

Dipartimento di Ingegneria dell'Impresa
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Education

JULY 14, 2005: **MSc in Mathematics** (*cum laude*)
Università degli Studi di Roma "Tor Vergata"
Advisor: Prof. Andrea Clementi

MARCH 23, 2009: **PhD in Computer Science**
Università degli Studi dell'Aquila
Thesis: *On the Speed of Information Spreading in Dynamic Networks*
Advisors: Prof. Andrea Clementi and Prof. Michele Flammini

Postdoc experiences

JUNE 2009 - SEPTEMBER 2012: Postdoc at *Dipartimento di Informatica "R. Capocelli"*
Università degli Studi di Salerno
Supervisor: Prof. Giuseppe Persiano

DECEMBER 2012 - NOVEMBER 2014: Postdoc at *Dipartimento di Informatica Sapienza* Università di Roma
Supervisor: Prof. Alessandro Panconesi

SINCE DECEMBER 2014: Postdoc at *Dipartimento di Ingegneria dell'Impresa "M. Lucertini"*
Università di Roma "Tor Vergata"
Supervisor: Prof. Andrea Clementi

Research interests

Random structures, dynamic networks, Markov chains, randomized algorithms, game theory.

Research projects

I have been involved in the following research projects:

NOVEMBER 2005 - JUNE 2009: IST FET FP6-015964 Integrated Project AEOLUS *Algorithmic Principles for Building Efficient Overlay Computers*. Coordinator: Prof. Christos Kaklamanis (University of Patras).

JUNE 2010 - SEPTEMBER 2012: Italian MIUR-PRIN Project COGENT *Computational and Game-theoretic aspects of uncoordinated networks*. Coordinator: Prof. Michele Flammini (Università dell'Aquila).

SINCE JUNE 2013: EU FET FP7-317532 Project MULTIPLEX *Foundational Research on MULTI-level comPLEX networks and systems*. Local Coordinator: Prof. Stefano Leonardi (Sapienza Università di Roma)

SINCE DECEMBER 2013: Italian MIUR-PRIN 2010N5K7EB Project ARS-TECHNOMEDIA *Algorithms for Techno-Mediated Social Networks*. Coordinator: Prof. Alessandro Panconesi (Sapienza Università di Roma)

International collaborations

MAY 2009: Visiting researcher at the *Ben-Gurion University of the Negev* (Israel). Hosted by: Prof. Chen Avin and Prof. Zvi Lotker

NOVEMBER 2012: Visiting researcher at CNRS - LIAFA *Laboratoire d'Informatique Algorithmique: Fondements et Applications* (France). Hosted by: Prof. Pierre Fraigniaud

Awards

MAY 2009: Winner of the *Best poster award* at TCPP PhD Forum 2009 IPDPS.

Teaching activity

OCTOBER 2005 - MAY 2009: Teaching assistant at Università di Roma "Tor Vergata" for courses on *Algorithms* (undergraduate level) and *Randomized Algorithms* (graduate level)

OCTOBER 2009 - JANUARY 2010: A series of seminars at Università di Salerno on *Randomized Algorithms and Markov Chains*

MARCH 2010 - MAY 2010: Teaching assistant at Università di Salerno for a course on *Algorithmic Game Theory*

OCTOBER 2013 - MAY 2014: Teaching assistant at Sapienza Università di Roma, for courses on *Theory of Algorithms*

OCTOBER 2014 - JANUARY 2015: Teaching assistant at Sapienza Università di Roma, for a course on *Principles of Programming*

Reviewing activity

I have been reviewer for several journals, among them:

Algorithmica, ACM Journal of Experimental Algorithmics, IEEE/ACM Transaction on Networking, IEEE Transactions on Communications, IEEE Transaction on Parallel and Distributed Systems, Information Processing Letters, Physica A, Theoretical Computer Science, Theory of Computing Systems.

I was reviewer for several conferences and workshops, among them:

MSWiM'07, MSWiM'08, SIROCCO'08, IPDPS'09, ICALP'10, WINE'11, SAGT'11, ICALP'11, PODC'12, FOMC'12, MFCS'12, SAGT'12, SPAA'13, WADS'13, ICALP'14, ICDCN'15, SODA'15.

International events

I participated as a speaker in several international events, among them:

AUGUST 26 - 31, 2007: *Thirty-Second International Symposium on Mathematical Foundations of Computer Science (MFCS'07)* (Český Krumlov, Czech Republic)

AUGUST 18 - 21, 2008: *Twenty-Seventh Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'08)* (Toronto, Canada)

NOVEMBER 3 - 7, 2008: *Random Graals 2008: The 4th Bertinoro Workshop on Randomized Algorithms and Graphs* (Bertinoro, Italy)

JULY 5 - 12, 2009: *Thirty-Sixth International Colloquium on Automata, Languages and Programming (ICALP'09)* (Rodi, Greece)

AUGUST 19-24, 2012: *Twenty-First International Symposium on Mathematical Programming (ISMP'12)* (Berlin, Germany)

OCTOBER 14-19, 2012: *SINS: Synergic Investigations in Network Science* (Bertinoro, Italy)

JANUARY 20-25, 2013: *Epidemic Algorithms and Processes: From Theory to Applications* (Schloss Dagstuhl, Germany)

SEPTEMBER 02-04, 2013: *Twenty-First European Symposium on Algorithms (ESA'13)* (Sophia Antipolis, France)

JUNE 23 - 25, 2014: *Twenty-Sixth ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'14)* (Prague, Czech Republic)

Publications

Journals

- [1] Andrea Clementi, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri
Broadcasting in Dynamic Radio Networks
Journal of Computer and System Sciences, 75(4):213-230, 2009.
- [2] Andrea Clementi, Claudio Macci, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri
Flooding Time of edge-Markovian Evolving Graphs
SIAM Journal on Discrete Mathematics, 24(4):1694-1712, 2010.
- [3] Andrea Clementi, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri
Information Spreading in Stationary Markovian Evolving Graphs
IEEE Transactions on Parallel and Distributed Systems, 22(9):1425-1432, 2011.
- [4] Andrea Clementi, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri
Optimal gossiping in geometric radio networks in the presence of dynamical faults
Networks, 59(3):289-298, 2012.
- [5] Chen Avin, Zvi Lotker, Francesco Pasquale, and Yvonne-Anne Pignolet
A note on uniform power connectivity in the physical signal to interference plus noise (SINR) model
Theoretical Computer Science, 453:2-13, 2012.
- [6] Andrea Clementi, Francesco Pasquale, and Riccardo Silvestri
Opportunistic MANETs: Mobility Can Make Up for Low Transmission Power
IEEE/ACM Transactions on Networking, 21(2):610-620, 2013.
- [7] Vincenzo Auletta, Diodato Ferraioli, Francesco Pasquale, and Giuseppe Persiano
Mixing Time and Stationary Expected Social Welfare of Logit Dynamics
Theory of Computing Systems, 53(1):3-40, 2013.
- [8] Luca Becchetti, Andrea Clementi, Francesco Pasquale, Giovanni Resta, Paolo Santi, and Riccardo Silvestri
Flooding Time in Opportunistic Networks under Power Law and Exponential Inter-Contact Times
IEEE Transactions on Parallel and Distributed Systems, 25(9):2297-2306, 2014.
- [9] Vincenzo Auletta, Diodato Ferraioli, Francesco Pasquale, Paolo Penna, and Giuseppe Persiano
Logit Dynamics with Concurrent Updates for Local Interaction Potential Games
Algorithmica, (to appear).

Conference Proceedings

- [10] Andrea Clementi, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri.
Communication in Dynamic Radio Networks
In *Proceedings of the 26th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'07)*, pp. 205-214. ACM Press, 2007.

- [11] Andrea Clementi, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri
Optimal Gossiping in Geometric Radio Networks in Presence of Dynamical Faults
In *Proceedings of the 32nd International Symposium on Mathematical Foundations of Computer Science (MFCS'07)*, LNCS 4708, pp. 430-441, 2007.
- [12] Andrea Clementi, Claudio Macci, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri
Flooding Time in edge-Markovian Dynamic Graphs
In *Proceedings of the 27th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'08)*, pp. 213-222. ACM Press, 2008.
- [13] Andrea Clementi, Angelo Monti, Francesco Pasquale, and Riccardo Silvestri
Information Spreading in Stationary Markovian Evolving Graphs
In *Proceedings of the 23rd IEEE International Parallel and Distributed Processing Symposium (IPDPS'09)*, pp. 1-12. IEEE, 2009.
- [14] Andrea Clementi, Francesco Pasquale, and Riccardo Silvestri
MANETS: High mobility can make up for low transmission power
In *Proceedings of the 36th International Colloquium on Automata, Languages and Programming (ICALP'09)*, LNCS 5556, pp. 387-398. Springer, 2009.
- [15] Vincenzo Auletta, Diodato Ferraioli, Francesco Pasquale, and Giuseppe Persiano
Mixing Time and Stationary Expected Social Welfare of Logit Dynamics
In *Proceedings of the 3rd International Symposium on Algorithmic Game Theory (SAGT'10)*, LNCS 6386, pp. 54-65. Springer-Verlag, 2010.
- [16] Vincenzo Auletta, Diodato Ferraioli, Paolo Penna, Francesco Pasquale, and Giuseppe Persiano
Convergence to Equilibrium of Logit Dynamics for Strategic Games
In *Proceedings of the 23rd ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'11)*, pp. 197-206. ACM Press, 2011.
- [17] Vincenzo Auletta, Diodato Ferraioli, Francesco Pasquale, and Giuseppe Persiano
Metastability of Logit Dynamics for Coordination Games
In *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA'12)*, pp. 1006-1024. SIAM, 2012.
- [18] Vincenzo Auletta, Diodato Ferraioli, Paolo Penna, Francesco Pasquale, and Giuseppe Persiano
Logit Dynamics with Concurrent Updates for Local Interaction Games
In *Proceedings of the 21st European Symposium on Algorithms (ESA'13)*, LNCS 8125, pp. 73-84. Springer-Verlag, 2013.
- [19] Andrea Clementi, Pierluigi Crescenzi, Carola Doerr, Pierre Fraigniaud, Marco Isopi, Alessandro Panconesi, Francesco Pasquale, and Riccardo Silvestri
Rumor Spreading in Random Evolving Graphs
In *Proceedings of the 21st European Symposium on Algorithms (ESA'13)*, LNCS 8125, pp. 325-336. Springer-Verlag, 2013.
- [20] Luca Becchetti, Andrea Clementi, Emanuele Natale, Francesco Pasquale, Riccardo Silvestri, and Luca Trevisan
Simple Dynamics for Plurality Consensus
In *Proceedings of the 26th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'14)*, pp. 247-256. ACM Press, 2014.
- [21] Luca Becchetti, Andrea Clementi, Emanuele Natale, Francesco Pasquale, and Riccardo Silvestri
Plurality Consensus in the Gossip Model
In *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA'15)*, pp. 371-390. SIAM, 2015.

Workshop Proceedings

- [22] Chen Avin, Zvi Lotker, Francesco Pasquale, and Yvonne-Anne Pignolet
A Note on Uniform Power Connectivity in the SINR Model
In *Proceedings of the 5th International Workshop on Algorithmic Aspects of Wireless Sensor Networks (Algosensors'09)*, LNCS 5804, pp. 116-127. Springer, 2009.

Book Chapter

- [23] Andrea Clementi and Francesco Pasquale
Information Spreading in Dynamic Networks: An Analytical Approach
In *Theoretical Aspects of Distributed Computing in Sensor Networks*
EATCS Monographs in Theoretical Computer Science (ISBN: 978-3-642-14848-4).

Roma, 10/03/2015

