



Im Rahmen der

## AG Komplexe Analysis

laden wir zu folgendem Vortrag ein:

### Energy of quasiconformal maps and of pseudoholomorphic entire curves.

(Prof. Hervé Gaussier, Université Grenoble Alpes)

am **Dienstag, den 18.07.2017, um 16 Uhr c.t. in Hörsaal 3 (BZ.08.02).**

**Abstract:** This is a joint work with Masaki Tsukamoto from Kyoto University.

If  $f: \mathbb{C} \rightarrow \mathbb{C}\mathbb{P}^n$  is a smooth map, the energy of  $f$  is defined by:

$$E(f) := \limsup_{R \rightarrow \infty} \frac{1}{\pi R^2} \int_{D(0,R)} f^* \omega_{FS}$$

where  $\omega_{FS}$  denotes the Fubini Study form on  $\mathbb{C}\mathbb{P}^n$  and  $D(0, R) \subset \mathbb{C}$  is the disk centered at the origin with radius  $R$ .

We prove that the energy of a uniformly continuous quasiconformal map in  $\mathbb{C}\mathbb{P}^1$ , avoiding two points, is equal to zero. As an application, we show that the energy of an entire pseudoholomorphic curve in  $\mathbb{C}\mathbb{P}^2$ , avoiding three J-lines in general position, is equal to zero. Finally, unlike the holomorphic case, we construct a one parameter family  $(f_a)_{0 < a < 2}$  of uniformly continuous quasiconformal maps in  $\mathbb{C}\mathbb{P}^1$ , avoiding two points, such that for every  $0 < a < 2$ :

$$\lim_{R \rightarrow \infty} \frac{1}{\pi R^a} \int_{D(0,R)} (f_a)^* \omega_{FS} = \infty.$$

Alle Interessenten sind herzlich eingeladen!

gez. Prof. N. Shcherbina