

The GW Department of Physics is proud to announce the Fall 2019

Cornelius Bennhold Lecture

“Why traditional labs fail (and what to do about it)”

Dr. Natasha G. Holmes

Asst. Professor of Physics

Cornell University

When you ask physicists to reflect on their intro labs, responses include “boring”, “forgettable”, or “cookbook.” What is so wrong with the traditional lab? In this talk, we’ll discuss research that helps illuminate the problems with traditional labs and the impacts on students. We’ll then move on to solutions: how do we restructure labs to provide better learning opportunities for our students? We’ll discuss how we measure the impact of different techniques, some tactics for using labs to teach experimentation and critical thinking skills, and some examples of restructured lab courses.

When:

Thursday, November 21, 2019 4:00 pm

Where:

Cornelius Bennhold Auditorium
Corcoran Hall, 101
725 21st Street, N.W.
Washington, D.C. 20052



About the Speaker:

Natasha G. Holmes is an assistant professor in the Department of Physics at Cornell University, with the Laboratory of Atomic and Solid State Physics. Dr. Holmes received her BSc.(Hons) in physics from the University of Guelph and her MSc and PhD in physics at the University of British Columbia, and was a postdoctoral researcher at Stanford University working with Dr. Carl Wieman. Her research group studies many aspects of student learning, attitudes, and skill development from hands-on laboratory experiences, with a focus on critical thinking and experimentation. They also study how we know what outcomes are being achieved (how do you measure critical thinking?) and what mechanisms are responsible those outcomes.

About the Lecture Series:

The Cornelius Bennhold Memorial Lecture Series was created through a generous gift of the Bennhold family and contributing Physics faculty members. A faculty member of the Department of Physics at The George Washington University from 1992 to 2009, Professor Bennhold was a talented teacher, whose dedication to his educational craft was matched by his compassion for his students. He was committed to understanding the learning process and enhancing the pedagogical environment for all students. This prompted his keen interest in Physics Education Research (PER), which he undertook in the later part of his career, and which is the central theme of the Bennhold Lecture Series. Through this series of talks, we bring eminent contributors in the PER field to GW to share their expertise and insights, with the hope that important new connections can be made and effective pedagogical methods can be realized

The George Washington University Physics Department:

The GW Physics Department has a strong commitment to undergraduate and graduate education and has active research programs in astrophysics, biophysics, nuclear physics, and physics education.

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