Daniel John
The isoperimetric problem in symmetric spaces of noncompact type

TIME:

3 May 2005, 17:00 - 19:00

LOCATION:

Freie Universität Berlin - Fachbereich Mathematik und Informatik
Arnimallee 2-6, 14195 Berlin-Dahlem (Raum 032)

Symmetrization procedures have been a basic tool in the history of the isoperimetric problem in constant curvature spaces. In this talk we present a new symmetrization procedure for domains in symmetric spaces of noncompact type. This symmetrization generalizes the well known Steiner symmetrization in euclidean space. In contrast to the classical construction the symmetrized domain is obtained by solving a nonlinear elliptic equation of mean curvature type. So far, it is not possible to solve the isoperimetric problem in symmetric spaces of noncompact type by applying this symmetrization procedure. Nevertheless, it provides some interesting insights into the qualitative behavior of isoperimetric solutions.

www.raumzeitmaterie.de