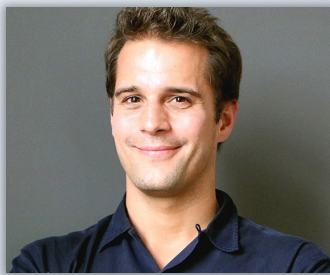


Spring 2018 Ritt Lectures

Tuesday, March 20th
2:45 - 3:45pm
(Room 417)

Wednesday, March 21st
4:30 - 5:30pm
(Room 520)

“Scalar Curvature & Isoperimetry in the Large”



Professor Michael Eichmair
(University of Vienna)

Abstract

According to the initial value formulation of general relativity, all that is future and all that is past is contained in a glimpse of a space-time. This correspondence between the physics of the evolving space-time and the geometry of initial data for the Einstein equations is highly non-linear. The works of H. Bray, D. Christodoulou, G. Huisken, R. Schoen, S.-T. Yau, and others suggests isoperimetry (How much area is needed to enclose a given amount of volume in initial data for the space-time?) as a tool for extracting physical information about the space-time from the initial data. I will discuss recent proofs of a number of their conjectures in my two lectures.

This is joint work with S. Brendle, with O. Chodosh, with O. Chodosh, Y. Shi, and H. Yu, and with O. Chodosh, Y. Shi, and J. Zhu.



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