

ICFO Colloquium Series: Teaching students to think like skilled scientists and engineers

CARL WIEMAN

December 01, 2025
10:00 to 11:00
ICFO Auditorium

ABSTRACT:
Science and engineering have advanced dramatically over the past few centuries, but the teaching of these subjects has not. The primary goal of university education in thes subjects is to have students develop expertise, the ability to think like skilled scientists an engineers. I will discuss how research on both the development of expertise and the natu e of technical expertise can provide guidance for more effective teaching and resear h training, and I will provide examples of results when these ideas have been implemented n practic

BIO: ?

Carl Wieman holds a joint appointment as Emeritus Professor of Physics and of the Graduat School of Education at Stanford University. He has done extensive experimental research i atomic and optical physics and was awarded the Nobel Prize in Physics in 2001 for the firs realization of a Bose-Einstein condensate (with Eric Cornell and Wolfgang Ketterle). He ha also done extensive research on physics and science education, developing new approache and evaluating the effectiveness of various teaching methods. That work was recogniz d with the Yidan International Prize for Education Research. Recently, he has focused on he nature of expertise in science and engineering and how to better measure and teach it. He served as Associate Director for Science in the White House Office of Science nd Technology Policy from 2010 to 2012.

COLLOQUIUM COMMUNITY EVENT IMMEDIATELY FOLLOWING TALK: ?

There will be coffee break in the NEST Hall following this Colloquium so that members of ou ICFO community can comment about the talk amongst ourselves and with Prof Wieman Please plan to stick around to take full advantage of this opporunity to connect.

Hosted by: Veronica Haufinger