



UC Center Sacramento

“Introducing an Open-Source Adaptive Tutoring System to Accelerate Learning Sciences Research”

Professor Zachary Pardos, UC Berkeley

**Wednesday,
January 31st**

12:00—1:00pm

In person attendance
or by Zoom webinar

**Please note our
new location:**

1115 11th St,
Sacramento, CA
95814

For catering
purposes, please
RSVP by
January 24th
(uccs.ucdavis.edu)
to ensure that we
have a lunch for you.

Despite the decades-long establishment of effective computer tutoring software, no adaptive tutoring system has been developed and open-sourced to the field. The absence of such a system inhibits researchers from replicating adaptive learning studies, experimenting with new AI capabilities, and exploring various tutoring system design directions. For this reason, we aim to create more equitable access to adaptive learning technology with the introduction of the first open-source adaptive tutoring system based on Intelligent Tutoring System principles. This system, called Open Adaptive Tutor (OATutor), and its adaptive textbook library, have been iteratively developed over three years with field trials in seven college math classrooms, drawing feedback from students, educators, and researchers.

In this talk, Professor Pardos will describe how this system can be used as a foundation for exploring integrations of generative AI and share nascent results from our first evaluations of ChatGPT for content generation. He will also discuss connections to transfer and articulation in higher education as well as future avenues for community involvement.

Professor Zachary Pardos is an Associate Professor of Education at UC Berkeley studying adaptive learning and AI. His early scholarship focused on formative assessment using Knowledge Tracing, the predominant model used for estimating skill mastery in computer tutoring system contexts. His recent work designing Human-AI collaborations to pave pathways to and within higher education systems has been published in venues such as *SIGCHI*, *NeurIPS*, *The Internet and Higher Education*, and *Science*. This work has included developing high-quality tools used by tens of thousands of users, including course recommender systems (AskOski), a Python library for Knowledge Tracing (pyBKT), and an open-source adaptive tutoring system and creative commons content library (OATutor). At Cal, he directs the Computational Approaches to Human Learning (CAHL) research lab, teaches in the data science major, and is a faculty affiliate in Cognitive Science.



For questions contact Brooke Miller-Jacobs at (916) 319-4835 or UCCS-talks@ucdavis.edu.

The views and opinions expressed during this lecture are those of the speaker and do not necessarily represent the views of UCCS.