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Diego Santoro

January 03, 1995—Padova, Italy

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About

I am a third year Ph.D. candidate in Information Engineering at the Department of Information Engineering of the University of Padova. I am a member of VandinLab, led by my Ph.D. supervisor Prof. Fabio Vandin.

My research focuses on the development of novel and efficient Data Mining and Knowledge Discovery Algorithms with rigorous theoretical guarantees on their quality, leveraging on Statistical Learning Theory and Sampling Techniques. My research is often motivated by Molecular Biology Applications.

Education

2009-2014 **High school** in Computer Science, ITIS Severi, Padova (Italy), *100 (over 100)*.

2014-2017 **B.Sc.** in Computer Engineering, University of Padova, *110 (over 110) summa cum laude*.
Thesis: *Phylogeny Models and Applications to Cancer Evolution Reconstruction*.
Advisor: Prof. Fabio Vandin.

2017-2019 **M.Sc.** in Computer Engineering, University of Padova, *110 (over 110) summa cum laude*.
Thesis: *On the Use of the Rademacher Complexity in Mining Sequential Patterns*.
Advisor: Prof. Fabio Vandin.

2019-now **Ph.D. candidate** in Information Engineering, University of Padova.
Research topic: *Mining sequential data with statistical learning tools and applications to molecular biology* . Advisor: Prof. Fabio Vandin.

Academic Appointments

2018-2019 **Teaching Assistant**, *Discrete Mathematics and Probability*, B.S. in Computer Engineering, University of Padova.

2018-2021 **Teaching Assistant**, *Big Data Computing*, M.S. in Computer Engineering, University of Padova.

Publication

Journals:
Mining Sequential Patterns with VC-Dimension and Rademacher Complexity.
Diego Santoro, Andrea Tonon, Fabio Vandin. Algorithms 2020.

SPRISS: Approximating Frequent k-mers by Sampling Reads, and Applications.
Diego Santoro, Leonardo Pellegrina, Matteo Comin, Fabio Vandin. Bioinformatics 2022.

Conference Proceedings:
SPRISS: Approximating Frequent k-mers by Sampling Reads, and Applications.
Diego Santoro, Leonardo Pellegrina, Fabio Vandin. Accepted to the 25th International Conference on Research in Computational Molecular Biology (RECOMB 2021).

ONBRA: Rigorous Estimation of the Temporal Betweenness Centrality in Temporal Networks.
Diego Santoro, Ilie Sarpe. Accepted to the The Web Conference 2022 (TheWebConf2022).

Awards, Certifications, Fellowships and Scholarships

Nov 2016 **"Mille e una lode" Scholarship**.
Award given to the best 3% of students of Computer Engineering School at University of Padova.

Feb 2017 **Award for Scientific Degrees**.
Award given to the best 500 students of scientific degrees at University of Padova.

Gen 2018 **"Mille e una lode" Scholarship**.
Award given to the best 3% of students of Computer Engineering School at University of Padova.

May 2019 **Formative Tutoring Certification**.
Certification of tutoring skills, University of Padova.

Jul 2019 **"Budget MIUR - Departments of Excellence" Ph.D. Fellowship**.
Ph.D. Fellowship for 3-years Ph.D. Program in Information Engineering at University of Padova.

Aug 2020 **"Fondazione Luciano Iglesias" Scholarship**.
Award given to the 10 best M.Sc. graduates in Computer Engineering at the University of Padova in 2019.

Scientific Activities

Conference Reviewing: RECOMB 2020, KDD 2020, ICDM 2020, RECOMB 2021, ECML/PKDD 2021, ACM BCB 2021, TheWebConf 2022, RECOMB 2022.