Peter Hilton Memorial Lecture - 2026

Chasing finite shadows of infinite groups through geometry

Speaker: Martin Bridson, University of Oxford
Date: Friday, March 13, 2026
Time: 3:30pm
Location: TBA
Abstract: There are many situations in geometry or elsewhere in mathematics where it is natural or convenient to explore infinite groups of symmetries via their actions on finite objects. But how hard is it find these finite manifestations and to what extent does the collection of all such actions determine the infinite group?

In this colloquium, I will sketch some of the rich history of such problems and then describe some of the great advances in recent years. I'll describe pairs of distinct groups that have the same finite images and I'll sketch the proof of some "profinite rigidity results", i.e. theorems showing that in certain circumstances one can identify an infinite group if one knows its set of finite images.

We'll pay particular attention to groups that arise in 3-dimensional geometry and topology.

About the speaker: Martin Bridson is the Whitehead Professor of Pure Mathematics at Oxford and President of the Clay Mathematics Institute. He is renowned for his work in geometry, topology, and group theory.

Born in the Isle of Man, he was an undergraduate at Oxford and a graduate student at Cornell (PhD 1991). He subsequently held faculty positions at Princeton, Geneva, and Imperial College London. He has also been a visiting professor at Stanford and the EPFL.

His honours include the LMS Whitehead Prize (1999), AMS Steele Prize (2020), and the Royal Society's Wolfson Research Merit Award (2012). A Fellow of the Royal Society (2016), the American Mathematical Society (2015), and Academia Europeae (2020), he was an Invited Speaker at the International Congress of Mathematicians in 2006 and a Plenary Speaker at the European Congress of Mathematics in 2024.

The lecture will be followed by a reception at 4:45 p.m., location to be announced. This reception is for the whole Binghamton Mathematics Community as well as for our visitors.

For details contact cmalkiew at binghamton dot edu.

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Last update: **2026/02/03 19:46**