

ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ

ΤΜΗΜΑ ΜΑΘΗΜΑΤΙΚΩΝ



Εβδομαδιαίο Σεμινάοιο

Local invariants of four-dimensional Riemannian manifolds and their application to the Ricci flow

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We study the four-dimensional Ricci flow with the help of local invariants. If $(M^4, g(t))$ is a solution to the Ricci flow and $x \in M$, we can associate to the point x a one-parameter family of curves, which lie on a smooth quadric in $\mathbb{P}(T_xM\otimes\mathbb{C})$. This allows us to reformulate the Cheeger-Gromov-Hamilton Compactness Theorem in the context of these curves. Furthermore we study Type I singularities in dimension four and give a characterization of the corresponding singularity models also in the context of these curves.

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