

The logo for SIMBa, featuring the text "SIMBa" in a bold, black, serif font on a bright orange rectangular background.

**BGSMath**  
BARCELONA GRADUATE  
SCHOOL OF MATHEMATICS

# Seminari Informal de Matemàtiques de Barcelona

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**Speaker:** Clara Torres Latorre.

**University:** Universitat de Barcelona.

**Date:** Wednesday, May 13th, 2020.

**Schedule:** 12:00, *virtual coffee break*; 12:20, talk.

**Place:** Zoom (the link will be posted on our website).

**Language:** English.

**Title:** Elliptic PDE 1: Why do we study them?

**Abstract:** Elliptic PDE theory plays a central role in modern mathematical analysis, and it is connected with probability and geometric measure theory. Historically, elliptic PDE come from physical problems related to the heat equation, first studied by Fourier in 1822, and also from the Poisson equation, that appears in electromagnetism. In this first talk, we discuss both classical and modern applications, and we introduce concepts to state the main problem in the field: existence, uniqueness and regularity of solutions.

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**About us:** *SIMBa* is a mathematics seminar organized by graduate students in the Barcelona area. It is aimed towards graduate and last course undergraduate students. Our goals are divulging the knowledge from different branches of mathematics for those interested and promote networking between the attendants.

This seminar is backed by the Faculty of Mathematics and Computer Science at Universitat de Barcelona, Faculty of Mathematics and Statistics at Universitat Politècnica de Catalunya, the Department of Mathematics from Univesitat Autònoma de Barcelona, CRM, IMUB and BGSMath.

Fore more information, visit at [www.ub.edu/simba/en/](http://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@gmail.com](mailto:seminari.simba@gmail.com).