FIM Minicourse

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Existence of min-max minimal hypersurfaces

May 13 to 22, 2014

Tuesday,	May 13,	10:15 - 12:00	HG E 21
Thursday,	May 15,	10:15 - 12:00	HG G 43
Tuesday,	May 20,	10:15 - 12:00	HG E 21
Thursday,	May 22,	10:15 - 12:00	HG G 43

ETH Zürich, Rämistrasse 101

Abstract

The Almgren-Pitts min-max theory for the area functional, finished in 1980, establishes the existence of a smooth embedded closed minimal hypersurface in every compact Riemannian manifold with dimension at most seven. We will give an overview of the theory and present recent work with Andre Neves, in which we prove existence of infinitely many minimal hypersurfaces in the positive Ricci curvature setting. The proof is based on Lusternik-Schnirelman theory and uses some multiparameter families previously studied by Gromov and Guth.

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