The Clay Mathematics Institute

The Clay Mathematics Institute (CMI) was founded in September 1998 as a private philanthropic foundation dedicated to mathematics. Its aim is to increase and disseminate mathematical knowledge and to recognize extraordinary achievements in mathematics by students and researchers. In pursuit of this aim, the CMI will implement a wide variety of projects around the world.

The CMI was established through an endowment by Landon T. Clay, a prominent Boston businessman who served for many years as the chief executive officer and chairman of the mutual fund company Eaton Vance. Arthur Jaffe, whose chair at Harvard University was also endowed by Landon T. Clay, is the president of the CMI Corporation. Jaffe served as president of the AMS during 1997–1998.

Unlike most organizations having the label "mathematics institute", the CMI does not function as a center for conferences or visitors. Rather, the CMI acts as a foundation, employing individuals to create mathematics and sponsoring projects that advance the field. The scope of the CMI is quite broad. For example, it has provided a grant to assist the Independent University of Moscow, a project initiated jointly with the AMS. The CMI also supports individual mathematicians as Clay Prize Fellows. Recently, eighth-grade student Po Ru Loh was selected as the first CMI Olympiad Scholar, a distinction that recognizes the most original solution to a problem in the American Mathematical Olympiad competition.

(Front, left to right), Landon T. Clay, Lavinia D. Clay, Finn M. W. Caspersen. (Back, left to right), Alain Connes, Edward Witten, Andrew Wiles, Arthur Jaffe.

The latter award demonstrates one of the CMI's most important aims, to honor mathematical achievements and to encourage students in their mathematical pursuits. "One of the goals of the institute is to fundamentally change attitudes toward mathematics and to encourage young people to do mathematics," Jaffe explains. "We also hope to inspire people outside of mathematics to appreciate the importance of the field."

The CMI is run by its five-person board of directors, and several committees of mathematicians provide advice. The initial Scientific Advisory Board consists of Alain Connes of the Collège de France and Institut des Hautes Études Scientifiques, Andrew Wiles of Princeton University, and Edward Witten of the Institute for Advanced Study. This board is supplemented by three liaison committees of mathematicians: one draws on Boston-area institutions, one is at the national level, and one is at the international level. Although located in Cambridge, Massachusetts, the CMI is an independent organization not officially linked to Harvard University, the Massachusetts Institute of Technology, or any other university.

While Jaffe says that he prefers not to speak about the amount of the endowment of the CMI, but rather to focus on CMI's goals, ideas, and projects, he does say that "We are very handsomely endowed." A special event entitled A Celebration

of the Universality of Mathematical Thinking was held on May 10 to celebrate the opening of the CMI [see sidebar]. The fact that the event featured speakers from five different countries shows that the CMI has already gained a high international profile.

The ambitious and exalted aims of the CMI are well captured in its Statement of Purpose: "The primary objectives and purposes of the Clay Mathematics Institute, Inc., are to increase and disseminate mathematical knowledge, to educate mathematicians and other scientists about new discoveries in the field of mathematics, to encourage gifted students to pursue mathematical careers, and to recognize extraordinary achievements and advances in mathematical research. The Clay Mathematics Institute will further the beauty, power, and universality of mathematical thinking." Through the establishment of the CMI, the international mathematical community has gained a new source of support for the activities that keep the field thriving.

—Allyn Jackson

Clay Mathematics Institute
1770 Massachusetts Avenue, #618
Cambridge, MA 02140, USA
Telephone: 617-868-8277
Fax: 617-491-1449
E-mail: `cmi@claymath.org`
World Wide Web: `http://www.ClayMath.org/`

Arthur M. Jaffe (left), and Landon T. Clay.

Helaman Ferguson with the CMI icon.

CMI Kickoff in Cambridge

The opening of the Clay Mathematics Institute took place on May 10, 1999, in a festive atmosphere. About 450 mathematicians gathered at the Massachusetts Institute of Technology (MIT) for a "happening", followed by a reception and by dinner in Boston for out-of-town guests. The ceremony excited interest in mathematics, and it received high praise from many persons who were present. CMI founder Landon Clay described the genesis of CMI. Then, mathematician and sculptor Helaman Ferguson unveiled the CMI icon that he had been commissioned to produce. It is a Mongolian granite sculpture named *Figure Eight Knot Complement, CMI.*

At this point, as a surprise in the program, Mr. Clay brought forward a hand-held bronze miniature of CMI, while Mrs. Clay produced a miniature of its wooden base. Andrew Wiles received the first CMI Award, in the form of the bronze miniature and the base.

The program proceeded with a mini-forum on mathematics and society, moderated by David Gergen of *U.S. News & World Report* and featuring as speakers Nobel laureate Dudley Herschbach and William Odom, former director of the National Security Agency. The much anticipated keynote address by Wiles followed, with a spectacular, exciting, and witty presentation on "The Future of Number Theory", aimed at a general audience.

Other speakers at the opening included MIT president Charles Vest, Alain Connes of the Institut des Hautes Études Scientifiques (IHÉS), Michael Atiyah of the Royal Society, Edward Witten of the Institute for Advanced Study, and Barry Mazur of Harvard University. During the dinner, Rita Colwell, director of the National Science Foundation, spoke positively about mathematics and the CMI. Other dinner speakers included mathematicians Jean-Pierre Bourguignon of IHÉS, William Browder of Princeton University, David Mumford of Brown University, who represented the International Mathematical Union, and Ludwig Faddeev of the Russian Academy of Sciences. Also speaking at the dinner were Konrad Osterwalder, rector of the Eidgenössisches Technische Hochschule (ETH) in Zürich; and Finn Caspersen, chair of the Knickerbocker Management Corporation, who gave uplifting encouragement to private support of mathematics.

—Arthur Jaffe