



**POLITECNICO
DI TORINO**



Dipartimento di
Scienze Matematiche
G. L. Lagrange

ECCELLENZA 2018 • 2022

Tuesday the **11 December 2018** at 10:00

Politecnico di Torino, DISMA, Aula Buzano (third floor)

Ulderico FUGACCI

Post-doc Fellow at Institute of Geometry at Graz University of Technology

Topology-based Tools for Data Classification

Prof. Francesco Vaccarino introduces the seminar

Abstract

Recently, topological data analysis is gaining a more and more relevant role in the extraction of the core information from large and unorganised datasets. In particular, persistent homology provides a powerful tool enabling a stable data classification.

In this talk, Dr Fugacci will investigate the capability of persistent homology in being integrated with kernel methods in a machine learning framework, mainly focusing on the case of multivariate datasets. Moreover, he will discuss the possibility of developing new topological tools specifically designed for catching and visualising the global structure of complex networks.

Biography

Ulderico Fugacci is a postdoc fellow of the Institut für Geometrie group of the Graz University of Technology. His research activity is developed in strictly collaboration with Professor Michal Kerber. Ulderico received a Master Degree in Mathematics from the University of Genova (Italy) in July 2012. In May 2016, he received a PhD in Computer Science at the same university, under the supervision of Prof. Leila De Floriani and Prof. Maria Evelina Rossi. He has been a postdoc fellow at the Department of Computer Science of the University of Maryland (March 2016 - October 2016) and at the Visual Information Analysis group of the Kaiserslautern University of Technology (November 2016 - October 2017).

His interests are in various topics in Algebraic Topology, Computational Geometry and Commutative Algebra. Specifically, he focuses his studies on Topological Data Analysis.

Save the date for the next event: *December 18, 2018*

More info on www.polito.it/disma-excellence