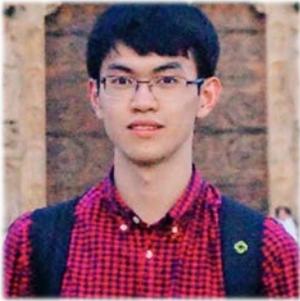


Professor Naveen Verma has been appointed Director of Princeton University’s Keller Center for Innovation in Engineering Education, a center focused on enabling students across the University to realize their aspirations for addressing societal problems. “*What excites me about the Keller Center is that it is for all students*,” Naveen said. “*It happens to be in the engineering school because technology is often a big part of the solution to societal challenges and because engineering is naturally about transforming scientific discovery into solutions, but standing up solutions to today’s societal challenges really requires broad thinking and discovery. Keller is a place for this sort of thinking.*” [Read more here](#). Learn more about Prof. Verma’s current SRC research in the JUMP C-BRIC Center, in task [2777.007](#) »

ADA Prof. Baris Kasikci delivers first scalable hypervisor for shared-memory FPGA platforms



In a recently accepted ASPLOS-2020 paper, PhD Candidate [Jiacheng Ma](#) presents OPTIMUS, the first scalable hypervisor for shared-memory FPGA platforms. OPTIMUS provides both spatial and preemptive temporal multiplexing of FPGAs, such that individual accelerators on an FPGA can be fairly overprovisioned to guests. It offers efficient virtual DMA isolation via page table slicing. Their experiments showed that OPTIMUS could support eight physical accelerators on a single Intel HARP FPGA, improving the aggregate throughput of twelve realistic benchmark workloads by 1.98x-7x. Learn more at [P098939](#) »



JUMP, C-BRIC Student from Princeton Wins 2020 Microsoft Research PhD Fellowship

[Zhiyuan Li](#), a doctoral Candidate at Princeton University under the direction of Prof. Sanjeev Arora with interests in the interface between theoretical computer science and machine learning has just been awarded [Microsoft's 2020 Research PhD Fellowship](#). His work in C-BRIC task # 2777.002, Theoretical Underpinnings of Neuro-inspired Computing, can be found [here](#). Well done, Zhiyuan!

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