

# Kathi Fisler: Personal Context

Research history in both  
Formal Software Verification and  
Computing Education



**WPI**

Co-director: *Bootstrap Project*  
Integrated CS and Algebra  
education for 8<sup>th</sup>-9<sup>th</sup> grade;  
large teacher PD effort



Teach large (250+) first-year  
courses with heterogeneous  
prior backgrounds

*But graduated  
from a CS program  
with 10 majors*

# What to Personalize ...

- What work students do
  - keep everyone learning, from wherever they are
- What feedback students get
  - matters that they made progress relative to where they were, less that achieved common target
- My understanding of students' mastery and needs
  - what do they seem to know?
  - what problem-solving process are they following?

Poster on outcome/competency grading

# Power of Formal Methods lies in Comparing Two Artifacts

**What are the interesting (semi)-formalizable artifacts  
in a (CS) pedagogic context?**

- Test cases (from students or staff)
- Process by which a student tried a problem
  - and the process the same student used last week
- (Perceived) dependencies between topics
- oh, and yes ... code