

Center for Applied Mathematics Seminar

Michael H. Freedman

Station Q Microsoft, University of
California, Santa Barbara

Will give a lecture entitled:

K-theory in condensed matter physics

Tuesday, November 17, 2009

11:00 am

**Location: 123 Nieuwland Hall
of Science**



Biography: Michael Freedman is Director of Station Q, Microsofts Project on quantum physics and quantum computation located on the UCSB campus. The project is a collaborative effort between Microsoft and academia directed towards exploring the mathematical theory and physical foundations for quantum computing.

Freedman joined Microsoft in 1997 as a Fields Medal-winning mathematician whose accomplishments included a proof of the 4-dimensional Poincare conjecture, the discovery (with Donaldson and Kirby) of exotic smooth structures on Euclidian 4-space, applications of minimal surfaces to topology, and estimates for the stored energy in magnetic fields. Freedman has received numerous awards and honors: The Fields Medal, election to the National Academy of Science and the American Academy of Arts and Sciences, the Veblen prize, a MacArthur Fellowship and the National Medal of Science. His work since joining Microsoft has been primarily on the interface of quantum computation, solid state physics, and quantum topology.