

# ETIENNE LASALLE

## Ph.D. Student in Mathematics

Univ. Paris-Saclay & Inria Saclay

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📅 August 21, 1994

🏠 elasalle.github.io

🔗 github.com/elasalle



## RESEARCH INTERESTS

Topological Data Analysis (TDA) has revealed that topological information allows for a better understanding of complex data. I try to extend tools from TDA to **graph data analysis**, using **implementable** and **statistically well-founded** methods.

**Key-Words :** Topological Data Analysis, Statistics, Graphs.

## PUBLICATIONS

### Preprint

E. Lasalle, Heat diffusion distance processes: a statistically founded method to analyze graph data sets, *arXiv:2109.13213*.

## EXPERIENCE

### Pre-Doctoral Year :

#### Statistical Tools for Neuro-Topology

📅 Oct 2018 - Jul 2019 📍 EPFL, Lausanne, Switzerland

- Probabilistic and statistical studies of topological features for random graph analysis, in the context of Neuro-science.

@ kathryn.hess@epfl.ch

#### Internship : TDA for Anomaly Detection

📅 Apr - Jul 2018 📍 INRIA-Saclay, Palaiseau, France

- Development of anomaly detection methods based on tools and features from TDA.

@ frederic.chazal@inria.fr

#### Internship : Bio-Informatics

📅 Apr - Jul 2017 📍 Simon Fraser Univ., Vancouver, Canada

- Study and development of unsupervised clustering algorithms combining several types of tuberculosis genomic data.

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@ leonid@sfu.ca

#### Internship : Numerical Hydrology

📅 Jan - Jun 2016 📍 ENS Paris-Saclay, Cachan, France

- Study and development of algorithms modelling water flow on a large scale surfaces using elevation grids.

@ moreljeanmichel@gmail.com

@ marc.lebrun.ik@gmail.com

## STUDIES AND CAREER

### Ph.D

📅 2019-on 📍 U. P-Saclay & Inria Saclay

- Statistical foundations of topological data analysis for graph structured data.
- Under co-supervision of F. Chazal et P. Massart.

### Graduated from ENS Paris-Saclay

📅 2019 📍 ENS Paris-Saclay, Cachan

### MSc in Probability et Statistics

📅 2018 📍 Univ. Paris-Sud, Orsay

## TECHNICAL SKILLS

### Informatics and Programming :

Python

R

Github

LaTeX

### Tools for Topology

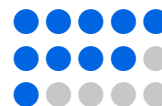
GUDHI (Python Library)

## LANGUAGES

French

English

German



## HOBBIES

Climbing

Hiking

Paragliding

Skiing

Music

Photography