EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Mathematisch-
Naturwissenschaftliche
Fakultät

Fachbereich Mathematik

AB Geometrische Analysis,
Differentialgeometrie und
Relativitätstheorie

Sommersemester 2016

Oberseminar
Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Am Donnerstag, den **23.06.2016** spricht um **16 Uhr c. t.** im Raum N16

Prof. Dr. Dirk Lebiedz
(Universität Ulm)

über das Thema

On a geometric variational principle for computing slow invariant attracting manifolds in dynamical systems of chemical reaction kinetics

Differential equation models for chemical reaction kinetics are dissipative dynamical systems, usually sharing high stiffness, multiple time scale character and often also high dimensionality. Modeling the slow modes of kinetics plays a significant role in dimension reduction approaches for such models within reactive flow applications and can be achieved by computing slow invariant attracting manifolds (SIAM) in phase space. A numerically efficient variational approach for the approximation of SIAM will be presented and issues concerning the search for an exact variational principle characterizing the slow manifolds will be discussed.

Hierzu wird herzlich eingeladen.

C. Cederbaum, G. Huisken