



Sommersemester 2017

Gastvorlesung

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über das Thema

Deformation of metrics towards constant scalar curvature

The classical uniformization theorem asserts that any Riemannian metric on a closed two-dimensional surface is conformal to a metric of constant Gaussian curvature. A higher dimensional analogue of this statement is given by the solution of the Yamabe problem: Any metric on an n -dimensional manifold is conformal to a metric of constant scalar curvature. This problem is equivalent to the existence of a positive solution of the nonlinear elliptic equation of the form $\Delta u - \frac{n-2}{4(n-1)}Ru + cu^{\frac{n+2}{n-2}} = 0$.

In this lectures, I will describe the background of this problem, and its variational formulation in terms of the Yamabe functional. The gradient flow associated with the Yamabe functional leads to an curvature flow, and I will discuss why this flow converges to a metric of constant scalar curvature for any initial metric.

Termine

Dienstag,	16. Mai 2017,	16 c.t.-18 Uhr,	N 9
Dienstag,	30. Mai 2017,	14 c.t.-16 Uhr,	N 9
Dienstag,	13. Juni 2017,	14 c.t.-16 Uhr,	N 9
Dienstag,	27. Juni 2017,	16 c.t.-18 Uhr,	N 9
Donnerstag,	06. Juli 2017,	14 c.t.-16 Uhr,	N 9

Hierzu wird herzlich eingeladen.