



# Brendan Guilfoyle (Tralee/ Ireland) Proof of the Caratheodory Conjecture, Part I

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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.

**Kontakt:**

Humboldt-Universität zu Berlin . Institut für Mathematik  
SFB 647 . Unter den Linden 6 . 10099 Berlin  
Tel. +49 30 2093 1804 . Fax. +49 30 2093 2727  
sfb647@math.hu-berlin.de

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