



Department of Mathematical Sciences welcomes

Michael Gekhtman **University of Notre Dame**

Five Glimpses of Cluster Algebras

ABSTRACT:

Cluster algebras were introduced by Fomin and Zelevinsky almost 20 years ago and have since found exciting applications in many areas including algebraic geometry, representation theory, integrable systems and theoretical physics. I will use examples to explain a definition of a cluster algebra and then sketch several applications of the theory, including Somos-5 recursion, pentagram map and generalizations of Abel's pentagon identity.

ABOUT THE SPEAKER:

Michael Gekhtman earned his Ph.D. in 1990 at the Institute of Mathematics of the National Academy of Sciences of Ukraine. Prior to joining the faculty of the University of Notre Dame, he held postdoctoral positions at the Weizmann Institute, University of Michigan and the College of William and Mary. In 2007 he became a full professor at Notre Dame where he also served as a department chair from 2013 to 2016. Over the years, Gekhtman held visiting research professorships at the Max-Planck-Institute, IHES, MSRI, RIMS, and the University of Heidelberg.

He published about 70 papers on integrable systems, orthogonal polynomial and most recently on the theory and applications of cluster algebras and, in particular, their interactions with Poisson geometry.

January 24, 2020

Hosted by:
Prof. Evgeny Mukhin

Tea begins at 3:00
in LD 259

Research Topic
begins at 3:30
in LD 229

