# Seminari Informal
# de Matemàtiques de Barcelona

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| ***Speaker*:** | Marina Garrote López. |
| **University:** | Universitat Politècnica de Catalunya. |
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| **Date:** | Wednesday, 8th of May. |
| **Schedule:** | 12:00, *coffee break*; 12:20, talk. |
| **Place:** | B1 classroom, *Facultat de Matemàtiques* of UB. |
| **Language:** | English. |
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| **Title:** | Algebraic versus semi-algebraic conditions for phylogenetic varieties. |

**Abstract:** It is well known that there exists a close relationship between Phylogenetics and Algebraic Geometry. It is common to model evolution adopting a parametric statistical model which allows to define a joint probability distribution at the leaves of the trees. When these models are algebraic, one is able to deduce polynomial relationships between these probabilities, and the study of these polynomials and the geometry of the algebraic varieties that arise from them can be used to reconstruct phylogenetic trees. However not every point in this algebraic varieties has biological sense. In this talk we would like to discuss the importance of studying the subset of these varieties with biological sense and explore the extent to which restricting to these subsets can provide insight into existent methods of phylogenetic reconstruction.

**About us:** The SIMBa is a young seminar organized by the PhD students of the Faculties of Mathematics and Computers 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..

Fore 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***.