Thesis Defense

Computer Science Master's Program

"Open Source ASIC Design Curriculum"

By **Francisco Wilken**

Abstract:
The ever-growing importance of Application-Specific Integrated Circuits (ASICs) in a high-compute world necessitates that college graduates entering the workforce are well prepared to design them.

This thesis details the design of novel ASIC curriculum, using open source tools to teach at the undergraduate level. By moving to a higher level of abstraction than classical transistor-focused coursework, chip design material can be made accessible earlier in an undergraduate degree. Additionally, open source tools provide a powerful, free, and portable platform for students to create their own designs, solving assignments focused on industry readiness. Finally, this thesis studies the results and challenges of implementing this curriculum as a technical elective at Cal Poly San Luis Obispo.

Date: Wednesday, June 11th, 2025
Time: 10:00 AM – 12:00 PM
Location: 14-238b
Committee: Dr. Beard, Dr. Danowitz, Dr. Slivovsky