

2017 Distinguished Lecture Series

UCLA Department of Mathematics

Mathematics of General Relativity



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Abstract: In these lectures I will try to showcase a variety of mathematical phenomena appearing in General Relativity, particularly in its evolutionary aspect. The discussion will touch upon basic properties of the Einstein equations, gravitational and impulsive waves, black holes, expanding and collapsing universes.

In the second and third lectures I will focus in more detail on the stability problems, analysis of the big bang singularity, self-similar solutions of the Einstein equations and their connections to the Fefferman-Graham construction of conformal invariants.

Lecture 1

Tuesday, April 4, 2017 3:00 - 3:50 p.m., MS 6627

Lecture 2

Wednesday, April 5, 2017 3:00 - 3:50 p.m., MS 6627

Lecture 3

Thursday, April 6, 2017 3:00 - 3:50 p.m., MS 6627