

# Raphaël Tinarrage

Born 09/06/1993

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## Education

- Since 2017 **PhD**, *Inria Saclay, Orsay, Thesis in Topological Data Analysis.*  
Advisors : Frédéric Chazal and Marc Glisse
- 2016–2017 **Master**, *ENS, Paris-Saclay University, Orsay, M2R mathematics for life sciences.*
- 2015–2016 **Master**, *Ecole normale supérieure, Cachan, M2 Preparation to the Agregation degree.*  
Accepted, rank 68<sup>th</sup>
- 2014–2015 **Master**, *Paris-Sud University, Orsay, M1 Fundamental and applied mathematics, Magistère de mathématiques 2<sup>nd</sup> year.*
- 2013–2014 **Licence**, *Paris-Sud University, Orsay, L3 Fundamental and applied mathematics, Magistère de mathématiques 1<sup>st</sup> year.*  
Licence degree
- 2011–2013 **CPGE (Preparatory classes)**, *Camille Pissaro High School, Pontoise, MPSI and MP.*

## Publications

- 02/2019 **Recovering the homology of immersed manifolds.**  
Soon submitted to SoCG 2020 conference
- 02/2019 **DTM-based filtrations**, <https://arxiv.org/abs/1811.04757>.  
Accepted in Symposium Abel 2018 proceedings and SoCG 2019 conference

## Talks and posters

- 10/2019 **Talk for DATASHAPE team seminar**, *Inria Saclay, Orsay.*  
Recovering the homology of immersed manifolds
- 04/2019 **Talk for Topo-Dyn team**, *LMO, Orsay.*  
DTM-filtrations
- 02/2019 **Talk for PhD students seminar**, *LAMFA, Amiens.*  
Introduction to persistent homology
- 12/2018 **Talk for PhD students seminar**, *IMJ-PRG, Jussieu, Paris.*  
Introduction to persistent homology
- 12/2018 **Talk for PhD students seminar**, *LMO, Orsay.*  
Introduction to persistent homology
- 11/2018 **Talk for DATASHAPE team seminar**, *Inria Saclay, Orsay.*  
DTM-filtrations
- 06/2018 **Poster presentation**, *ATMCS conference, IST-Austria, Klosterneuburg (Autriche).*  
DTM-filtrations

## Various scientific works

- 2014–2017 **Co-direction of In Vitro Artificial Intelligence**, *Centre de Recherche Interdisciplinaire, Paris.*  
Synthetic neurology club
- 2016 **Research work**, *for M2R.*  
Stochastic modelisation of aging, genetic evolution
- 2015 **Master Thesis**, *for magistère de mathématiques.*  
Dynamics on flat surfaces
- 2014 **Licence Dissertation**, *for magistère de mathématiques.*  
Introduction to differential geometry
- 2013 **Short Dissertation**, *for MP.*  
Classification of finite simple groups

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## Teaching

- Since 2017 **Statistical interpretation of data**, *UE M331, L3 MINT, Paris-Sud University, Orsay.*  
Assistant professor
- Since 2017 **Modelisation project**, *UE M326, L3 MINT, Paris-Sud University, Orsay.*  
Assistant professor
- 2017-2019 **Differential equations**, *UE M257, L2 BC, Paris-Sud University, Orsay.*  
Assistant professor

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## Programming skills

- Languages HTML, PHP, CSS, C Maths MATLAB, SAGE, GAP, LATEX, PYTHON
- System Windows, Mac, Linux (Debian)

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## Hobbies

- Science Maths and their applications to experimental science, philosophy of consciousness, some themes of sociology en epistemology
- Teaching Alternative teaching methods, visualization in space (in dimension 3 or 4)
- Arts Instruments with strings or mouthpiece, sewing, conception of perfume
- Sports Hiking, speleology, ballet