SRC faculty elected to the 2020 National Academy of Engineering class, one of the highest distinctions accorded engineers. Congratulations to David Allstot, Stacey Bent, and Kenneth Goodson

CONIX Researcher Develops Framework that Improves Firefox Security

UCSD faculty member, Prof. Deian Stefan, and SRC graduate students Shravan Narayan and Craig Disselkoen have integrated RLBox into Mozilla's Firefox. RLBox increases browser security by separating third-party libraries that are vulnerable to attacks from the rest of the browser via sandboxing. This allows the use of off-the-shelf, highly tuned libraries without worrying about the security impact of these libraries. "By isolating libraries, we can ensure that attackers can't exploit bugs in these libraries to compromise the rest of the browser," said Narayan, the project's lead student. Learn more »

SRC Patents Continue to Soar as JUMP's First Patent Issued

Over the past 35 years, SRC research has generated more than 700 patents focused on driving progress in the microelectronics industry. We are excited to announce SRC's newest patent, Methods, Circuits, Systems, and Articles of Manufacture for State Machine Interconnect Architecture using Embedded DRAM (US 10,580,481). Read more »

C-BRIC Student, Sujan Gonugondla, Wins Prestigious Predoctoral Achievement Award

Gonugondla, advised by UIUC Prof. Naresh Shanbhag, is researching energy efficient machine learning systems for edge devices that can analyze the data in-situ, i.e., without transmitting the data outside the device. "His integrated circuit prototype demonstrated up to a 100X reduction in the energy-delay product of decision-making over an equivalent von Neumann digital architecture... a phenomenal accomplishment" said Shanbhag. When asked what makes his research stand out from the other applicants, Gonugondla thinks working on algorithmic solutions to make efficient systems, rather than circuit design only, helped set him apart. "I tried to bring a unique approach to this problem, where we focused on the system as a whole instead of looking at it as only a circuit design problem," Learn more »

## ComSenTer's PI Announced as 2020 Sloan Research Fellow

"To receive a Sloan Research Fellowship is to be told by your fellow scientists that you stand out among your peers," says Adam F. Falk, president of the Alfred P. Sloan Foundation. "A Sloan Research Fellow is someone whose drive, creativity, and insight makes them a researcher to watch." Winners receive $75,000, which may be spent over a two-year term on any expense supportive of their research. Congratulations to Stanford's Prof. Srabanti Chowdhury for this outstanding achievement! Professor Srabanti Chowdhury ConSenTer research on Integral Diamond Cooling of GaN Power HEMTs can be found here. »

Khalifa University hosts 2nd Mubadala-SRC-Globalfoundries Forum

The forum brought together AI scientists out of academia, industry, and important government organizations such as Hub71 and the Abu Dhabi Investment Office. The event formulated a vision to chart future plans for the Artificial Intelligence (AI) and semiconductor ecosystem in the UAE. Dr. Arif Sultan Al Hammadi, Executive Vice President of Khalifa University, said, "We thank Mubadala, Globalfoundries, and SRC for their support over the past several years and for contributing to advancing the UAE's objectives in this vital area of science. We believe the second edition of the forum will further intensify our efforts towards driving innovation in R&D and bringing AI closer towards everyday use." Read more »

AMML paper selected as an Editor's Pick of Applied Physics Letters
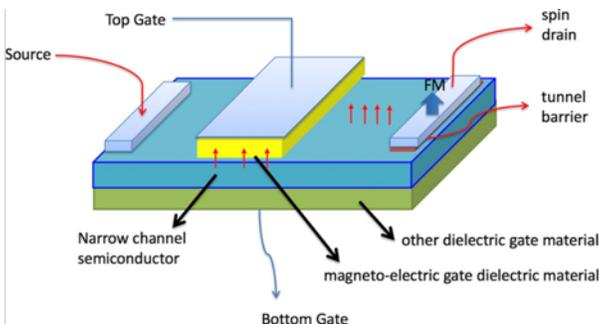
A recent paper, co-authored by AMML researchers and Intel, was selected by Applied Physics Letters as an Editor's Pick. The paper reviews promising energy-efficient devices based on antiferromagnetic materials and magneto-electric (ME) switches. The ME devices can operate at low voltage (~100mV) with high speed (down to ps) and have nonvolatile states. Variants of the ME device are reviewed in the paper. Learn more »

C-BRIC students reflect on the power of their Samsung and IBM summer internships

Aayush Ankit (grad. May 2020) interned with Samsung Electronics in San Jose, CA during the summer of 2019. His research interests lie in hardware and software design for machine learning. During his internship position, Aayush focused on GPU architecture. The industry experience gave Aayush a better idea of how iterative design is important to progress, and how increasing the level-of-details incrementally at every iteration stage of modeling is beneficial.

Yinghan Long (grad. May 2021) interned with IBM in Yorktown Heights, NY during the summer of 2019. Her research interests include neuromorphic computing and VLSI design. Her work at IBM focused on machine learning and she was particularly excited to learn how AI researchers and web/cloud developers worked together to deploy cutting edge IBM research projects. The hands-on experience of working on different machine learning applications and their deployment was just one of the many valuable skills Yinghan gained during her summer with IBM.

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