



Department of Mathematical Sciences welcomes

## **Pavel Etingof** **Massachusetts Institute of Technology**

### **Double affine Hecke algebras and their applications**

#### **ABSTRACT:**

Double affine Hecke algebras (DAHAs) were introduced by I. Cherednik 25 years ago to prove Macdonald's conjectures. A DAHA is the quotient of the group algebra of the elliptic braid group attached to a root system by Hecke relations. DAHAs and their degenerations are now central objects of representation theory. They also have numerous connections to many other fields—integrable systems, quantum groups, knot theory, algebraic geometry, combinatorics, and others. In my talk, I will discuss the basic properties of double affine Hecke algebras and touch upon some applications.

#### **ABOUT THE SPEAKER:**

Pavel Etingof received the M.S. in applied mathematics from the Moscow Oil & Gas Institute in 1989, and the Ph.D. in mathematics from Yale University in 1994. Igor Frenkel was his thesis advisor. He went to Harvard as a Benjamin Peirce Assistant Professor in 1994, and joined the MIT mathematics faculty as assistant professor in 1998 (professor in 2005). Professor Etingof's research interests are primarily in studies which intersect representation theory and mathematical physics, such as quantum groups. He served as Chair of the Graduate Student Committee from 2002-05. In 1999 Etingof received a Clay Mathematics Institute Prize fellowship. In 2012 he was selected to be the Robert E. Collins Distinguished Scholar in the Mathematics Department. In 2015 he was selected by the Institute for the Frank E. Perkins Award for excellence in graduate advising. In 2016 he was elected Fellow of the American Academy of Arts and Sciences.

March 29, 2019

Hosted by:  
Graduate students

Tea begins at 3:00  
in LD 259

Research Topic  
begins at 3:30  
in LD 229

