For more information, please contact Assistant STEM Education Program Director, Jeremy Bradford: jeremy.bradford@yale.edu

STEM Education

2018 - 2019 Seminar Series

Center for Teaching and Learning generously support the STEM Education Seminar Series at Yale University.
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Dr. Elise Lockwood
Associate Professor
Oregon State University

Friday, December 7th

12:00 PM - 1:30 PM (lunch provided)

Location:

Watson Center Room A74
60 Sachem Street
New Haven, CT 06511

RSVP: tinyurl.com/STEMELRSVP

Computational Thinking and Activity in STEM Education: What Happens When Math Students Engage with Python Code

(Open to all STEM disciplines)

Computational thinking and activity are becoming an increasingly important aspect of what it means to conduct scientific and mathematical work. In light of this, there is a need for STEM education studies that examine the ways in which students engage with computational tools as they reason about scientific and mathematical concepts. In this talk, I review relevant literature on computational thinking in STEM and make a case for an increasing focus on computing in STEM education research. As an example of computational thinking and activity, I present results from a study in which undergraduate novice programmers engaged with tasks designed to use basic Python programming to teach particular combinatorial ideas. I highlight noteworthy aspects of students' experiences with using computation in a mathematical context. I conclude by framing this work within ongoing efforts to better understand the nature of computational thinking and activity for undergraduate STEM students.

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