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Proof of the Caratheodory Conjecture, Part I

ZEIT:

13.1.2009, 15:30 Uhr - 16:30 Uhr

ORT:

HU Berlin
Institut für Mathematik
Rudower Chaussee 25, Room I.410
Berlin-Adlershof

In these two self-contained talks we outline a proof of the Caratheodory conjecture, which states that there must be at least 2 umbilic points on a closed convex surface in Euclidean 3-space. The proof involves a reformulation of the Conjecture in terms of the index of an isolated complex point on a Lagrangian surface in TS^2 , and establishing the existence of holomorphic discs with boundary lying on the Lagrangian surface.

In this first talk we describe the geometric setting and the reformulations of the Conjecture.

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