Embedded Computational Thinking: Casting a Wide Net

Building interest and proficiency in computational thinking in STEM

Computational thinking plays an increasingly important role in science, technology, engineering, and mathematics. Yet, many high school students never encounter computational thinking in their day-to-day coursework. Our project develops computational thinking activities that can be embedded in existing high school STEM courses (CT-STEM).

Our Accomplishments

- Developed a CT-STEM skills taxonomy
- Developed 30 CT high school lesson plans across the STEM disciplines
- Engaged 28 teachers, 19 diverse high schools, and over a thousand students
- Developed 5 CT-STEM assessments
- Developed a scalable online assessment system and recorder over 4000 responses
- Conducted numerous professional development workshops

About Us

PIs: Michael Horn, Kemi Jona, Vicky Kalogera, Laura Trouille, Uri Wilensky
Research Faculty: Kai Orton
Graduate Students: Elham Beheshti, David Weintrop
High School Lead Teachers: Ami Lefevre, Tim Miller, Mark Vondracek

Office of STEM Education Partnerships

Innovate, educate, collaborate

This work is supported by the National Science Foundation under NSF grant CNS-1138461. Any opinions, findings, conclusions, and/or recommendations expressed in this material are those of the investigator and do not necessarily reflect the views of the Foundation.