



nCORE's CAPSL Center, led by Prof. Jeorg Appenzeller, launches "Purdue-P" – a website to design and implement devices that solve today's most difficult problems with Probabilistic Spin Logic or "p-bits". [Read more](#) ».

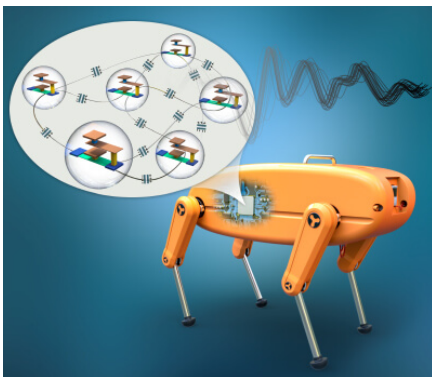
PURDUE P

An Exploration into Probabilistic Spin Logic



SRC in The White House

CEO, Ken Hansen, and Chief Scientist, Victor Zhirnov, participated in the White House Bioeconomy Summit on October 7th. The future of the American Bioeconomy will be a defining factor for the 21st century. The Summit outcome will help inform meaningful Administration actions and recommendations to ensure America leads the world in the science, technology, and useful application of biology. See a [transcript](#) of SRC's remarks and dig into SRC's [SemiSynBio](#) and [BioElectronic Medicine](#) Roadmaps to learn more. Join us to help create the future! »



Similarities in biology and tech inspire novel approach in mobile robotics and prosthetics for spinal cord injuries.

A collaborative SRC team led by [Notre Dame](#) postdoctoral researcher [Sourav Dutta](#) has [successfully demonstrated the hardware](#) for low-power compact nano-oscillators that are coupled using capacitors. "We have created compact and energy efficient hardware that can function as a central pattern generator (CPG) does in the body," said Datta. "Our successful demonstration of the CPG hardware was the first step. However, locomotion control (action) works hand-in-hand with perception and decision. Along these lines, we are now exploring how to interface the CPG hardware with visual, tactile, and other sensors and to perform real-time learning and actuation using feedback signals." The 3-year research endeavor out of SRC task # [2698.001](#) was completed in Sept-2019. »



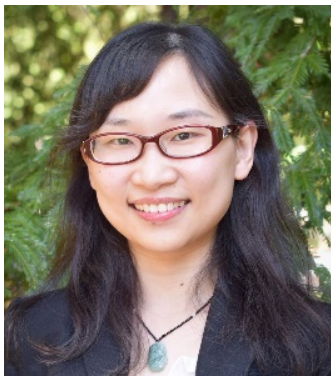
Best Student Paper Award at the International 3D Systems Integration Conference.

Congratulations to graduate student [Ming Jui \(Carl\) Li](#), pictured, and co-authors on receiving the Best Student Paper Award at the International [3D Systems Integration Conference, held October 8-10 in Sendai, Japan](#), for “*High density and low-temperature interconnection enabled by mechanical self-alignment and electroless plating.*” Learn more about the award winning research from the JUMP ASCENT Center, here: [2776.048](#) »

‘Perfectly Real’ deepfakes to arrive in 6 months to a year.



CONIX Faculty, [USC Professor Hao Li](#), says in a CNBC interview that “everyday people will be able to create manipulated images and videos that seem “perfectly real” in half a year to a year.” Learn more about his views on the underlying technologies and importance of using research to understand and stay out in front of the technology and those with malicious intent. As also stressed in the interview, the same technologies present upside for the fashion and entertainment industries and stand to enhance the efficacy of video conferencing. Learn more about Prof. Li’s CONIX research [here](#) and in his recent CONIX annual review talk [AI-Based Teleportation](#) »



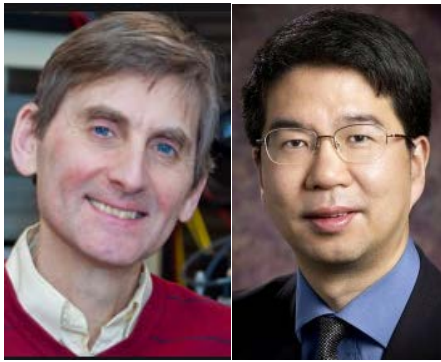
JUMP-CRISP faculty researcher inducted into MICRO Hall of Fame.

UC/San Diego Assistant Professor [Jishen Zhao](#) has been inducted into the IEEE/ACM International Symposium on Microarchitecture (MICRO) Hall of Fame, which honors researchers that have consistently contributed high-impact research. Learn more about her current SRC research [here](#) and her current SRC students [here](#). They are certain to have a high-impact on our shared future! »



SRC student making a difference at Intel.

UC San Diego PhD student and [Intel AI intern, Huili Chen](#), under the direction of recent Mahboob Khan Outstanding Liaison Award winner, Rosario Cammarota/Intel, is developing an end-to-end compiler framework that automates and accelerates homomorphic encryption (HE)-based ML computation. Huili’s ongoing research in secure and reliable machine learning is part of the [Automotive Electronics research program](#) at SRC. Her internship is an excellent example of how industry and students can extract value from collaborative research.



SRC PIs honored for excellence in semiconductor research.

Professors Jesus del Alamo, MIT and Jason Cong, UCLA to receive the 2019 SIA University Researcher Award at the SIA Award Dinner on November 7th. Dr. del Alamo is being recognized for significant contributions over more than 30 years to education and the advancement of semiconductor devices in physics, technology, modeling, and reliability. Dr. Cong is being recognized for his achievements over the past 30 years in advancing the industry's interconnect estimation and optimization, customizable computing with the use of FPGAs, and high-level synthesis from C/C++ to RTL. Read more [here](#). »



Decadal Plan for Semiconductors

What trends, if left unchecked become problematic in 10 years for the semiconductor industry? SRC is hosting 5 workshops with participation from industry, academia and government on the topical areas of compute, analog, communications, memory and security to identify the troublesome trends and research vectors to eliminate the roadblocks. The results of the workshops will be summarized in a report named “Decadal Plan for Semiconductors”. Join “The Case for a Decadal Plan for Semiconductors” eWorkshop on January 9, 2020 at 11:00AM EST (<https://www.src.org/calendar/e006869/>) or 8:00PM EST (<https://www.src.org/calendar/e006870/>) where you will a hear more in depth talk about the work, including a summary of the first two workshops.

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