

Prof. Dr. Fedor Bogomolov

"Closed holomorphic differentials and holomorphic webs"

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FU (Arnimallee 3, Raum 119)

I will report on a progress in our joint work with Bruno de Oliveira.

We call a symmetric holomorphic differential ω on a complex manifold closed if it can be written as $\prod df_i^{n_i}$ in the local neighborhood of some point x_0 of the manifold.

This property holds then for a complementary of a finite set of divisors and hence such a differential defines a holomorphic web- a set of local codimension one foliations on the manifold (possibly singular).

Note that any symmetric differential on surface defines a similar web. However the webs defined by closed differentials are very special and provide with restrictions on the topology of the ambient surface (or manifold). I will discuss some results and conjectures.

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