



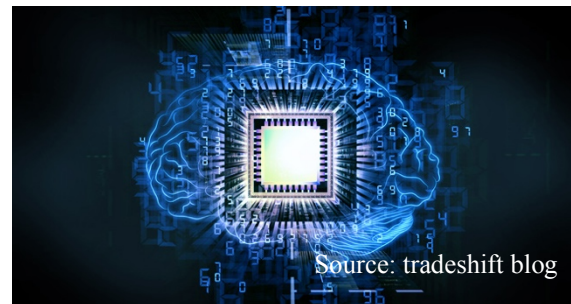
VLSI for Wireless Communication and Machine Learning

4 credits

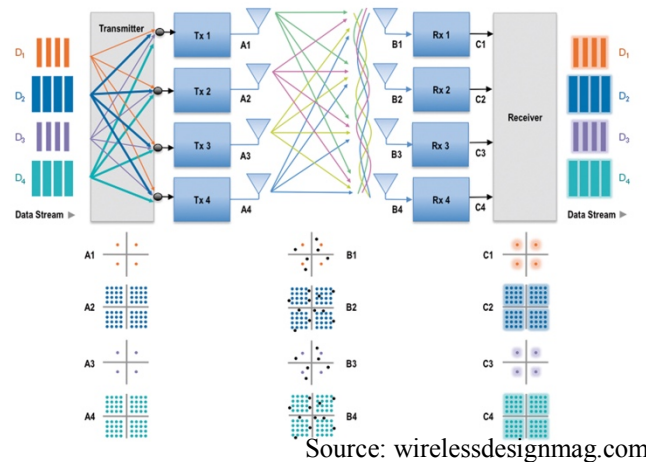
Fall 2021 - EECS 598 Section 001

Instructor: Professor Hun-Seok Kim

The advance in very-large-scale integration (VLSI) technologies has enabled intelligent mobile internet-of-things (IoT) applications that are now integral parts of our daily lives. Recently emerging image/audio signal processing, machine learning, and wireless communication systems constantly impose new challenges on VLSI integrated circuit (IC) implementations. These implementations must satisfy stringent latency, throughput, and energy-efficiency constraints that are critical to ubiquitous IoT applications.



This course will survey methodologies to design energy-efficient and/or high-performance VLSI systems for the state-of-the-art wireless communication, machine learning, and signal processing systems. The primary focus of the course is on designing hardware-efficient algorithms and energy-aware VLSI IC architectures to deliver the performance and efficiency required by various signal processing and machine learning applications. The course will be a mix of lectures and student-led presentations/projects. The content will be suitable for senior undergraduates or graduate students interested in hardware-efficient algorithms and their VLSI implementations.



Questions: Please email Prof. Kim at hunseok@umich.edu