Michael Freedman named winner of Fields Medal

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UCSD MATH PROFESSOR WINS FIELDS MEDAL

Michael Freedman, Charles Lee Powell Professor of Mathematics at the University of California, San Diego has been named a winner of the Fields Medal, the most prestigious award in mathematics.

The medal is given every four years to promising young mathematicians and is considered the mathematics equivalent of the Nobel Prize. It was presented to Freedman and two others Sunday (August 3) at the opening of the eight-day meeting of the International Congress of Mathematicians (ICM) in Berkeley.

The other winners of the Fields Medal were Simon Donaldson of Oxford University and Gerd Faltings of Princeton.

The Medal is presented to young mathematicians in recognition of progressive achievements in the field of mathematics. According to an ICM announcement, Freedman won his medal for his "amazing results in the field of topology."

Freedman, 35, is the second member of the UCSD mathematics faculty to win the Fields Medal. Shing-Tung Yau, who holds the Chancellor's Associates Chair in Mathematics, won the award in 1982.

"The Fields Medal marks the culmination of ten years of extraordinary achievement by Michael Freedman," said UCSD Chancellor Richard C. Atkinson. "His work represents one of the major intellectual accomplishments of our time. I am particularly proud that this great work was accomplished during Professor Freedman's tenure in our mathematics department. He is an outstanding young colleague and a great credit to UCSD."

Freedman's major research interest is in topology, a branch of mathematics that involves the study of shapes, and is currently centered on the global structure of four-dimensional spaces.

"I am delighted that Michael Freedman has received the most prestigious international award in mathematics," said Hubert Halkin, chairman of the UCSD mathematics department. "In the past, UCSD has been able to attract several established superstars. That's very good. Michael Freedman came here as a young assistant professor and did the work that brought him to the top of his profession. This is really great."

Halkin added that: "His work in low-dimensional topology is a cornerstone in modern research in physics."

In 1983 Freedman achieved international recognition among his colleagues by solving an 82-year old mathematical riddle known as the four-dimensional Poincare conjecture. The hypothesis, named after its author, the famed French mathematician Henri Poincare, is one of a handful of intellectual labyrinths that have challenged mathematicians for decades.

His work could eventually affect our understanding of the universe since most models of the universe are based on four dimensional manifolds.

In recognition of his achievements, Freedman was named a 1984 winner of a $176,000 prize by the John D. and Catherine T. MacArthur Foundation. The prestigious tax-free award, which goes each year to "a small number of exceptionally talented individuals," has allowed him to begin pursuing new avenues in his research.

In April of 1984, Freedman was named "California Scientist of the Year" by the California Museum of Science and Industry in Los Angeles, and the following month he was selected for membership in the National Academy of Sciences.

He is also a recent winner of the Veblen Prize, one of the major awards in mathematics, given by the American Mathematical Society.

Freedman, a resident of La Jolla, joined the UCSD Department of Mathematics in 1976 as an assistant professor after spending a year at the Institute for Advanced Study in Princeton, New Jersey. He earned his Ph.D. in mathematics from Princeton University in 1973.

The Fields Medal is named in honor of Professor J.C. Fields, who proposed the idea of the award when he was president of the ICM when the organization met in Toronto in 1924. The idea was accepted in 1932 and the first medals awarded in 1936.

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