Carlos Kenig

FRIDAY, APRIL 16

"The Global Behavior of Solutions to Critical Nonlinear Dispersive and Wave Equations,"
4 p.m., 115 Avery Hall

Preceding Reception,
3:15 p.m., 348 Avery Hall

ABSTRACT: We describe a method (which I call the concentration-compactness/rigidity theorem method) which Frank Merle and I have developed to study global well-posedness and scattering for critical non-linear dispersive and wave equations. Such problems are natural extensions of non-linear elliptic problems which were studied earlier, for instance in the context of the Yamabe problem and of harmonic maps. We illustrate the method with some concrete examples and also mention other applications of these ideas.

Professor Carlos Kenig currently holds the position of Louis Block Distinguished Service Professor in the Department of Mathematics of the University of Chicago.

Professor Kenig's area of expertise is in the fields of harmonic analysis and partial differential equations. The unifying theme of his widespread research has been applications and development of techniques to analyze equations which come directly from the physical sciences and engineering disciplines. Kenig's research was honored with the 2008 AMS Maxime Bôcher Memorial Prize. Presented every three years by the American Mathematical Society, the Bôcher Prize is one of the highest distinctions in the field of analysis. In the past, he has also held Sloan and Guggenheim Fellowships; in 1986 and 2002 he was an invited speaker at the International Congress of Mathematicians, at Berkeley and Beijing, respectively. Since 2002 Professor Kenig has been a fellow of the American Academy of Arts and Sciences.

To read more about Professor Kenig, please visit:
http://www.math.unl.edu/events/rowlee/2010/

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