THE INSTITUTE FOR COMPUTATIONAL AND EXPERIMENTAL RESEARCH IN MATHEMATICS (ICERM)

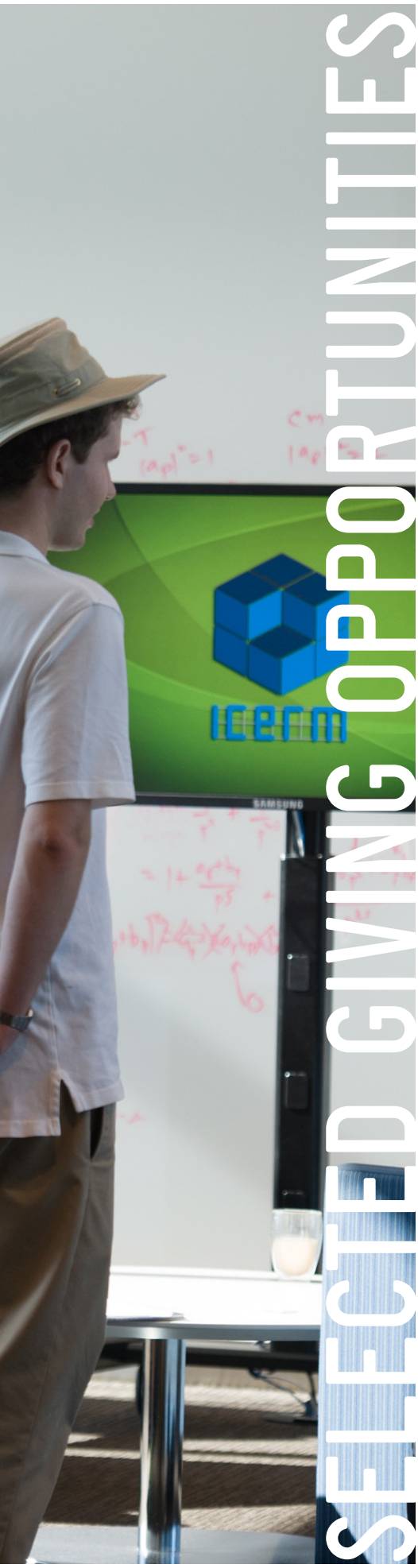
Mathematics has entered an age where powerful and readily available computational tools can transform the mathematical landscape at all levels of education. And a research institute established here at Brown in 2010—thanks to a National Science Foundation (NSF) grant—is employing these tools to solve new problems of critical importance and of benefit to society.

For decades, Brown has enjoyed a strong national reputation in mathematics and applied mathematics. The Institute for Computational and Experimental Research in Mathematics (ICERM) plays to these strengths. It supports basic research in mathematics, focusing on the interplay between mathematics, computation, and experimentation. To that end, the institute invites leading scholars from around the world to study new ways of bringing computational l and experimental methods to bear on a variety of mathematical problems. ICERM-hosted programs have included topics in pure mathematics as well as topics such as cybersecurity, climate modeling, and the challenges of exascale—systems capable of billions of calculations per second—computing.

"We all believe that this institute, with its strategic location at Brown, has the potential to change the landscape of future research integrating mathematics and computation."

BRENDAN HASSETT
Professor of Mathematics;
Director, ICERM

BROWN TOGETHER



SELECTED GIVING OPPORTUNITIES

ICERM does not operate in isolation. Instead, it benefits from strong ties to the mathematical sciences departments at Brown, from the vibrant educational community of colleges and universities across New England, and from affiliations with organizations nationwide. Academic partners include Brown's Data Science Initiative; while scientific partnerships include, among others, Microsoft Research and the Schlumberger-Doll Research Center.

In addition to semester-long programs and topical workshops, ICERM sponsors:

- Summer@ICERM, which enables undergraduates working in team settings to solve mathematical research problems developed by faculty experts.
- Collaborate@ICERM, which offers teams of three-to-six researchers the opportunity to spend five days on projects that have a computational or experimental component.
- GirlsGetMath@ICERM, which allows high school students to explore and be inspired by math during the summer.

ICERM has an exceptional opportunity to shape future research and innovation in mathematics and to train the next generation of computationally skilled mathematicians. While its core programs are funded by the NSF, additional funds from other federal agencies and from corporate, academic, and individual sponsors are sought in order to expand the scope of its research enterprise.

+ CONTACT

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