



**BOISE STATE UNIVERSITY**

**COLLEGE OF ARTS AND SCIENCES**

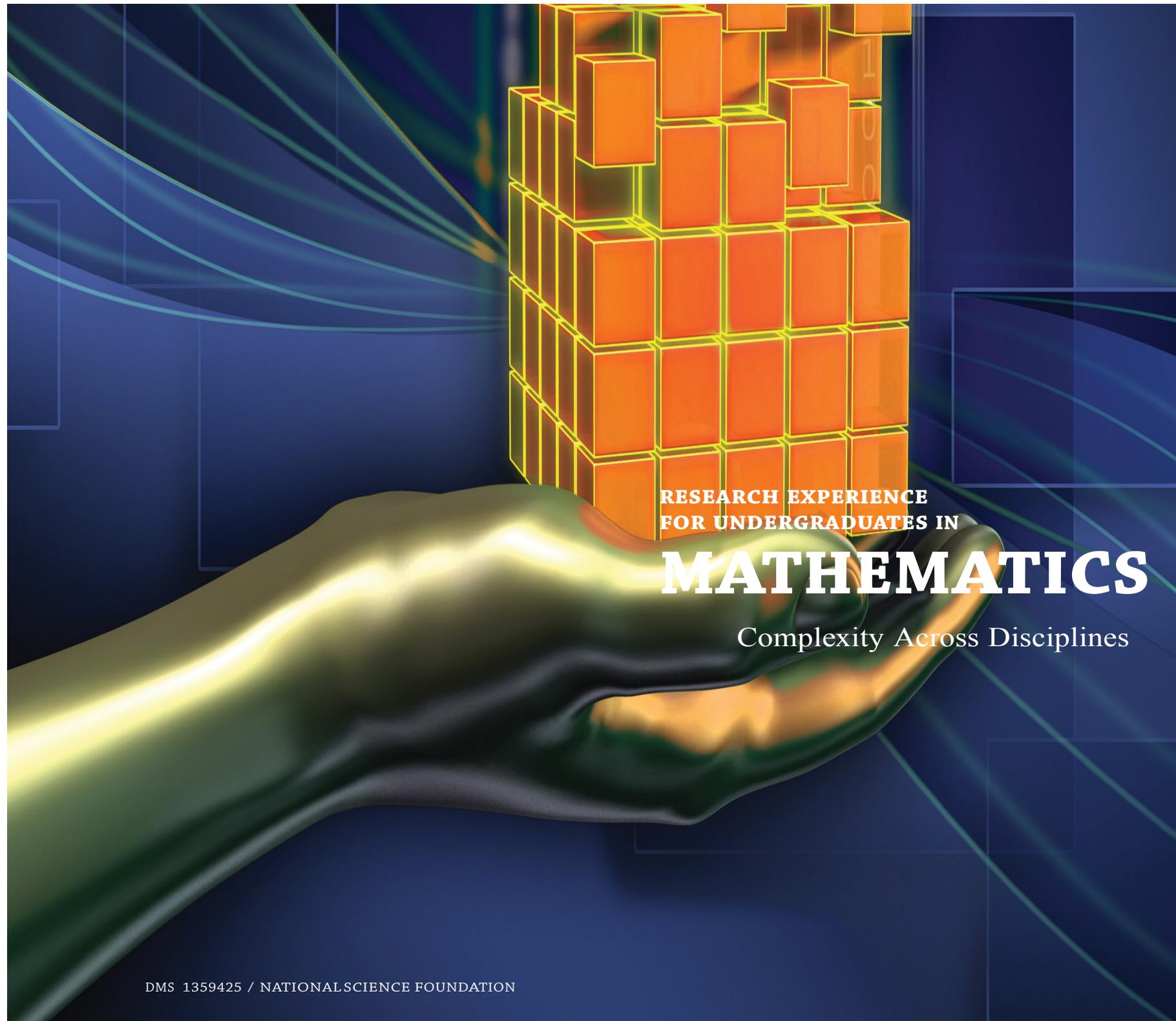
*Department of Mathematics*

## The Complexity Across Disciplines (CAD) Program

- Develops multidisciplinary approaches to scientific problems
- Produces intellectually independent young researchers whose work and vision transcend traditional disciplinary boundaries
- Builds intellectual infrastructure focusing on the pervasive themes of computing and complexity in daily life
- Invests intellectual and professional resources in engaging K-12 students in scientific inquiry
- Establishes long lasting professional relationships and collaboration among participants

1910 University Drive  
Boise ID 83725  
(208) 426-2896

**[reu@math.boisestate.edu](mailto:reu@math.boisestate.edu)**  
**[math.boisestate.edu/reu](http://math.boisestate.edu/reu)**



**RESEARCH EXPERIENCE  
FOR UNDERGRADUATES IN**

**MATHEMATICS**

*Complexity Across Disciplines*

# PROGRAM

The REU Site “COMPLEXITY ACROSS DISCIPLINES” (CAD) is a nine week summer program, sponsored by the National Sciences Foundation and Boise State University, in which undergraduate students experience independent team based research in combinatorics, number theory/algebra, and game theory motivated by applications to search optimization, information security, or genome biology. The nature of computing and complexity is the central unifying focus of the program. The program aims to immerse up to ten undergraduate students of diverse backgrounds in all facets of research in a culture of close and daily collaboration with faculty.

The program, as member of the Alliance of Summer Undergraduate Research Programs at Boise State University, exposes the participants to a myriad of learning and research opportunities. The students have an opportunity to interact with intellectual peers from a variety of disciplines and be part of an academically rich social environment.

## APPLICATION

We welcome applications from current students with strong interests in mathematics, science, technology and engineering. We strongly encourage applications from students who are also members of a group underrepresented in STEM fields (e.g. women, African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, Pacific Islanders, persons with disabilities) or who are enrolled in a minority, women’s, or non-doctoral institution.

NSF support through this program is open only to applicants who are US citizens or permanent residents of the United States. Applications from current foreign undergraduate students with alternate funding are welcome.

**Applications must be submitted online through [mathprograms.org](http://mathprograms.org) by March 1, 2016.**



## PROGRAM HIGHLIGHTS

Receive a stipend of \$4000, free on campus housing and an allowance for meals.

Receive three undergraduate upper division college credits from Boise State University.

Receive funding to present the results of summer research at an upcoming national conference.

Attend scientific workshops and seminars addressing mathematical techniques used in information security, search optimization and genome remodeling, research presentation skills, and scientific writing.

Be part of a vibrant community of collaborators, students and faculty, and have an opportunity to interact with intellectual peers from a variety of disciplines and be part of academically rich environment.

Participate in an interdisciplinary seminar featuring research projects from several REU sites in STEM disciplines.

Actively participate in engaging high school students in the mathematical design aspects of information security tools through selected workshops offered by the Idaho Science and Aerospace Scholars Program.

Have an opportunity to present your research results at the 2016 Idaho Conference on Undergraduate Research.

Enjoy multiple cultural, social and other activities in and around Boise, hiking and biking trails, and other opportunities for nature lovers.

## STUDENT SPOTLIGHTS



*“The Boise State REU program made graduate studies an attainable and practical goal in the future. The chance to work with other mathematicians and research unique ideas has really opened the door to further mathematical study. This program gave me an idea of how rewarding graduate school can be, and what I can do with a higher degree afterwards.”*



*“This program is engaging, challenging, and rigorous. I really cannot express in words how thankful I am for this program and just how surprised I am by the experience. I’ve learned so much, and I’ve had such wonderful intellectual conversations with my peers. I’m really going to miss the math community of this REU program.”*