

# Ilie Sarpe

PhD Student

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📄 [iliesarpe.github.io](https://iliesarpe.github.io)

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## ABOUT ME

I am a second year PhD student in Information Engineering under the supervision of Prof. Fabio Vandin. My research interests largely focus on the development of algorithms for the analysis of massive temporal networks. In particular I am currently developing data mining algorithms for collecting patterns (e.g., motifs) from large temporal networks, such algorithms need to be scalable and efficient since extracting such patterns may be unfeasible on large temporal networks with currently available techniques. I am thus focused especially on sampling-based algorithms with provable theoretical guarantees.

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## EDUCATION

**PhD Student**  
*Oct 2019 - Present*  
UNIVERSITY OF PADOVA, ITALY  
Department of Information Engineering

TOPIC: Efficient and Rigorous Techniques for the Analysis of Large Temporal Networks

ADVISOR: Prof. Fabio Vandin

**M.S. in Computer Engineering**  
*Oct 2017 - Sep 2019*  
UNIVERSITY OF PADOVA, ITALY  
Department of Information Engineering

THESIS TITLE: Mining Motifs in Temporal Networks

GRADE: 110/110 e lode (*summa cum laude*)

ADVISOR: Prof. Fabio Vandin

**B.S. in Computer Engineering**  
*Oct 2014 - Sep 2017*  
UNIVERSITY OF PADOVA, ITALY  
Department of Information Engineering

THESIS TITLE: Statistical Correlation between Alignment-free and Edit Distance Measures

GRADE: 104/110

ADVISOR: Prof. Matteo Comin

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## TEACHING ASSISTANT

2018 - Present

*Big Data Computing*, Department of Information Engineering, University of Padova

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## FELLOWSHIPS AND AWARDS

Oct 2019 - Sep 2022

PhD Fellowship from "Department of Information Engineering (DEI)", University of Padova, Italy

2017

Award for scientific degrees, award given to the best 500 students of scientific degrees, University of Padova, Italy

2017

"Mille e una lode", award for the top 5% students of the academic year 2016, University of Padova, Italy

2016

"Mille e una lode", award for the top 5% students of the academic year 2015, University of Padova, Italy

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## PUBLICATIONS

Ilie Sarpe and Fabio Vandin, *PRESTO: Simple and Scalable Sampling Techniques for the Rigorous Approximation of Temporal Motif Counts*, Accepted at the 2021 SIAM International Conference on Data Mining (SDM21).

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## OTHER INFORMATION

Conference Reviewer  
Programming Experience  
Languages

RECOMB 2020, KDD 2020, ICDM 2020, WWW 2021, ECML-PKDD 2021  
C++, C, Java, Python, MATLAB, SQL, NoSQL, Bash,  $\text{\LaTeX}$   
Native Italian and Romanian Speaker, B2 English