

The logo for SIMBa, consisting of the text "SIMBa" in a bold, black, serif font on a solid orange rectangular background.

# Seminari Informal de Matemàtiques de Barcelona

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**Speaker:** María Cumplido Cabello.

**University:** Universidad Complutense de Madrid.

**Date:** Wednesday, December 16th, 2020.

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

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

**Language:** Spanish.

**Title:** Strand diagrams and generalised braided Thompson's groups

**Abstract:** This is a joint work with Julio Aroca. There is a generalisation of Thompson's groups constructed from the Thompson's group  $V$  and Artin's braid group. The braided Thompson's group  $BV_2$  was independently introduced by Patrick Dehornoy and Matthew G. Brin in 2006. In this talk we will explain how to extend this concept to a much bigger family of groups by using infinite braids: Infinitely braided Thompson's groups  $BV_n(H)$ , where  $H$  is a subgroup of the braid group on  $n$  strands. We will prove that they are indeed groups by using braided diagrams and rewriting systems. We will also see that they are finitely generated if  $H$  is finitely generated and give an explicit set of generators for  $BV_n(H)$  and some other cases. Slides will be in English and the talk will be given in Spanish.

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**About us:** *SIMBa* is a youth 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 Universitat Autònoma de Barcelona, CRM, IMUB and BGSMath.

For 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).