

Seminari Informal de Matemàtiques de Barcelona

Speaker: Joaquim Brugués.
University: Universitat Politècnica de Catalunya.

Date: Wednesday, 29th of January.
Schedule: 12:00, *coffee break (be eco friendly, bring your cup)*; 12:20, talk.
Place: S1 classroom, *Facultat de Matemàtiques i Informàtica* of UB.
Language: English.

Title: Morse theory: from dynamics to topology and back

Abstract: Morse theory relates the critical points of a smooth function defined on a manifold to the topology of the manifold, in a way that allows to construct a homology equivalent to the singular homology from classical algebraic topology. The main result from this construction are the Morse inequalities, that give a lower bound on the number of critical points of a smooth function that depends solely on the underlying topology. In this talk we will present the ideas behind this construction and the most remarkable results of the theory. It's recommended to have some previous knowledge of differential geometry and/or algebraic topology to understand this talk..

About us: The SIMBa is a young seminar organized by students of the Faculties of Mathematics and Computer Science of Barcelona. It is aimed at doctoral, master's degree students and, also, for those who are in the last grade courses. Our goal is that each one can make known the research which they are doing, as well as, to get new knowledge of other areas of mathematics than his own..

For more information, visit at www.ub.edu/simba/en/.

If you have any doubt or comment, do not hesitate to contact us by sending an email to seminari.simba@ub.edu.