

Thursday, November 11, 2021

11:00am–11:45am

Steven Bradlow

CAS Associate 2019-20, Mathematics

Geometric Structures on Pretzels and Other Surfaces: What Goes on in a Mathematics Research Institute



Professor Bradlow spent the Fall of 2019 at the Mathematical Sciences Research Institute in Berkeley for a program devoted to the mathematics of surfaces, a subject where geometry is no longer governed by Euclid's postulates and exotic structures play a role in questions as varied as how to find the best way to avoid the corners of a polyhedron and questions in quantum field theories in physics. He will describe some of the themes of the program but will leave the mathematics with some digressions about the hosting institute and its history.

Noon–12:45pm

Vesna Stojanoska

CAS Fellow 2018-19, Mathematics

Solving Polynomial Equations with Homotopy Theory



Given a general polynomial, it can be hard or impossible to solve it, or even to tell if solutions exist within a fixed number system. The set of solutions is rather rigid: numbers that are "close" to a solution usually are not themselves solutions. So how can homotopy theory, the study of shapes that can be continuously deformed without changing their nature, help in solving polynomials? Professor Stojanoska will sketch some old ideas and new developments in the world of homotopical approaches to arithmetic questions.



CENTER FOR ADVANCED STUDY

FOOD FOR THOUGHT

A new Center for Advanced Study public events series featuring presentations of research and creative projects by recent CAS Associates and Fellows.

This informal series includes talks that were canceled after campus shut down in Spring 2020. With the possibility of in-person events once again, we are delighted to showcase the work of some of our most productive and creative faculty in a series of intellectually and spiritually invigorating presentations. You are invited to drop in when you can and enjoy a bite to eat while you learn about the exciting projects undertaken by our faculty. A brunch buffet will be provided at all in-person events.

Center for Advanced Study
Levis Faculty Center—Room 210
919 W. Illinois, Urbana



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