

*4<sup>th</sup> Annual Women in Mathematics Day*

**Jean E. Rubin Memorial Lecture**

**Tuesday, October 19, 2010**

**4:30 p.m.**

**MATH 175**

*Refreshments will be served prior to the talk at 4 p.m. in the Math Library Lounge (3<sup>rd</sup> floor MATH).*

**Speaker:**

**Dusa McDuff**

**Helen Lyttle Kimmel '42 Chair in Mathematics  
Columbia University, Barnard College**

Professor McDuff obtained her Ph. D. from the University of Cambridge, UK. In many ways, however, the most significant part of her graduate studies was a six month stay in Moscow during 1969-70, when she studied with the great Russian mathematician Israil Gelfand. After several more years in Britain (as a postdoc in Cambridge and as a University Lecturer in York and Warwick), she came to the United States in 1978 to take up a position at Stony Brook University, remaining there until recently going to Barnard as Helen Kimmel Professor of Mathematics.



For the past 25 years or so, Professor McDuff's research has been in the area of symplectic geometry. She has written more than 90 research papers and coauthored two books. She has given numerous talks, including a plenary address at ICM Berlin in 1998. She has been a Fellow of the Royal Society since 1994 and a Member of the National Academy of Sciences since 1999.

**Symplectic embeddings and continued fractions**

**Abstract**

As has been known since the time of Gromov's Nonsqueezing Theorem, symplectic embedding questions lie at the heart of symplectic geometry. The talk will discuss some recent developments concerning the question of when a 4-dimensional ellipsoid can be symplectically embedded in a ball. This problem turns out to have unexpected relations to the properties of continued fractions and of exceptional curves in blow ups of the complex projective plane. The talk will be elementary and will not assume knowledge of symplectic geometry.



Jean E. Rubin was Professor of Mathematics at Purdue University from 1967 until her death in 2002. She received a B.S. from Queen's College in New York City in 1948, an M.A. from Columbia in 1949, and a Ph.D. from Stanford in 1955. She taught at Oregon and Michigan State before coming to Purdue.

Professor Rubin was the author of more than 40 papers and five books in set theory and questions related to the axiom of choice.