National Science Foundation
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News Release 16-109

NSF awards $25 million in new projects in support of the Computer Science for All Initiative

New awards accelerate NSF's ongoing efforts to enable rigorous, engaging CS education in schools across the nation

Chicago high school teachers participate in a computer science professional development workshop.

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As the lead federal agency responsible for building the research knowledge base for Computer Science (CS) education, the National Science Foundation (NSF) is pleased to announce <https://www.whitehouse.gov/sites/default/files/microsites/ostp/csforall-fact-sheet-9-13-16-long.pdf> more than $25 million in awards since the administration's CS for All initiative launched <https://www.whitehouse.gov/blog/2016/01/30/computer-science-all> just seven months ago.

These new awards accelerate NSF's ongoing efforts to enable rigorous and engaging CS education in schools across the nation by funding:

- Creation of, and research and evaluation on, scalable professional development for teachers of Exploring Computer Science <https://www.nsf.gov/cgi-bin/good-bye?http://www.exploringcs.org/> , Advanced Placement® (AP) CS Principles <https://www.nsf.gov/cgi-bin/good-bye?https://advancesinap.collegeboard.org/stem/computer-science-principles> , and other instructional approaches.
- Development, piloting, and study of the effectiveness of instructional materials on computational thinking and computing for use in pre-K through 8th-grade education.
- Establishment of best practices for ensuring equity in CS education.
- Research on mechanisms for implementing CS education, including CS for All.
- Support for teachers newly prepared to teach computer science, such as coaching, mentoring, master teacher corps and online communities of practice.

NSF anticipates an additional $100 million investment over the next four years in support of CS for All.

Below are just a few of the projects that NSF is funding in Fiscal Year (FY) 2016 in support of CS for All:

Bringing a Rigorous Computer Science Principles Course to the Largest School System in the United States <https://nsf.gov/awardsearch/showAward?AWD_ID=1441075&HistoricalAwards=false> , Paul Goldenberg, Brian Harvey, June Mark, Don Miller and Evan Korth, Education Development Center (EDC) — The EDC, in collaboration with the University of California Berkeley, the New York City Department of Education and the New York City Foundation for Computer Science Education, will scale up teacher training for a Beauty and Joy of Computing (BJC) course by preparing Master Teacher Facilitators. The collaborators will create a BJC professional development course, and test and refine instructional materials.

Inspiring Commitment for STEM Career Paths through Extended Women's Hackathons <https://www.nsf.gov/awardsearch/showAward?AWD_ID=1615255&HistoricalAwards=false> , Youwen Ouyang, Moses Ochanji and Anna Woodcock, California State University, San Marcos — This research project will study how the relationships between interest, competency, self-efficacy, identity and values influence commitment to pursue an Information and Communication Technology (ICT) career pathway for young women, especially Latinas.

CS1C@OC-Building a Local Area Network of Computer Science Teachers <https://www.nsf.gov/awardsearch/showAward?AWD_ID=1640247&HistoricalAwards=false> , Debra Richardson, Mark Warschauer, Rebecca Black, Elizabeth van Es and Elizabeth Simon, University of California-Irvine — The project will develop a program of study to satisfy California's new teacher certification pathway in Computer Science, preparing in-service teachers in Orange County to qualify for this certification so they can teach Exploring Computer Science or Advanced Placement® Computer Science Principles in California.

A Whole-School Model for Integrating Computational Thinking in High School Science and Mathematics <https://www.nsf.gov/awardsearch/showAward?AWD_ID=1640201&HistoricalAwards=false> , **Uri Wilensky, Kemi Jona and Michael Horn, Northwestern University —** Northwestern will carry out an integrated, interdisciplinary curriculum development and implementation effort, conducting a design-based implementation research study of whole-school design, development and use of resources for integration of computational thinking with other STEM disciplines.

CS10K: Leveraging the National UTeach Network to Strengthen and Expand Computer Science Principles Education, Calvin Lin, University of Texas at Austin (UT Austin) — This award supplements an existing project <https://www.nsf.gov/awardsearch/showAward?AWD_ID=1543014&HistoricalAwards=false> to scale the Advanced Placement® Computer Science Principles curriculum developed at UT Austin called Thriving in Our Digital World. Working with the UTeach Institute, this project will expand professional development and participant support activities to better accommodate district and teacher interest, as well as expand and institutionalize UT Austin's UTeach computer science program.

Find the complete list of NSF-funded CS for All projects and their abstracts at this link <https://www.nsf.gov/awardsearch/advancedSearchResult?PIId=&PIFirstName=&PILastName=&PIOrganization=&PIState=&PIZip=&PICountry=&ProgOrganization=&ProgEleCode=&BooleanElement=All&ProgRefCode=023Z&B.

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NSF supports creation and piloting of professional development for computer science teachers.
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High school students engage in collaborative learning in a computer science principles course.
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Related Websites
Computer Science Education: Special Report: https://www.nsf.gov/news/special_reports/csed/ <https://www.nsf.gov/news/special_reports/csed/>
FACT SHEET: New Progress and Momentum in Support of President Obama's Computer Science for All Initiative:
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