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

TIME:
21 Jan 2009, 16:30 - 17:30

LOCATION:
HU Berlin
Institut für Mathematik
Rudower Chaussee 25, Room 1.410
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 a complex point on a Lagrangian surface in TS2, and establishing the existence of holomorphic discs with boundary lying on the Lagrangian surface.

In this second talk we establish the existence of the holomorphic discs by using mean curvature flow with respect to the neutral Kaehler metric on TS2.

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