**LORENZO DE STEFANI**

Curriculum vitae

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**CURRENT POSITION**

2016– Ph.D. Candidate, Brown University (USA), advised by Professor Eli Upfal (eli@cs.brown.edu).

**EDUCATION**

Ph.D. Information Engineering, University of Padova (Italy), 2016

Advisor: Professor Gianfranco Bilardi

M.Sc. (Laurea Specialistica) Computer Engineering, University of Padova (Italy), 2012

Advisor: Professor Gianfranco Bilardi

Final Grade: 110/110 cum laude

B.Sc. (Laurea Triennale) Computer Engineering, University of Padova (Italy), 2009

Advisor: Professor Giorgio Maria Di Nunzio

Final Grade: 110/110 cum laude

**PUBLICATIONS**

**Journal Articles**

2017 **L. De Stefani**, A. Epasto, M. Riondato, and E. Upfal. TRIÉST: Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size. *ACM Transactions on Knowledge Discovery from Data.*

2015 **L. De Stefani**, F. Silvestri. Exploiting non-constant safe memory in resilient algorithms and data structures**.** *Theoretical Computer Science*.

**Conference Proceedings**

2019 G. Bilardi and **L. De Stefani**. and E. Upfal. The I/O complexity of Toom-Cook Integer Multiplication. *To appear in the proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA).*

2017 **L. De Stefani**, [E. Terolli](https://dblp.org/pers/hd/t/Terolli:Erisa) and [E. Upfal](https://dblp.org/pers/hd/u/Upfal:Eli): Tiered sampling: An efficient method for approximate counting sparse motifs in massive graph streams. *Proceedings of 5th IEEE International Conference on Big Data (IEEE Big Data).*

2017 Z. Zhao, **L. De Stefani**, [E. Zgraggen](https://dblp.org/pers/hd/z/Zgraggen:Emanuel), [C. Binnig](https://dblp.org/pers/hd/b/Binnig:Carsten), [E. Upfal](https://dblp.org/pers/hd/u/Upfal:Eli) and [T. Kraska](https://dblp.org/pers/hd/k/Kraska:Tim): Controlling False Discoveries During Interactive Data Exploration. *Proceedings of the 38th ACM SIGMOD International Conference on Management of Data* (SIGMOD).

2017 Z. Zhao, [E. Zgraggen](https://dblp.org/pers/hd/z/Zgraggen:Emanuel), **L. De Stefani**, [C. Binnig](https://dblp.org/pers/hd/b/Binnig:Carsten), [E. Upfal](https://dblp.org/pers/hd/u/Upfal:Eli) and [T. Kraska](https://dblp.org/pers/hd/k/Kraska:Tim): Safe Visual Data Exploration**.** *Proceedings of the 38th ACM SIGMOD International Conference on Management of Data* (SIGMOD).

2017 C. Binning, **L. De Stefani**, [T. Kraska](https://dblp.org/pers/hd/k/Kraska:Tim), [E. Upfal](https://dblp.org/pers/hd/u/Upfal:Eli), [E. Zgraggen](https://dblp.org/pers/hd/z/Zgraggen:Emanuel) and [Z. Zhao](https://dblp.org/pers/hd/z/Zhao:Zheguang): Toward Sustainable Insights, or Why Polygamy is Bad for You**.** *Proceedings of the 7th biennial Conference on Innovative Data Systems Research (CIDR).*

2017G. Bilardi and **L. De Stefani***:* The I/O Complexity of Strassen's Matrix Multiplication with Recomputation***.*** *Proceedings of the 15th biennial Algorithms and Data Structures Symposium (WADS).*

2016 **L. De Stefani**, A. Epasto, M. Riondato, and E. Upfal: TRIÉST: Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size. *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD) **Best Student Paper Award (Research Track).**

2016 **L. De Stefani**, [A. Epasto](https://dblp.org/pers/hd/e/Epasto:Alessandro), [E. Upfal](https://dblp.org/pers/hd/u/Upfal:Eli) and [F. Vandin](https://dblp.org/pers/hd/v/Vandin:Fabio): Reconstructing Hidden Permutations Using the Average-Precision (AP) Correlation Statistic. *Proceedings of the 30th AAAI Conference on Artificial Intelligence (*[*AAAI).*](https://dblp.org/db/conf/aaai/aaai2016.html#StefaniEUV16)

2009 **L. De Stefani**, G. Di Nunzio and G. Vezzaro: A Visualization Tool of Probabilistic Models for Information Access Components. *Proceedings of the 13th European Conference on Research and Advanced Technology for Digital Libraries (ECDL).*

**Other publications**

2018 **Lorenzo De Stefani**, [Leonhard F. Spiegelberg](https://dblp.org/pers/hd/s/Spiegelberg:Leonhard_F=), [Tim Kraska](https://dblp.org/pers/hd/k/Kraska:Tim), [Eli Upfal](https://dblp.org/pers/hd/u/Upfal:Eli):  
VizRec: A framework for secure data exploration via visual representation. *ArXiv preprint (currently in submission),  [CoRRabs/1811.00602](https://dblp.org/db/journals/corr/corr1811.html" \l "abs-1811-00602).*

2016 **Lorenzo De Stefani**: On memory constrained computations. *Ph.D. Thesis, University of Padova (Italy).*

2012 **Lorenzo De Stefani**: On the space complexity of DAG computations. *Master Thesis, University of Padova (Italy).*

2009 **Lorenzo De Stefani**:Study on the classification of documents retrieved by information retrieval systems using linear regression analysis. *Bachelor Thesis written in Italian language, University of Padova (Italy).*

**AWARDS**

2016 Best Student Paper Award (Research Track) at ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD’16)

**GRANTS AND FELLOWSHIPS**

2018 Student Travel Award to the ACM-SIAM Symposium on Discrete Algorithms (SODA 19)

2016 Student Travel Grant to the 20th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD16)

2014 Brown University Graduate Fellowship

2013 University of Padova (Italy) Graduate Fellowship – First position in the open ranking.

**INVITED TALKS**

2017 *Reconstructing Hidden Permutations Using the Average-Precision (AP) Correlation Statistic.* Selected for Talk and Poster presentation at the 11th Annual Machine Learning Symposium being held on March 3, 2017 at the New York Academy of Science (NY).

2016 *Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size*, Department of Computer Science, Boston University, Boston (USA), September 30.

2015 *Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size*, Workshop on Scalable Approaches to High Performance and High Productivity Computing (ScalPerf), Bertinoro Center for Informatics, Bertinoro (Italy), September 26.

**ADDITIONAL RESEARCH EXPERIENCE**

2014 Brown University (Providence, RI, USA) – Visiting Student, February–March

**TEACHING EXPERIENCE**

**Brown University – Department of Computer Science**

*Probability for Computing and Data Analysis (CS1450)* – Co-Instructor (fall 2018)

*Probability and Computing (CS1550)* – Teaching Assistant (spring 2017, spring 2018)

The main instructor for these classed was Professor Eli Upfal ([eli@cs.brown.edu](mailto:eli@cs.brown.edu))

**University of Padova – Department of Information Engineering**

*Parallel Computing* – Teaching Assistant (a.a. 2013-2014, a.a. 2014-2015). Main instructor: Professor Gianfranco Bilardi (bilardi@dei.unipd.it).

**SERVICE TO THE SCIENTIFIC COMMUNITY**

**Organizing Committee:** Workshop on Scalable Approaches to High Performance and High Productivity Computing (ScalPerf), Bertinoro Center for Informatics – Web Co-chair - 2012 – present.

**Program Committee:** IEEE DSAA ‘18

**Journal Reviewing:** *ACM Transactions on Knowledge Discovery from Data* (TKDD)

**Conference Reviewing**: AAAI’17, AAAI - ICWSM’17, ACM - SIAM SODA’17, ACM - WSDM’17, AAAI’16, IEEE/ACM – ASONAM’16, ACM - SIGKDD’16, ACM - WebSci’16, IEEE/ACM – ASONAM’15, ACM - SIGKDD’15, ACM – ICS’13.

**ADDITIONAL TRAINING**

2016 Brown University Harriet W. Sheridan Center for Teaching and Learning

Teaching Certificate I: Reflective Teaching.

2016 Sao Paulo Summer School on Advanced Algorithms, Sao Paulo (Brazil).

2013 AACSE Ph.D. summer school on Algorithms and Architectures for Computational Science and Engineering, University of Padova: September 12-16, Padova (PA), Italy

2012 21st Summer School of Parallel Computing, CINECA: July 2-13, Casalecchio di Reno (BO), Italy

**REFERENCES**

**Eli Upfal**

Rush C. Hawkins Professor of Computer Science

Brown University

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**Tim Kraska**

Associate Professor of Electrical Engineering and Computer Science

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