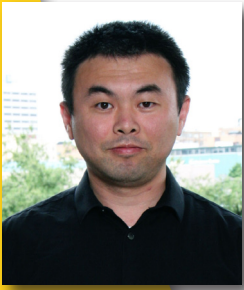*The College of Computing and the College of Engineering are pleased to present a lecture by faculty candidate*

Hongyu An

Wednesdy, February 12, 2020

3:00 pm   Chem. Sci. 101

Brain on a Chip: Designing Self-learning and Low-power Neuromorphic Systems

How can a silicon brain in a chip be built with self-learning capability? What are the challenges for neural network-based artificial intelligence in the next decade, and how can those challenges be solved?

To answer these questions, Hongyu introduces a cutting-edge research topic: Brain-inspired Computing. Also called neuromorphic computing, brain-inspired computing aims to physically reproduce the brain's structure in a silicon chip to resolve critical challenges in deep learning deployment.

In his talk, Hongyu will explore the underlying biological mechanism of associative memory learning, novel non-von Neumann computer architectures, and circuit implementations with transistors and memristors.

Hongyu An is a doctoral candidate in the Bradley Department of Electrical and Computer Engineering, Virginia Polytechnic Institute and State University (Virginia Tech). His research interests include neuromorphic and brain-inspired computing, energy-efficient neuromorphic electronic circuit design for Artificial Intelligence, three-dimensional integated circuit (3D-IC) design, and emerging nanoscale device design.
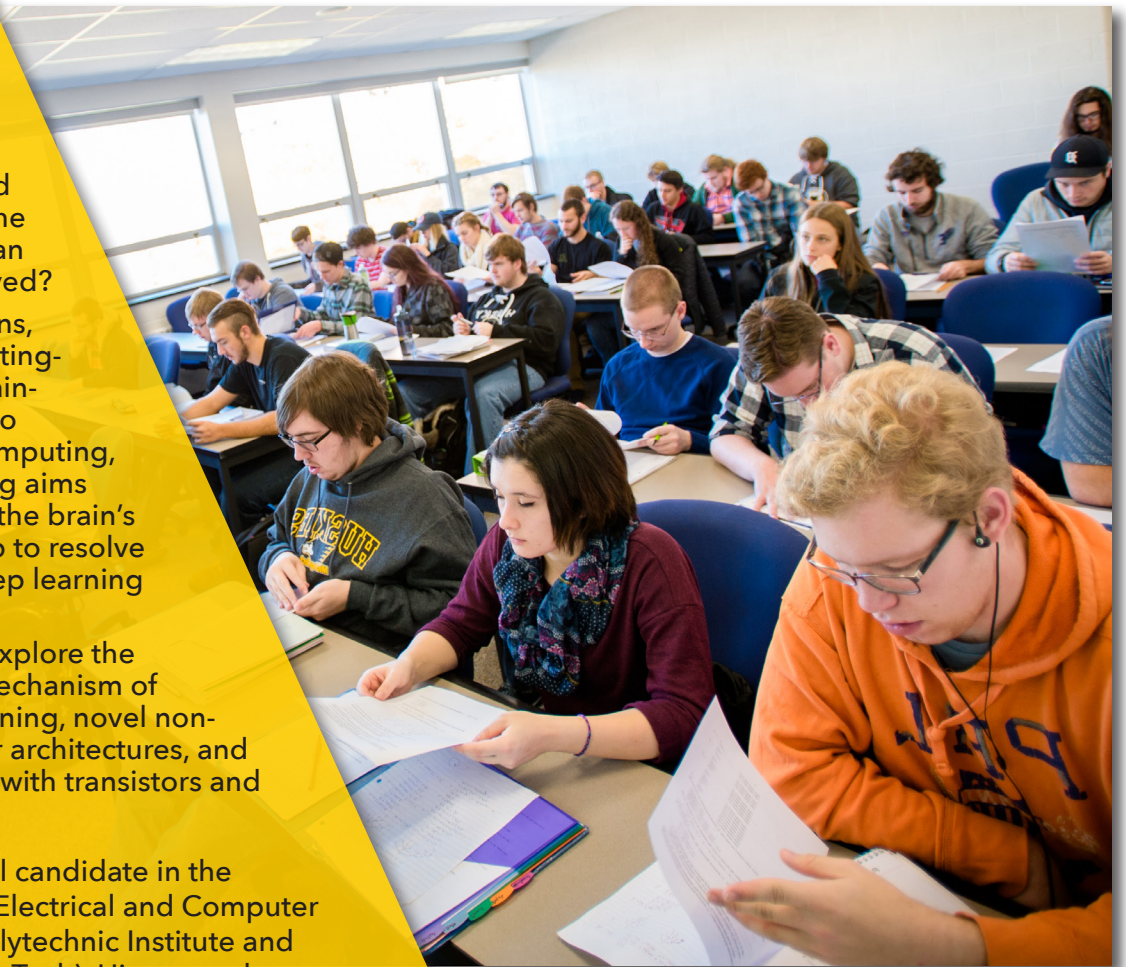
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