Colloquium

Einstein manifolds, gradient shrinking Ricci solitons and linear stability

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PS-307

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Research interests:

Mathematics, Engineering, Physics, Applied Mathematics and Meteorology

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Abstract: Einstein manifolds can be variationally characterized as critical points of the classical Hilbert action (i.e., the total scalar curvature). Shrinking Ricci solitons are self-similar solutions to Hamilton's Ricci flow and natural extensions of Einstein metrics of positive scalar curvature. They are also critical points of a certain functional defined by Perelman. In this talk, I will discuss geometry of Ricci solitons, in particular the second variation of Perelman's shrinker entropy and stability question. I will present a joint work with Huai-Dong Cao that gives the full classification of the linear stability of Perelman's entropy on symmetric spaces of compact type.

For Colloquium attendees, refreshments will be served in PS 317 at 3:30 pm