

Chiara Petrioli, Biographical Sketch

• Professional preparation.

Ph.D. in Computer Engineering, Università degli Studi di Roma “La Sapienza,” Italy, May 1998.

B.S. (summa cum laude) in Computer Science, Università degli Studi di Roma “La Sapienza,” Italy, November 1993.

• Appointments.

March 2014–Present: Full Professor, Università degli Studi di Roma “La Sapienza,” Roma, Italy.

Director, SENSES (SEnsor Networks and Embedded Systems) Lab.

Director, Cyber Physical Systems Lab, Center for Cyber Intelligence and Information Security.

“La Sapienza” representative within the ARTEMIS Industry Association, the European association for R&D actors in Embedded Systems.

Member of La Sapienza spinoff committee.

Founding partner of WSENSE S.r.l.

November 2006–February 2014: Associate Professor, Università degli Studi di Roma “La Sapienza,” Roma, Italy.

March 2001–October 2006: Assistant Professor of Computer Science, Università degli Studi di Roma “La Sapienza,” Roma, Italy.

May 1998–December 2000: Post-doc at the Telecommunication Engineering Department, Politecnico di Milano, Italy. Telecom/CSELT consultant contributing on proposals for the standardization bodies ETSI/BRAN and ETSI/SMG2.

• Selected major achievements.

1. General chair of ACM SenSys 2013 (ACM Conference on Embedded Networked Sensor Systems). Member of ACM SenSys steering committee. ACM SenSys is ranked within the top 2% of the computer science conferences according to Microsoft Academic Search.
2. Member of the steering committee and of the editorial board of IEEE Transactions on Mobile Computing (2010–2013), the reference publication for the mobile networking and computing community.
3. Program co-chair of ACM MobiCom 2006 (The Annual International ACM Conference on Mobile Computing and Networking). Estimated impact among the publications in computer science: top 0,2% according to Microsoft Academic Search.
4. PI or co-PI of twenty European Community and Italian Government sponsored research projects, for a total of over E4,000,000 (personal share), in the last ten years.

• Synergistic activities.

1. *Service to the scientific community.*
 - (a) Steering committees: Member of the steering committee of ACM SenSys (2006–Present); member of the steering committee of IEEE SECON (2014–Present); past member of the steering committee of IEEE Transactions on Mobile Computing (2010–2013); Mobicitous steering committee member (2004–Present).
 - (b) Editorial board memberships: ACM/Springer Wireless Networks journal (2002–Present). Previous member of several editorial boards: IEEE Transactions on Mobile Computing (2007–2013), IEEE Transactions on Vehicular Technology (2005–2007), Elsevier Ad Hoc Networks Journal (2002–2011), Wiley Wireless Communications & Mobile Computing (WCMC) Journal (2002–2011).
 - (c) Key positions in conference organizing committee: Program co-chair of IEEE INFOCOM 2016, San Francisco, USA; General Chair of WUWNET 2014, Rome, Italy; Workshop co-chair of ACM MobiCom 2014, Maui, USA; Program co-chair of WinMee 2014, Hammamet, Tunisia; General chair of ACM SenSys 2013, Rome, Italy; Area chair of IEEE INFOCOM 2013, IEEE INFOCOM 2014 and IEEE INFOCOM 2015; Panel chair of IEEE MASS 2012, Las Vegas, USA; Program co-chair of IEEE SECON 2009, Roma, Italy; Program co-chair of ACM HealthNet 2007; Program co-chair of the ACM International Conference on Mobile Computing and Networking, MobiCom 2006; Program co-chair of Mobicitous 2004; General co-chair of HealthNet 2008; General co-chair of Mobicitous 2005.

- (d) Executive committees: ACM SIGMOBILE executive committee member (2005-2009).
- (e) Organization and participation to panels: Organizer of the ACM MobiCom 2008 panel on Cross-Domain Research: The Future of Mobile Computing and Networks; Member of IEEE PIMRC 2005, 2006 and 2010 panels on “Applications of Wireless Sensor Networks”, “From sensor networks to smart dust” and “Large Scale Deployment of Wireless Sensor Networks: Challenges and opportunities”.
- (f) Member of the TPC of over eighty conferences such as: IEEE Infocom, IEEE ICDCS, IEEE IPDPS, IEEE Percom, IEEE MASS, IEEE WCNC, IEEE Globecom, IEEE SECON, IEEE PIMRC, IEEE ICC, IEEE DCOSS, ACM MobiCom, ACM MobiHoc, ACM WUWNET, IEEE OCEAN.
- (g) Senior member of the IEEE, and its communication society, member of the ACM.

2. *Services to the Department.*

- (a) Member of La Sapienza spinoff committee (in charge of selecting which spinoffs to sponsor at the university level, and of the spinoff ex post evaluation);
- (b) Member of La Sapienza Senate (Senato Accademico) (2012-2013); Member of the Senate (Consiglio Accademico) of La Sapienza “Ateneo Federato delle Scienze e delle Tecnologie (AST).” AST combines several colleges in the field of science and technology including the College of Science and College of Engineering (2006); Member of La Sapienza Senato Accademico Integrato (2002–2006);
- (c) Member of the committee in charge of designing the procedures for the quantitative evaluation of the quality of the scientific activities (Nucleo di Valutazione di Facoltà) for the College of Information and Communication Technology and Statistics (2011–2013) and for the College of Science (2007–2010);
- (d) Member of the Computer Science department fundraising committee (2003–2006 and 2009–Present);
- (e) Member of the national Ph.D. granting committee (Commissione finale di dottorato), University of Padova, 2008. This committee was in charge of evaluating the Ph.D. thesis of the candidates in the fields of control engineering, operative research and telecommunications engineering;
- (f) Member of La Sapienza Computer Science Department master program committee in charge of designing the Computer Science department second level degree teaching offer (2002–2004);
- (g) Member of the Computer Science Ph.D. program entering examination committee (2002 and 2013).

• **Teaching and advising.** Professor Petrioli has taught two dozens of undergraduate and graduate classes (Wireless Systems, Foundations of Programming, Advanced Topics in Networking, Programming Languages I, Computer Networks I, Design and Optimization of Wireless Systems). She has been the Master Thesis advisor of over twenty students and the advisor of fourteen Ph.D. students (eight graduated already and six in progress).

Among my current PhD students Dora Spenza is the recipient of the Google Europe Doctorate Fellowship in Wireless Networking and Ariona Shashaj is recipient of an IBM master thesis award.

• **Awards.**

1. Best demo award: The demo “Time Synchronization and Localization for Underwater Acoustic Sensor Networks with the SUNSET Framework.”, co-authored by C. Petrioli, R. Petroccia, D. Spaccini, received the best demo award at ACM WINTECH 2013.
2. Best student paper award: The paper “Energy-harvesting WSNs for structural health monitoring of underground train tunnels”, co-authored by A. Cammarano, D. Spenza, C. Petrioli was recipient of the best student poster award at IEEE INFOCOM 2013.
3. Winner of a Fulbright scholarship (1995).

• **Funded research and project review activity.** PI and co-PI of 20 European Community and Italian Government sponsored projects, for a total of over E4,000,000 (personal share). Projects include: IP FP7 SUNRISE (Sensing, monitoring and actuating on the underwater world through a federated research infrastructure extending the future Internet, 2013–2016), as coordinator at the European level; STREP FP7 TROPIC (Distributed computing, storage and radio resource allocation over cooperative femtocells, 2012-2015); STREP FP7 GENESI (GENESI: Green sEnSor

NEtworks for Structural minItoring, 2010–2013), as coordinator at the European level; STREP FP7 CLAM (CoLIAborative eMbedded networks for submarine surveillance, 2010–2013); Artemis CHIRON (Cyclic and Person-centric Health Management: Integrated Approach for Home, Mobile and Clinical Environments, 2010–2013); SENSELAB (Testbed development of sensor networks for environmental monitoring, 2010); ARTEMIS eDiana (Embedded Systems for Energy Efficient Buildings, 2009–2011); ARTEMIS SOFIA (Smart Objects for Intelligent Applications, 2009–2011); STREP IST SENDORA (Sensor Network for Dynamic and Opportunistic Radio Access, 2008–2010); IP IST 215923 SENSEI (Integrating the Physical with the Digital World of the Network of the Future, 2008–2010); IP IST E-Sense (Capturing Ambient Intelligence for Mobile Communications through Wireless Sensor Networks, 2006–2007); International FIRB (Integration of fundamental computer science theory and experimentation on wireless and mobile communications, 2006–2008); CA Embedded WiSeNts (Cooperating Embedded Systems for Exploitation and Control featuring Wireless Sensor Networks, 2004–2006); (Secure, Internet-able Mobile Platforms Leading Citizens Toward Simplicity, 2004–2005); ITEA POLLENS (Platform for Open, Light, Legible, & Efficient Network Services, 2001–2003); STREP IST EYES (Energy Efficient Sensor networks, 2002–2005); FIRB VICOM (Virtual Immersive COMMunications, 2002–2005).

Review panelist for research projects funded by the European Commission in the field of ocean science (BlueGrowth programme), network embedded systems and cyber physical systems, mobile computing, next generation Internet, future emerging technologies. Reviewer for science foundations such as NWO, VINNOVA.

• **Publications.** Over 100 papers in prominent international conferences and journals with over 3000 citations, h-index=26, i10-index = 61 (according to “Google Scholar”).

For a complete list of recent publications see <http://senseslab.di.uniroma1.it>

Selected papers

1. S. Basagni, L. Boloni, P. Gjanci, C. Petrioli, C. Philipps and D. Turgut Maximizing the Value of Sensed Information in Underwater Wireless Sensor Networks via an Autonomous Underwater Vehicle *in Proceedings of IEEE INFOCOM 2014*, May 2014.
2. T. F. La Porta, C. Petrioli, C. Philipps and D. Spenza Sensor-mission assignment in rechargeable wireless sensor networks Accepted for publication in *ACM Transactions on Sensor Networks*, 2013.
3. C. Petrioli, M. Nati, P. Casari, M. Zorzi and S. Basagni ALBA-R: Load-Balancing Geographic Routing Around Connectivity Holes in Wireless Sensor Networks *IEEE Transactions on Parallel and Distributed Systems*, 2013.
4. G. Ateniese, G. Bianchi, A. Caposelle and C. Petrioli Low-cost Standard Signatures in Wireless Sensor Networks: A Case for Reviving Pre-computation Techniques? *in Proceedings of the 20th Annual Network and Distributed System Security Symposium (NDSS 2013)*, February 2013.
5. N. Bartolini, T. Calamoneri, T. F. La Porta, C. Petrioli and S. Silvestri Sensor Activation and Radius Adaptation (SARA) in Heterogeneous Sensor Networks *ACM Transactions on Sensor Networks*, 8(3), July 2012.
6. T. F. La Porta, G. Maselli and C. Petrioli. Anti-collision Protocols for Single-Reader RFID Systems with Passive Tags *IEEE Transactions on Mobile Computing*, 10(2):267–279, February 2011.
7. S. Basagni, M. Mastrogiovanni, A. Panconesi, and C. Petrioli. Localized protocols for ad hoc clustering and backbone formation: A performance comparison. *IEEE Transactions on Parallel and Distributed Systems*, 17(4):292–306, April 2006.
8. C. Petrioli, S. Basagni, and I. Chlamtac. Configuring BlueStars: Multihop scatternet formation for Bluetooth networks. *IEEE Transactions on Computers, Special Issue on Wireless Internet*, 52(6):779–790, June 2003.
9. G. Bianchi, A. Capone and C. Petrioli Throughput Analysis of End-to-End Measurement-Based Admission Control in IP *in Proceedings of IEEE INFOCOM 2000*, March 2000.
10. I. Chlamtac, C. Petrioli, and J. Redi. Energy-conserving access protocols for identification networks. *IEEE/ACM Transactions on Networking*, 7(1):51–59, February 1999.