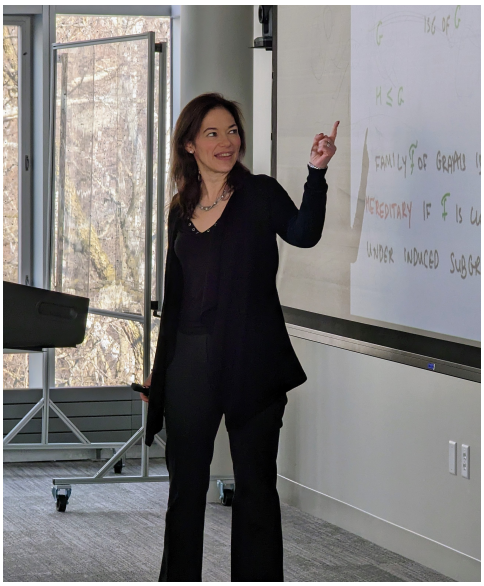
Erdős Colloquium 2024



Induced subgraphs and tree decompositions

Dr. Maria Chudnovsky, Princeton University

Tree decompositions are a powerful tool in both structural graph theory and graph algorithms. Many hard problems become tractable if the input graph is known to have a tree decomposition of bounded "width." Exhibiting a particular kind of a tree decomposition is also a useful way to describe the structure of a graph. Tree decompositions have traditionally been used in the context of forbidden graph minors; studying them in connection with graph containment relations of more local flavor (such as induced subgraph or induced minors) is a relatively new research direction. In this talk we will discuss recent progress in this area, touching on both the classical notion of bounded tree-width, and concepts of more structural flavor.

Tuesday, January 23, 2024
4:05 pm
Fine Arts B (FAB) 105

Tea, preceding the talk, at 3:30 pm in Little Hall 339

Dr. Maria Chudnovsky received her PhD from Princeton University in 2003 and has held faculty positions at Columbia University and Princeton University. Her research interests lie in the field of graph theory, and her work has been funded by the National Science Foundation, the Clay Mathematics Institute, the US Army, and the Air Force Office of Scientific Research. She is a Fellow of the American Mathematical Society, and in 2013 she was named a MacArthur Foundation Fellow.

Paul Erdős (1913–1996) was one of the 20th Century's most famous mathematicians. He was a regular visitor to the University of Florida between 1973 and 1996. In 1998-99, under the leadership of chair Krishnaswami Alladi, the Department of Mathematics initiated the annual Erdős Colloquium Lecture Series in pure mathematics at the University of Florida.