



MORGANTM
CYBERSECURITY ASSURANCE
AND POLICY CENTER

CAP Center Distinguished Lecture Series

Circuit Labs at the Lunch Table with MOSbius

Date: Thursday, April 24, 2025 | Time: 11:00 am

Venue: Engineering Library - Schaefer Engineering Building



Peter R. Kinget

Bernard J. Lechner Professor of Electrical Engineering

Distinguished Lecturer IEEE SSCS

Columbia Engineering

Columbia University

Abstract: Learning integrated circuit design requires gaining a broad range of skills and knowledge including circuit analysis & design, signals & systems, applied electro-magnetics, and semiconductor physics. Learning theory has always been most accessible through books or now the internet. Simulation tools are now also widely available on personal computers, including open-source versions. But, learning measurements so far have been mostly confined to school or industry laboratories. Yet, physical intuition and practical experience keep playing a significant role in the development of successful, high performance integrated circuits. We will present the MOSbius platform that allows a student or designer to experiment with IC-style, analog, CMOS circuits at the lunch table. This unique platform uses a custom chip with CMOS building blocks that can be wired on a breadboard or with a programmable on-chip switch matrix. Measurements can be conducted using an affordable, all-in-one, USB lab instrument. Ready-to-go experiments are provided to learners and instructors on <https://mosbius.org>. Nothing can substitute for the aha moment when you observe a circuit finally working. The MOSbius platform aims to make lab experience widely accessible and affordable to learners.

Bio: Peter Kinget is the Bernard J. Lechner Professor of Electrical Engineering at Columbia University in the City of New York. His research focuses on the design of analog and RF integrated circuits and the novel systems or applications they enable in communications, sensing, computation, and power management.