Wojciech Reise

PhD in Applied Mathematics

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Education

09.2020-12.2023	**PhD student**, *DataShape, Inria Saclay*.
	Topological descriptors of curves, with applications to vehicle positioning, under the supervision of Frédéric Chazal and Bertrand Michel.
09.2017-07.2019	**Master in Computational Science and Engineering**, *EPF Lausanne*.
	Master project in topological data analysis for audio fingerprinting.
09.2014-06.2017	**BSc in Mathematics**, *EPF Lausanne*.
	Third year on exchange, at Ecole Normale Superieure, focus on algebra and topology.

Experience

11.2023-	**Machine Learning Engineer**, *Akur8*.
01.2020-07.2020	**Research intern**, *L2F*.
	Implementation of topological data analysis methods and showcasing their applications. Development of a no-code interface for classification model training.
07.2019-09.2019	**Research intern**, *Spotify*.
	Design and implementation of an audio identification algorithm based on topological data analysis.
07.2018-12.2018	**Data analysis intern**, *Dominice&Co*.
	Analysis of historical daily prices and volatilities, work on in-house server and trading infrastructure.
04.2018-03.2019	**Treasurer**, *Club Montagne (EPFL)*.
	Accounting, budget planning of subsidised outings and courses.
07.2016-09.2016	**Data analysis intern**, *Transport Lausannois*.
	Analysis of the quality (punctuality and capacity) of the services, forecasting the number of passengers.
09.2015-02.2018	**Member**, *ShARE Association (EPFL)*.
	Consulting-like projects for the EPFL Technology Transfer Office. Manager of a project for the ThinkEE startup 10-12.2017.

Publications

2023	**Topological signatures of periodic-like signals**, *with F.Chazal and B.Michel*, In revision.
2023	**Audio identification with topological fingerprints**, *with X.Fernández, M.Dominguez, H.A.Harrington and M.Beguerisse-Díaz*, In revision.
2022	**Topological phase estimation method for reparameterized periodic functions**, *with T.Bonis, F.Chazal and B.Michel*, Under review.
2020	**Giotto-tda: A Topological Data Analysis Toolkit for Machine Learning and Data Exploration**, *with G.Tauzin, U.Lupo, L.Tunstall, J.B.Pérez, M.Caorsi, A.Medina-Mardones, A.Dassati, K.Hess* , NeurIPS 2020 workshop Topological Data Analysis and beyond.

Teaching

09.2020-06.2023	**Assistant**, *Polytech Paris-Saclay*.
	Exercice sessions for a course in analysis for first-, second-year students of an engineering school.
02.2018-06.2018	**Assistant**, *EPFL*.
	Analysis II for the course of K.-D. Semmler.
09.2015-08.2016	**Private tutor**, *EliteIB*.
	Regular tuition, exam preparation, organising revision courses.

Languages

Polish: Native, **French**: C2 (DALF), **English**: C2 (CAE grade A), **Italian**: A2