



SLING Efficient algorithms for sustainable machine learning

Mon, April 11th, 2022, 3:00 p.m., DIBRIS Room 706, Via Dodecaneso 35, Genova.

Analysis & Learning

Some recent results on the use of group equivariant non-expansive operators for topological data analysis and geometric deep learning.

Abstract.

Group equivariant non-expansive operators (GENEOs) have been recently introduced as mathematical tools for approximating data observers, when data are represented by real-valued or vector-valued functions. The use of these operators is based on the assumption that the interpretation of data depends on the geometric properties of the observers. In this talk we will illustrate some recent results in the theory of GENEOs, showing how these operators could be used for topological data analysis and geometric deep learning.

Speaker

Patrizio Frosini

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Patrizio Frosini received the PhD degree in Mathematics from the University of Florence (Italy) in 1991. He is currently an associate professor of geometry at the Department of Mathematics of the University of Bologna. In the 90s he introduced the first concepts on which topological persistence and multiparameter topological persistence were subsequently built. He is mainly interested in the connections between Topological Data Analysis and Geometric Deep Learning.