

BERGISCHE UNIVERSITÄT  
WUPPERTAL  
Gaußstraße 20  
42119 Wuppertal



*Fachbereich C, Mathematik  
und Naturwissenschaften*

Prof. Dr. Nikolay Shcherbina

Telefon: (0202) 439-3041

Raum: G.15.19

Im Rahmen der

## AG Komplexe Analysis

laden wir zu folgendem Vortrag ein:

### Holomorphicity and homotopy

(Prof. Eugene Poletsky, Syracuse University, USA)

am **Dienstag, den 13.01.2015, um 16 Uhr c.t. in Raum G.15.25.**

**Abstract:** Given to “holomorphic” objects we say that they are holomorphically or h-homotopic if they can be continuously deformed one into another so that every deformation stays “holomorphic”. While such homotopies were used earlier, e.g., by Hartogs, only recently serious studies has started with a paper of Gromov on “homotopic Oka principle”. This principle was later developed by Forstnerič and his students and collaborators.

However, currently it can be applied only to objects in non-hyperbolic manifolds. In hyperbolic case it is reasonable to start with the case when objects are analytic disks in a complex manifold  $M$ , while their boundaries are in a domain  $W \subset M$ . H-homotopy is defined so that deformations still possess this property. There are two versions of such h-homotopy: one keeps disks’ centres fixed (Jöricke) and another keeps fixed a point on the boundary (Dharmasena-P.).

The first one was used to construct envelopes of holomorphy, while another is similar to the notion of fundamental group.

In our talk we will try to provide details for all things mentioned above.

Alle Interessenten sind herzlich eingeladen!

gez. Prof. N. Shcherbina