Pure Math Seminar

Einstein metrics and Ricci flow in dimension 4

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ABSTRACT:

Einstein manifolds and Ricci flow were instrumental tools in answering long standing topological questions in dimension 3. It is now in dimension 4 that most open questions remain, and geometers hope that those same tools will provide some answers. However, Einstein 4-manifolds are still far from being fully understood and many 4-dimensional specific techniques have yet to be applied to Ricci flow.

I will motivate Einstein metrics and the Ricci flow approach to topology and discuss what are some of the main difficulties and specificities of dimension 4. I will present my work on the degeneration of Einstein 4-manifolds, some of the questions it answers and the new directions it opens. I will finally discuss new aspects of a 4-dimensional-specific theory of Ricci flow.

THURSDAY, JANUARY 12, 2023
10:00 AM – 11:00 AM
Building 2, Room 449

ZOOM Link…
https://mit.zoom.us/j/94994298254

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