

# Francesco Pasquale

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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 - Sep 2012 Postdoc at *Dipartimento di Informatica "R. Capocelli"*  
Università degli Studi di Salerno  
Supervisor: Prof. Giuseppe Persiano
- Dec 2012 - Nov 2014 Postdoc at *Dipartimento di Informatica Sapienza* Università di Roma  
Supervisor: Prof. Alessandro Panconesi
- Dec 2014 - Nov 2015 Postdoc at *Dipartimento di Ingegneria dell'Impresa "M. Lucertini"*  
Università di Roma "Tor Vergata"  
Supervisor: Prof. Andrea Clementi
- Since March 2016 Postdoc at *Dipartimento di Ingegneria Informatica, Automatica e Gestionale "A. Ruberti"*  
Sapienza Università di Roma  
Supervisor: Prof. Luca Becchetti

## Research interests

- Random structures
- Dynamic networks
- Markov chains
- Randomized algorithms
- Game theory

## Research projects

I have been involved in the following research projects:

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

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## International collaborations

- May 2009 Visiting researcher at the *Ben-Gurion University of the Negev* (Israel)  
Hosted by: Prof. Chen Avin and Prof. Zvi Lotker
- Nov 2012 Visiting researcher at CNRS - LIAFA *Laboratoire d'Informatique Algorithmique: Fondements et Applications* (France)  
Hosted by: Prof. Pierre Fraigniaud

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## Awards

- May 2009 Winner of the *Best poster award* at TCPP PhD Forum 2009 IPDPS

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## Teaching activity

- Oct 2005 - May 2009 Teaching assistant at Università di Roma "Tor Vergata" for courses on *Algorithms* (undergraduate level) and *Randomized Algorithms* (graduate level)
- Oct 2009 - Jan 2010 A series of seminars at Università di Salerno on *Randomized Algorithms and Markov Chains*
- Mar 2010 - May 2010 Teaching assistant at Università di Salerno for a course on *Algorithmic Game Theory*
- Oct 2013 - May 2014 Teaching assistant at Sapienza Università di Roma, for courses on *Theory of Algorithms*
- Oct 2014 - Jan 2015 Teaching assistant at Sapienza Università di Roma, for a course on *Principles of Programming*
- Mar 2015 - Jun 2015 Teaching assistant at Università di Roma "Tor Vergata", for a course on *Algorithms*
- Oct 2015 - Jan 2016 Teaching assistant at Sapienza Università di Roma, for a course on *Principles of Programming*

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## Reviewing activity

Journals 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

Conferences 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,, SODA'15, ICALP'15, STOC'16

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## International events

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

- Aug 26 - 31, 2007 *Thirty-Second International Symposium on Mathematical Foundations of Computer Science (MFCS'07)* (Český Krumlov, Czech Republic)
- Aug 18 - 21, 2008 *Twenty-Seventh Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'08)* (Toronto, Canada)
- Nov 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)
- Aug 19-24, 2012 *Twenty-First International Symposium on Mathematical Programming (ISMP'12)* (Berlin, Germany)
- Oct 14-19, 2012 *SINS: Synergic Investigations in Network Science* (Bertinoro, Italy)
- Jan 20-25, 2013 *Epidemic Algorithms and Processes: From Theory to Applications* (Schloss Dagstuhl, Germany)
- Sep 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)

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## Publications

### Journals

- [1] A. Clementi, A. Monti, F. Pasquale, and R. Silvestri. "Broadcasting in Dynamic Radio Networks". In: *Journal of Computer and System Sciences* 75.4 (2009), pp. 213–230.
- [2] A. Clementi, C. Macci, A. Monti, F. Pasquale, and R. Silvestri. "Flooding Time of edge-Markovian Evolving Graphs". In: *SIAM Journal on Discrete Mathematics* 24.4 (2010), pp. 1694–1712.

- [3] A. Clementi, A. Monti, F. Pasquale, and R. Silvestri. “Information Spreading in Stationary Markovian Evolving Graphs”. In: *IEEE Transactions on Parallel and Distributed Systems* 22.9 (2011), pp. 1425–1432.
- [4] A. Clementi, A. Monti, F. Pasquale, and R. Silvestri. “Optimal gossiping in geometric radio networks in the presence of dynamical faults”. In: *Networks* 59.3 (2012), pp. 289–298.
- [5] C. Avin, Z. Lotker, F. Pasquale, and Y.-A. Pigolet. “A note on uniform power connectivity in the physical signal to interference plus noise (SINR) model”. In: *Theoretical Computer Science* 453 (2012), pp. 2–13.
- [6] A. Clementi, F. Pasquale, and R. Silvestri. “Opportunistic MANETs: Mobility Can Make Up for Low Transmission Power”. In: *IEEE/ACM Transactions on Networking* 21.2 (2013), pp. 610–620.
- [7] V. Auletta, D. Ferraioli, F. Pasquale, and G. Persiano. “Mixing Time and Stationary Expected Social Welfare of Logit Dynamics”. In: *Theory of Computing Systems* 53.1 (2013), pp. 3–40.
- [8] L. Becchetti, A. Clementi, F. Pasquale, G. Resta, P. Santi, and R. Silvestri. “Flooding Time in Opportunistic Networks under Power Law and Exponential Inter-Contact Times”. In: *IEEE Transactions on Parallel and Distributed Systems* 25.9 (2014), pp. 2297–2306.
- [9] V. Auletta, D. Ferraioli, F. Pasquale, P. Penna, and G. Persiano. “Logit Dynamics with Concurrent Updates for Local Interaction Potential Games”. In: *Algorithmica* 73.3 (2015), pp. 511–546.
- [10] A. Clementi, P. Crescenzi, C. Doerr, P. Fraigniaud, F. Pasquale, and R. Silvestri. “Rumor Spreading in Random Evolving Graphs”. In: *Random Structures and Algorithms* 48.2 (2016), pp. 290–312.

#### Conference Proceedings

- [11] A. Clementi, A. Monti, F. Pasquale, and R. Silvestri. “Communication in Dynamic Radio Networks”. In: *Proceedings of the 26th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC’07)*. ACM, 2007, pp. 205–214.
- [12] A. Clementi, A. Monti, F. Pasquale, and R. 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)*. Vol. 4708. LNCS. Springer, 2007, pp. 430–441.
- [13] A. Clementi, C. Macci, A. Monti, F. Pasquale, and R. 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)*. ACM, 2008, pp. 213–222.

- [14] A. Clementi, A. Monti, F. Pasquale, and R. Silvestri. “Information Spreading in Stationary Markovian Evolving Graphs”. In: *Proceedings of the 23rd IEEE International Parallel and Distributed Processing Symposium (IPDPS'09)*. IEEE, 2009, pp. 1–12.
- [15] A. Clementi, F. Pasquale, and R. 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)*. Vol. 5556. LNCS. Springer, 2009, pp. 387–398.
- [16] C. Avin, Z. Lotker, F. Pasquale, and Y.-A. 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)*. Vol. 5804. LNCS. Springer, 2009, pp. 116–127.
- [17] V. Auletta, D. Ferraioli, F. Pasquale, and G. Persiano. “Mixing Time and Stationary Expected Social Welfare of Logit Dynamics”. In: *Proceedings of the 3rd International Symposium on Algorithmic Game Theory (SAGT'10)*. Vol. 6386. LNCS. Springer, 2010, pp. 54–65.
- [18] V. Auletta, D. Ferraioli, F. Pasquale, P. Penna, and G. 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)*. ACM, 2011, pp. 197–206.
- [19] V. Auletta, D. Ferraioli, F. Pasquale, and G. Persiano. “Metastability of Logit Dynamics for Coordination Games”. In: *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA'12)*. SIAM, 2012, pp. 1006–1024.
- [20] A. Clementi, P. Crescenzi, C. Doerr, P. Fraigniaud, M. Isopi, A. Panconesi, F. Pasquale, and R. Silvestri. “Rumor Spreading in Random Evolving Graphs”. In: *Proceedings of the 21st European Symposium on Algorithms (ESA'13)*. Vol. 8125. LNCS. Springer, 2013, pp. 325–336.
- [21] V. Auletta, D. Ferraioli, F. Pasquale, P. Penna, and G. Persiano. “Logit Dynamics with Concurrent Updates for Local Interaction Games”. In: *Proceedings of the 21st European Symposium on Algorithms (ESA'13)*. Vol. 8125. LNCS. Springer, 2013, pp. 73–84.
- [22] L. Becchetti, A. Clementi, E. Natale, F. Pasquale, R. Silvestri, and L. Trevisan. “Simple Dynamics for Plurality Consensus”. In: *Proceedings of the 26th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'14)*. ACM, 2014, pp. 247–256.
- [23] L. Becchetti, A. Clementi, E. Natale, F. Pasquale, and R. Silvestri. “Plurality Consensus in the Gossip Model”. In: *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA'15)*. SIAM, 2015, pp. 371–390.

- [24] L. Becchetti, A. Clementi, E. Natale, F. Pasquale, and G. Posta. “Self-Stabilizing Repeated Balls-into-Bins”. In: *Proceedings of the 27th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'15)*. ACM, 2015, pp. 332–339.
- [25] L. Becchetti, A. Clementi, E. Natale, F. Pasquale, and L. Trevisan. “Stabilizing Consensus with Many Opinions”. In: *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA'16)*. SIAM, 2016, pp. 620–635.

#### Book Chapters

- [26] A. Clementi and F. Pasquale. “Information Spreading in Dynamic Networks: An Analytical Approach”. In: *Theoretical Aspects of Distributed Computing in Sensor Networks*. Ed. by S. Nikolettseas and J. D. Rolim. EATCS Monographs in Theoretical Computer Science. Springer, 2011, pp. 591–619.

Ai sensi dell'art. 13 del D.Lgs.196/2003 i dati personali forniti con la presente dichiarazione potranno essere trattati per gli adempimenti connessi all'espletamento delle procedure amministrative relative.

Roma, 11/03/2016