Mentor Lecture Series

Organizer(s): Shaowei Lin & Diogo Oliveira e Silva

Monday, 4:10–5:00pm, 60 Evans

Nov. 26   **Ian Agol**, UCB

Survey on volumes of hyperbolic 3-orbifolds and manifolds

A hyperbolic n-orbifold is a quotient of n-dimensional hyperbolic space by a discrete group of isometries. Jorgensen and Thurston proved that the volumes of hyperbolic 3-orbifolds form a well-ordered set. Recently, the minimal volume 3-orbifolds and minimal volume orientable 3-manifolds have been identified. The smallest volume manifold is known as the Weeks-Matveev-Fomenko manifold, with volume .9427..., and has been conjectured to be minimal volume since the '80s. We'll survey these topics, and indicate some of the techniques that go into proving them.

The Mentor Lecture Series is designed for first and second year graduate students. The series aims to acquaint beginning graduate students with potential dissertation supervisors whom they might not otherwise closely encounter, and to impart a taste of research activity in the mathematics department in order to help beginning students choose fields of specialization.