Einladung zum

Würzburger Mathematischen Kolloquium

Julius-Maximilians-Universität Würzburg • Fakultät für Mathematik und Informatik

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Geometric and Analytic Aspects of Liouville Equations

Dienstag, der 6. Juli 2021 • 14:15 Uhr

Der Vortrag findet als Zoom-Videokonferenzen statt.
Bitte fordern Sie den Zoom-Link an bei klingenberg@mathematik.uni-wuerzburg.de

Inhaltsangabe:

Liouville equations play a fundamental role in geometry when prescribing the Gaussian curvature of a (possibly singular) surface, as well as in models from Mathematical Physics that describe stationary Euler flows, Electro-weak, Chern-Simons models of superconductivity and String Theory.

We will focus on finding existence of solutions by exploiting the variational structure of the problem. In general, global minimizers may not exist, and we will instead look for saddle-type solutions constructed via min-max theory. A crucial tool in doing this will be to find suitable improvements of the Moser-Trudinger inequality by a fine analysis of the distribution of conformal volume over the surface. Some applications to Functional Determinants in spectral theory will be also described.

Alle sind herzlich eingeladen.

Die Dozentinnen und Dozenten der Mathematik