

Francesco Silvestri

Curriculum vitae

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EDUCATION

- 04/2009 **Ph.D. in Computer Engineering**, *University of Padova*.
Supervisor: Andrea Pietracaprina; dissertation title: “Oblivious Computations on Memory and Network Hierarchies”.
- 09/2005 **M.S. in Computer Engineering** (“Laurea Quinquennale”), *University of Padova, summa cum laude*.
Supervisors: Andrea Pietracaprina and Geppino Pucci; thesis title “Simulation of D-BSP Parallel Programs on the Ideal Cache Hierarchy”.

PROFESSIONAL APPOINTMENTS

- Since 12/2016 **Assistant Professor**, *University of Padova*.
- 01/2015 - 11/2016 **Postdoctoral Researcher**, *IT University of Copenhagen*, ERC Project SSS (Scalable Similarity Search), Host: Rasmus Pagh.
- 10/2013 - 03/2014 **Part-time Lecturer and Visiting Scholar**, *IT University of Copenhagen*, host: Rasmus Pagh.
- 02/2009 - 12/2014 **Postdoctoral Researcher**, *Department of Information Engineering, University of Padova*, Host: Andrea Pietracaprina.
- 10/2007 - 04/2008 **Visiting Scholar**, *Department of Computer Science, University of Texas at Austin*, host: Vijaya Ramachandran.

TEACHING

Courses

- 2017 **Teacher of *Architettura degli Elaboratori (Computer Architecture)***, *University of Padova*.
- 2016 **Teacher of *Algorithm Engineering***, *IT University of Copenhagen*.
- 2016,2015 **Teacher and course manager of *Advanced Algorithms Seminars***, *IT University of Copenhagen*.
- 2015 **Teacher of *Algorithm Design Project***, *IT University of Copenhagen*.
- 2014, 2013 **Teaching assistant for *Data Mining***, *University of Padova*.
- 2013 **Teacher and course manager of *Algorithm Design II***, *IT University of Copenhagen*.
- 2010, 2008 **Teaching assistant for *Large Data Sets***, *University of Padova*.
- 2007 **Tutor for *Introduction to Probability***, *University of Padova*.
- 2006 **Teaching assistant for *Algorithms and Data Structures I***, *University of Padova*.

Since 2011 **Co-supervised 8 master students and 2 bachelor students.**

IT University of Copenhagen University (4 master students), University of Padova (4 master students, 2 bachelor students).

Pedagogical training

- 2016 **Workshop “Teaching computational competencies”**, *IT University of Copenhagen*.
- 2015 **Workshop “Use your voice”**, *IT University of Copenhagen*.
- 2015 **Workshop “Project and Thesis Supervision”**, *IT University of Copenhagen*.
- 2015 **Workshop “Flipped Learning”**, *IT University of Copenhagen*.
- 2014 **Course “University Teaching 101”**, *Johns Hopkins University*.
- 2014 **Seminar “Introduction to teaching at ITU”**, *IT University of Copenhagen*.
- 2013 **Seminar “Develop you professional skills as an examiner”**, *IT University of Copenhagen*.

AWARDS

- 04/2010 **Best Paper Award in the Algorithmic Track**, *24th IEEE International Parallel & Distributed Processing Symposium, USA*.
Award for the paper: R. A. Chowdhury, F. Silvestri, B. Blakeley, V. Ramachandran, “Oblivious Algorithms for Multicores and Networks of Processors”
- 04/2008 **IEEE TCPP Travel Award**, *Ph.D. Forum of the 22nd IEEE International Parallel & Distributed Processing Symposium, USA*.
- 03/2007 **IEEE TCPP Travel Award**, *21st IEEE International Parallel & Distributed Processing Symposium, USA*.

GRANTS AND PROJECTS

- 2015 **Co-Principal Investigator**, *Progetto Cineca “MapReduce Approaches for Efficient and Rigorous Mining of Massive Graphs”*.
- 2014-2017 **Task Leader of MIUR project AMANDA**, *Leader of the task “Algorithms for Emerging Computational Models”*.
- 2013, 2011 **Senior Research Grant**, *University of Padova*.
- 2013, 2011 **AWS in Education research grant**, *Amazon Web Services (AWS) in Education*.
- Since 2006 **Participation in the following projects**: ERC SSS (2014-2019), MIUR Projects AMANDA (2014-2017), ALGODEEP (2010-2012), MAINSTREAM (2007-2009), ALGONEXT (2004-2006); University of Padova Strategic Project STPD08JA32 (2010-2012); AURORA Project of Trento Province and INFN (2009-2011); European Project FET-IST FP6 AEOLUS (2005-2009).

PUBLICATIONS

See <http://www.dei.unipd.it/~silvestri/publications/>.

PROFESSIONAL EXPERIENCES

Main scientific collaborations

Lasso Excite (Danish software company), IConsulting (Italian consulting company), IT University of Copenhagen (R. Pagh), MIT (I. Razenshteyn), Korea Advanced Institute of Science and Technology (U Kang), University of Delaware (M. Tauffer), Brown University (E. Upfal), Universidade Federal do Rio Grande do Sul (P. Rech), Sapienza University of Rome (I. Finocchi), University of Texas at Austin (V. Ramachandran), Stony Brook University (R. A. Chowdhury).

Program and organizing committees

- Program The Web Conference (WWW, 2018), International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD, 2017-2016), IEEE Cluster (Cluster, 2017), Workshop on Algorithms and Systems for MapReduce and Beyond (BeyondMR, 2017), ACM Principles of Database Systems Symposium (PODS, 2017), International Joint Conference on Artificial Intelligence (IJCAI, 2016) IEEE International Parallel & Distributed Processing Symposium (IPDPS, 2016-2015, 2013) Annual European Symposium on Algorithms (ESA, Track B, 2015), ACM/IEEE Supercomputing Conference (SC, workshop selection 2015, poster selection 2014-2013), Workshop on Massive Data Algorithmics (MASSIVE, 2014), IEEE International Conference on Big Data (BigData, 2013).
- Organizing IEEE International Parallel & Distributed Processing Symposium (IPDPS, publicity chair, 2018-2017; publicity co-chair, 2016-2012), IEEE Cluster (Cluster, publicity co-chair, 2015), ACM International Conference on Supercomputing (ICS, submission co-chair, 2012), European Summer School in Information Retrieval (ESSIR, 2009).

Academic services

- 2015 **Organizer of Working Meetings**, *IT University of Copenhagen*.
- 2011-2012 **Representative of Postdoctoral Researchers**, *Department of Information Engineering, University of Padova*.
- 2008-2010 **Organizer and Co-Founder of the Ph.D. Student Group**, *Department of Information Engineering, University of Padova*.

Reviewer

- Journals JPDC (2017,2009), J. ACM (2016), IEEE TKDE (2016), ACM JEA (2015,2014), ACM TOPC (2014), ACM TALG (2013), IEEE TPDS (2013,2009), TOCS (2011).
- Conferences PODS (2018-2016) ACM-SIAM SODA (2017-2015,2012), ALENEX (2017,2015,2011), ESA (2016,2015,2013,2012), EURO-PAR (2016), SWAT (2016), ICDT (2016), ICDCN (2016), IJCAI (2016), SISAP (2016), ACM/IEEE SC (2014,2013), MASSIVE (2014), IEEE BigData (2013), ACM SPAA (2012,2011), ALGOSENSOR (2012), IEEE ICPADS (2011), SPIRE (2011), ACM ICS (2010), IEEE HiPC (2009), ACM SPAA (2008), FUN (2007), PACT (2007), SIROCCO (2007,2006).

Professional qualifications

- 2017 National Scientific Qualification as associate professor in Computer Engineering (ING-INF/05).
- 2016 Positive assessment for a position as Associate Professor at the IT University of Copenhagen.
- 2016 Positive assessment for a position as Assistant Professor at the University of Southern Denmark.
- 2006 Admitted to the Italian Engineering Association.

INVITED PRESENTATIONS

- 2017 *Dagstuhl Seminar “Theory and Applications of Hashing”*. Title: Locality Sensitive Hashing for curves.
- 2016 *Dagstuhl Seminar “Data Structures and Advanced Models of Computation on Big Data”*. Title: I/O-efficient Similarity Join in High Dimensions.
- 2014 *Workshop on Scalable Approaches to High Performance and High Productivity Computing (SCALPERF)*. Title: The Input/Output Complexity of Triangle Enumeration.
- 2014 *ENS de Lyon*. Title: The Input/Output Complexity of Triangle Enumeration.
- 2014 *University of Southern Denmark*. Title: The Input/Output Complexity of Triangle Enumeration.
- 2013 *IT University of Copenhagen*. Title: Space-Round Tradeoffs for MapReduce Computations.
- 2012 *Workshop on Scalable Approaches to High Performance and High Productivity Computing (SCALPERF)*. Title: Space-Round Tradeoffs for MapReduce Computations.
- 2011 *Workshop on Recent Advances in Data Structures (Chennai, India)*. Title: Resilient Data Structures.
- 2010 *Sapienza University of Rome*. Title: Obliviousness in the Parallel Settings.
- 2010 *Workshop on Scalable Approaches to High Performance and High Productivity Computing (SCALPERF)*. Title: Oblivious Algorithms for Multicores and Networks of Processors.
- 2007 *University of Texas at Austin*. Title: On The Limits Of Cache And Network-Oblivious Matrix Transposition.

TECHNICAL SKILLS

Data processing: Hadoop MapReduce, Matlab;

Programming: Java, C, C++, SQL, PHP, HTML, MPI Library;

Editing: T_EX, Open Office Suite, Microsoft Office Suite;

OS: Linux, Mac, Windows;

IDE: Eclipse.

LANGUAGES

Italian: mother tongue;

English: full professional proficiency;

Danish: beginner.

REFERENCES

References available upon request