EPFL

B. Buffoni - M. Colombo - M.Hairer - Xue-Mei Li - J. Krieger - G. Moschidis

SEMINAR OF ANALYSIS

Friday, 6 Marsh 2026 - Room: MA A1 12 at 2.15 pm

Dr. Thomas Koerber

(University of Vienna - AT)

will present a seminar entitled:

« **The Penrose inequality in extrinsic geometry** »

Abstract:

"Complete embedded minimal surface with integrable Gauss curvature such as the plane and the catenoid are fundamental objects in geometry. In this talk, I will show that the asymptotic slope of such a surface is bounded from below in an optimal way by a systolic quantity called the neck-size. A consequence of this inequality is a new characterization of the catenoid purely in terms of its extrinsic properties. This result confirms a conjecture of G. Huisken and can be viewed as an analog in extrinsic geometry of the Riemannian Penrose inequality in mathematical relativity. The proof is based on an analysis of so-called minimal capillary surfaces, which are compact minimal surfaces that intersect a given complete embedded minimal surface with integrable Gauss curvature at a constant angle. This is joint work with M. Eichmair."

Lausanne, January 16, 2026
D.W-H/rb

Seminars are announced on the Mathematics Section website: