

Fachbereich C, Mathematik und Naturwissenschaften

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Im Rahmen der

## AG Komplexe Analysis

laden wir zu folgendem Vortrag ein:

## Generalized cycles in projective space and local intersection numbers

(Prof. Mats Andersson, Chalmers University of Technology, Göteborg)

am Dienstag, den 25.02.2014, um 16 Uhr c.t. in Raum G.15.25.

**Abstract:** Let Z and W be two varieties in projective space. Some years ago, Tworzewski, and independently Gaffney and Gassler, introduced for each point on the set-theoretical intersection of Z and W, a list of non-negative integers, called the local intersection numbers.

We introduce a class of generalized cycles, that contains all analytic cycles. Each generalized cycle has well-defined multiplicity at each point and a well-defined degree. Given two (generalized) cycles Z and W we define a product  $Z \bullet W$ , which is a generalized cycle with the property that its multiplicities at each point is precisely the local intersection numbers. Moreover, the product respects Bézout's identity. We also discuss the relation to the classical non-proper intersection product. In particular, from  $Z \bullet W$  one can get the associated cohomology class on the set-theoretical intersection of Z and W.

This is a joint work in progress with D. Eriksson, H. Samuelsson, E. Wulcan and A. Yger.

Alle Interessenten sind herzlich eingeladen!