

UFSCar

DEPARTAMENTO DE MATEMÁTICA

COLÓQUIO

Profa. Isabel Fernandez Delgado

Universidade de Granada, Espanha

Falará sobre:

**Harmonics maps and constant mean curvature
surfaces in $H^2 \times \mathbb{R}$**

Abstract

In this talk we will develop two cases of constant mean curvature surfaces in $H^2 \times \mathbb{R}$ in which harmonics maps play an important role. First, we construct a hyperbolic Gauss map for surfaces in $H^2 \times \mathbb{R}$ that turns out to be harmonic when the surface has mean curvature $1/2$. Moreover, in this case the associated holomorphic differential coincides (up to a sign) with the one introduced by Abresch and Rosenberg. As an application we obtain the existence of infinitely many new examples of complete $H = 1/2$ surfaces with prescribed Abresch-Rosenberg differential. Secondly, we will study minimal surfaces in $H^2 \times \mathbb{R}$, specially those that are complete graphs over a subset of $H^2 \times \mathbb{R}$.

*DATA: 02/09/2005 HORÁRIO: 14:00 Hs
LOCAL: Sala 20 do DM-UFSCar*