

CURRICULUM VITAE ET STUDIORUM

Stefano Basagni

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Education

Ph.D. in Electrical Engineering, December 2001

The University of Texas at Dallas, U.S.A.

Thesis: *Location-Aware Protocols for Ad Hoc Networks*

Supervisor: Prof. Imrich Chlamtac

Ph.D. in Computer Science, May 1998

Università degli Studi di Milano, Italy

Thesis: *On the Broadcast and Clustering Problems in Peer-To-Peer Networks*

Supervisors: Prof. Alberto Bertoni and Danilo Bruschi

Bachelor of Science with distinction in Computer Science, December 1991

Università degli Studi di Pisa, Italy

Thesis: *Una Nuova Algebra di Alberi Causali e sue Applicazioni al CCS (A New Algebra of Causal Trees and Its Application to CCS)*

Supervisor: Prof. Pierpaolo Degano

Employment

Associate professor (July 2008–Present)

Northeastern University, Department of Electrical and Computer Engineering.

Assistant professor (January 2002–June 2008)

Northeastern University, Department of Electrical and Computer Engineering.

Assistant Professor (August 2000–December 2001)

The University of Texas at Dallas, Department of Computer Science.

Founding senior research member (May 1997–December 2001)

Center for Advanced Telecommunications Systems and Services (CATSS), The University of Texas at Dallas.

Visiting Scholar (March 1997–August 1997)

The Erik Jonsson School of Engineering and Computer Science, The University of Texas at Dallas.

Visiting Scholar (February 1996–February 1997)

The Advanced Communications and Networking Laboratory, Boston University.

Selected Honors and Awards

- May 2017: NU COE Best Research Team award, with professors Chowdhury, Melodia and Yeh.
- November 2016: Research on underwater networking featured on WIRED magazine.
- November 2015: *Distinguished scientist of the ACM* and of its Special Interest Group ACM SIGMOBILE.
- 2009: *NU COE Outstanding Teacher award*.
- 2009: Editor of Year Award from the Elsevier's Ad Hoc Networks journal, for his outstanding research achievements throughout the year.
- 2009–2016: Listed in the Montclair Who's Who in North American Colleges and Universities.
- 2003–2016: Listed in the Academic Keys Who's Who in Engineering Education (WWEE).
- 2006–2016: Listed in the Marquis' Who's Who in America.
- April 2006: *Senior member of the IEEE* and of its Computer and Communications societies.

Research Interests

Current interests concern research and implementation aspects of mobile networks and wireless communications systems. Research about networked systems for the Internet of Things is of particular interest, from algorithmic (e.g., protocol design) and technology (e.g., wake-radio and energy harvesting) points of view. This includes terrestrial, aerial and underwater wireless networking encompassing a wide number of technologies, ranging from radio (including mmWave and massive MIMO for 5G networks), acoustic, and optical (e.g., visible light communications), and their combination (multi-modal networking). Other interests include collaborative inter-networking, definition and performance evaluation of network protocols and theoretical and practical aspects of distributed algorithms.

In the past, I have contributed to research advancing Bluetooth networking, clustering and backbone formation for multi-hop mobile wireless networks, and geographic multi-point communications.

Publications

According to *Google Scholar*,¹ my peer-reviewed contributions that have already appeared in journals, conference proceedings, books and on digital libraries have been cited more than 10200 times.² This results to an average of over 80 citations per paper. Moreover, 36 papers of mine have been cited more than, or as many as 36 times, i.e., my *h-index* is 36.³ Of these, 15 publications have been cited over 100 times each.

¹ Google Scholar (GS, <http://scholar.google.com>) is a freely accessible web search engine that indexes the full-text of scholarly literature and report their number of citations across an array of publishing formats and disciplines. The GS index includes most peer-reviewed online journals of the world's largest scientific publishers. To the best of my knowledge, GS covers more publications in my research area than other similar services.

² This number, and the number of citations reported with the papers are updated September 2017.

³ The *h-index* is a parameter that quantifies the scientific productivity and impact of a scientist based on the number of citations that the scientist's publications have received. A scientist has index h if h of her/his N papers have at least h citations each, and the other $(N - h)$ papers have at most h citations each. The *h-index* aims at balancing the number of publications and the number of citations per publication.

1. Books

- [1] S. Basagni, M. Conti, S. Giordano, and I. Stojmenovic, editors. *Mobile Ad Hoc Networking: Cutting Edge Directions*. IEEE Series on Digital & Mobile Communication. IEEE Press and John Wiley & Sons, Inc., Piscataway, NJ and Hoboken, NJ, second edition, March 5 2013.
- [2] S. Basagni, M. Conti, S. Giordano, and I. Stojmenovic, editors. *Mobile Ad Hoc Networking*. IEEE Press and John Wiley & Sons, Inc., Piscataway, NJ and New York, NY, April 2004. (**Cited 855 times.**)
- [3] E. Gregori, G. Anastasi, and S. Basagni, editors. *Advanced Lectures in Networking, Networking 2002 Tutorials*. Number 2497 in Lecture Notes in Computer Science. Springer–Verlag, Berlin Heidelberg, Germany, May 2002.

2. Refereed Book Chapters

- [1] S. Basagni, M. Y. Naderi, C. Petrioli, and D. Spenza. Wireless sensor networks with energy harvesting. In S. Basagni, M. Conti, S. Giordano, and I. Stojmenovic, editors, *Mobile Ad Hoc Networking: Cutting Edge Directions*, chapter 20, pages 703–736. John Wiley & Sons, Inc., Hoboken, NJ, March 5 2013.
- [2] S. Basagni and M. A. Nanni. Location management in multi-hop wireless sensor networks. In Y. Xiao, H. Chen, and F. H. Li, editors, *Handbook on Sensor Networks*, chapter 29. World Scientific Publishing Co., Inc., Hackensack, NJ, August 2010.
- [3] S. Basagni, A. Carosi, and C. Petrioli. Mobility in wireless sensor networks. In A. Boukerche, editor, *Algorithms and Protocols for Ad Hoc and Sensor Networks*, chapter 10, pages 267–305. John Wiley & Sons, Inc., Hoboken, NJ, 2008.
- [4] S. Basagni, R. Bruno, and C. Petrioli. Scatternet formation in Bluetooth networks. In S. Basagni, M. Conti, S. Giordano, and I. Stojmenovic, editors, *Mobile Ad Hoc Networking*, chapter 4, pages 117–137. IEEE Press and John Wiley & Sons, Inc., Piscataway, NJ and Hoboken, NJ, April 2004.
- [5] S. Basagni. Remarks on ad hoc networking. In E. Gregori, G. Anastasi, and S. Basagni, editors, *Advanced Lectures on Networking, Networking 2002 Tutorials*, LNCS 2497. Springer–Verlag, Berlin Heidelberg, Germany, May 2002.
- [6] A. D. Myers and S. Basagni. Wireless media access control. In I. Stojmenovic, editor, *Handbook of Wireless Networks and Mobile Computing*, Wiley Series on Parallel and Distributed Computing, chapter 6, pages 119–143. John Wiley & Sons, Inc., Hoboken, NJ, February 2002.

3. Refereed Journal Articles

- [1] P. Gjanci, C. Petrioli, S. Basagni, C. A. Phillips, L. Bölöni, and D. Turgut. Path finding for maximum value of information in multi-modal underwater wireless sensor networks. *IEEE Transactions on Mobile Computing*, pages 1–14, in print, 2017.
- [2] M. Girolami, S. Basagni, F. Furfari, and S. Chessa. SIDEMAN: Service DiscoverY in Mobile social Networks. *Ad Hoc & Sensor Wireless Networks*, 34(1):1–39, December 2016.
- [3] L. Chen, J. Warner, P. L. Yung, D. Zhou, W. Heintzelman, I. Demirkol, U. Muncuk, K. R. Chowdhury, and S. Basagni. Reach²-mote: A range extending passive wake-up wireless sensor node. *ACM Transactions on Sensor Networks*, 11(4):64:1–64:33, December 2015.

- [4] S. Basagni, C. Petrioli, R. Petroccia, and D. Spaccini. CARP: A channel-aware routing protocol for underwater acoustic wireless networks. *Ad Hoc Networks*, 34:92–104, November 27 2015.
- [5] D. Mishra, S. De, S. Jana, S. Basagni, K. R. Chowdhury, and W. Heinzelman. Smart RF energy harvesting communications: Challenges and opportunities. *IEEE Communications Magazine*, 53(4):70–78, April 2015.
- [6] 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*, 24(3):529–539, March 2014.
- [7] S. Basagni, C. Petrioli, R. Petroccia, and M. Stojanovic. Optimized packet size selection in underwater WSN communications. *IEEE Journal of Oceanic Engineering*, 37(3):321–337, July 2012.
- [8] S. Basagni, A. Carosi, C. Petrioli, and C. A. Phillips. Coordinated and controlled mobility of multiple sinks for maximizing the lifetime of wireless sensor networks. *ACM/Springer Wireless Networks*, 17(3):759–778, April 2011.
- [9] R. Ghosh and S. Basagni. Mitigating the impact of node mobility on ad hoc clustering. *Wiley Inter-Science’s Wireless Communications & Mobile Computing, WCMC, Special Issue on Resources and Mobility Management in Wireless Networks*, L. Bononi and S. Nikolettseas, eds., 8(3):295–308, March 2008.
- [10] S. Basagni, C. Petrioli, and R. Petroccia. Efficiently reconfigurable backbones for wireless sensor networks. *Computer Communications Journal, Special Issue on Algorithmic and Theoretical Aspects of Wireless Ad Hoc and Sensor Networks*, S. Misra, ed., 31(4):668–698, March 5 2008.
- [11] S. Basagni, A. Carosi, E. Melachrinoudis, C. Petrioli, and Z. M. Wang. Controlled sink mobility for prolonging wireless sensor networks lifetime. *ACM/Springer Wireless Networks*, 14(6):831–858, December 2008. (**Cited 324 times.**)
- [12] S. Basagni, A. Carosi, E. Melachrinoudis, C. Petrioli, and Z. M. Wang. Protocols and model for sink mobility in wireless sensor networks. *ACM Mobile Computing and Communication Review, MC²R*, 10(4):28–30, October 2006.
- [13] 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, Special Issue on Localized Communication and Topology Protocols for Ad Hoc Networks (S. Olariu, D. Simplot-Ryl, and I. Stojmenovic, editors)*, 17(4):292–306, April 2006. (**Cited 196 times.**)
- [14] S. Basagni, R. Bruno, G. Mambrini, and C. Petrioli. Comparative performance evaluation of scatternet formation protocols for networks of Bluetooth devices. *ACM/Kluwer Wireless Networks*, 10(2):197–213, March 2004. (**Cited 70 times.**)
- [15] C. Petrioli, S. Basagni, and I. Chlamtac. BlueMesh: Degree-constrained multihop scatternet formation for Bluetooth networks. *ACM/Kluwer Journal on Special Topics in Mobile Networking and Applications (MONET), Special Issue on Advances in Research of Wireless Personal Area Networking and Bluetooth Enabled Networks (G. Zaruba and P. Johansson, editors)*, 9:33–47, February 2004. (**Cited 113 times.**)
- [16] C. Petrioli, S. Basagni, and I. Chlamtac. Configuring BlueStars: Multihop scatternet formation for Bluetooth networks. *IEEE Transactions on Computers, Special Issue on Wireless Internet (Y.-B. Lin and Y.-C. Tseng, editors)*, 52(6):779–790, June 2003. (**Cited 216 times.**)

- [17] S. Basagni, I. Chlamtac, and V. R. Syrotiuk. Location aware, dependable multicast for mobile ad hoc networks. *Computer Networks*, 36(5/6):659–670, August 2001. (**Cited 83 times.**)
- [18] S. Basagni. Finding a maximal weighted independent set in wireless networks. *Telecommunication Systems, Special Issue on Mobile Computing and Wireless Networks* (S. Olariu and I. Stojmenovic, editors), 18(1/3):155–168, September 2001. (**Cited 103 times.**)
- [19] I. Chlamtac, S. Gibbs, and S. Basagni. An overview of the University of Texas at Dallas’ Center for Advanced Telecommunications Systems and Services (CATSS). *ACM/SIGMOBILE Mobile Computing and Communications Review*, 4(2):63–69, April 2000. Special Feature on Wireless Research Centers.
- [20] S. Basagni, D. Bruschi, and I. Chlamtac. A mobility transparent deterministic broadcast mechanism for ad hoc networks. *ACM/IEEE Transactions on Networking*, 7(6):799–807, December 1999. (**Cited 130 times.**)
- [21] S. Basagni and D. Bruschi. A logarithmic lower bound for time-spread multiple-access (TSMA) protocols. *ACM/Kluwer Wireless Networks*, 6(2):161–163, May 2000.
- [22] S. Basagni. A note on causal trees and their applications to CCS. *International Journal of Computer Mathematics*, 71:137–159, April 1999.
- [23] S. Basagni, D. Bruschi, and F. Ravasio. On the difficulty of finding paths of length k in digraphs. *Theoretical Informatics and Applications*, 31(5):429–435, September 1997.

4. Journal Editorials

- [1] S. Basagni and C. A. Phillips. Editors foreword to the special issue on principles of mobile communications and computing. *Algorithmica*, 49(4):259–263, December 2007.
- [2] S. Basagni and A. Capone. Recent research directions in wireless ad hoc networking. *Elsevier Ad Hoc Networks*, 5(8):1205–1207, November 2007.
- [3] S. Basagni. Multipoint communications in wireless mobile networks. *ACM/Kluwer Mobile Networks and Application*, 7(6):427, December 2002.
- [4] S. Basagni and S.-J. Lee. Mobile ad hoc networking: Research trends and applications. *Wiley’s InterScience Wireless Communications & Mobile Computing*, 2(5):439–440, August 2002.

5. Refereed Demonstrations

- [1] S. Basagni, F. Ceccarelli, F. Gattuso, and C. Petrioli. Demo abstract: Abating LPL-induced latency with wake-up radio technology. In *Proceedings of ACM IoT DI 2017*, pages 1–2, Pittsburg, PA, April 18–21 2017.
- [2] S. Basagni, M. Nati, and C. Petrioli. Demonstrating the resilience of geographical routing to localization errors. In *Proceedings of the Fourth IEEE International Conference on Mobile Ad Hoc and Sensor Systems, MASS 2007*, pages 1–4, Pisa, Italy, October 8–11 2007.
- [3] S. Basagni, M. Nati, and C. Petrioli. A testbed-based performance investigation of an energy-efficient, load-balancing protocol for geo-forwarding in wireless sensor networks. Demo Session at ACM/USENIX MobiSys 2007, San Juan, Puerto Rico, June 11–14 2007.

6. Refereed Conference Articles at Critically Reviewed Conferences (< 40% acceptance rate)

- [1] S. Basagni, V. Di Valerio, G. Koutsandria, C. Petrioli, and D. Spenza. WHARP: A wake-up radio and harvesting-based forwarding strategy for green wireless networks. In *Proceedings of IEEE MASS 2017*, pages 1–9, Orlando, FL, October 24–27 2017.
- [2] S. Basagni, V. Di Valerio, P. Gjanci, and C. Petrioli. Finding MARLIN: Exploiting multi-modal communications for reliable and low-latency underwater networking. In *Proceedings of IEEE Infocom 2017*, (acceptance rate: 19%), pages 1–9, Atlanta, GA, May 1–4 2017.
- [3] R. G. Cid-Fuentes, M. Y. Naderi, S. Basagni, K. R. Chowdhury, A. Cabellos-Aparicio, and E. Alarcon. On signaling power: Communications over wireless energy. In *Proceedings of IEEE Infocom 2016* (acceptance rate: 18%), pages 1–9, San Francisco, CA, April 10–15 2016.
- [4] S. Basagni, C. Petrioli, and D. Spenza. CTP-WUR: The collection tree protocol in wake-up radio WSNs for critical applications. In *Proceedings of IEEE ICNC 2016*, pages 1–6, Kauai, HI, February 15–18 2016.
- [5] D. Spenza, M. Magno, S. Basagni, L. Benini, M. Paoli, and C. Petrioli. Beyond duty cycling: Wake-up radio with selective awakenings for long-lived wireless sensing systems. In *Proceedings of IEEE Infocom 2015* (acceptance rate: 19%), pages 522–530, Hong Kong, China, April 26–30 2015.
- [6] M. Y. Naderi, K. R. Chowdhury, S. Basagni, W. Heinzelman, S. De, and S. Jana. Experimental study of concurrent data and wireless energy transfer for sensor networks. In *Proceedings of IEEE Globecom 2014* (acceptance rate: 39%), pages 2543–2549, Austin, TX, December 8–12 2014.
- [7] S. Basagni, L. Bölöni, C. Petrioli, C. A. Phillips, 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* (acceptance rate: 19%), pages 988–996, Toronto, Canada, April 27–May 2 2014.
- [8] L. Bölöni, D. Turgut, S. Basagni, and C. Petrioli. Scheduling data transmissions of underwater sensor nodes for maximizing value of information. In *Proceedings of IEEE Globecom 2013, Ad Hoc and Sensor Networking Symposium* (acceptance rate: 37%), Atlanta, GA, December 9–13 2013.
- [9] L. Chen, S. Cool, H. Ba, W. Heinzelman, I. Demirkol, U. Muncuk, K. R. Chowdhury, and S. Basagni. Range extension of passive wake-up radio systems through energy harvesting. In *Proceedings of IEEE ICC 2013, Ad Hoc and Sensor Networking Symposium* (acceptance rate: 39%), pages 142–147, Budapest, Hungary, June 9–13 2013. **Best Paper award.**
- [10] M. Y. Naderi, S. Basagni, and K. R. Chowdhury. Modeling the residual energy and lifetime of energy harvesting sensor nodes. In *Proceedings of IEEE Globecom 2012* (acceptance rate: 37.5%), pages 3394–3400, Anaheim, CA, December 3–7 2012.
- [11] S. Basagni and M. A. Nanni. Using multiple radios for ad hoc backbone construction and maintenance. In *Proceedings of IEEE MASS 2011* (acceptance rate: 30%), pages 170–172, Valencia, Spain, October 2011.
- [12] S. Basagni, A. Faragó, M. A. Nanni, and D. T. Tran. Increased connectivity at lower cost: The case for multi-radio nodes in multi-hop wireless networks. In *Proceedings of IEEE Globecom 2009* (acceptance rate: 34.8%), pages 1–6, Honolulu, HA, November 30–December 4 2009.

- [13] S. Basagni, M. Nati, C. Petrioli, and R. Petroccia. ROME: Routing over mobile elements in WSNs. In *Proceedings of IEEE Globecom 2009* (acceptance rate: 34.8%), pages 1–7, Honolulu, Hawaii, November 30–December 4 2009.
- [14] S. Basagni, C. Carosi, C. Petrioli, and C. A. Phillips. Heuristics for lifetime maximization in wireless sensor networks with multiple mobile sinks. In *Proceedings of IEEE ICC 2009* (acceptance rate: 35%), pages 1–6, Dresden, Germany, June 14–18 2009.
- [15] S. Basagni, M. Nati, and C. Petrioli. Localization error-resilient geographic routing for wireless sensor networks. In *Proceedings of IEEE Globecom 2008*, (acceptance rate: 36%), pages 1–6, New Orleans, LA, November 30–December 4 2008.
- [16] S. Basagni, C. Carosi, C. Petrioli, and C. A. Phillips. Moving multiple sinks through wireless sensor networks for lifetime maximization. In *Proceedings of the 5th IEEE International Conference on Mobile Ad Hoc and Sensor Systems, MASS 2008*, (acceptance rate: 30%), pages 523–526, Atlanta, GA, September 29–October 2 2008.
- [17] S. Basagni, A. Carosi, E. Melachrinoudis, C. Petrioli, and Z. M. Wang. A new MILP formulation and distributed protocols for wireless sensor networks lifetime maximization. In *Proceedings of the IEEE International Conference on Communications, ICC 2006* (acceptance rate: 39%), volume 8, pages 3517–3524, Istanbul, Turkey, June 11–15 2006. (**Cited 38 times.**)
- [18] S. Basagni, M. Mastrogiovanni, and C. Petrioli. A performance comparison of protocols for clustering and backbone formation in large scale ad hoc networks. In *Proceedings of The 1st IEEE International Conference on Mobile Ad Hoc and Sensor Systems, MASS 2004* (acceptance rate: 25%), pages 70–79, Fort Lauderdale, FL, October 25–27 2004. (**Cited 79 times.**)
- [19] S. Basagni, R. Bruno, and C. Petrioli. A performance comparison of scatternet formation protocols for networks of Bluetooth devices. In *Proceedings of the IEEE International Conference on Pervasive Computing and Communications, PerCom 2003* (acceptance rate: 20%), pages 341–350, Forth Worth, TX, March 23–26 2003. (**Cited 57 times.**)
- [20] C. Petrioli and S. Basagni. Degree-constrained multihop scatternet formation for Bluetooth networks. In *Proceedings of the IEEE Globecom 2002* (acceptance rate: 30.6%), volume 1, pages 222–226, Taipei, Taiwan, R.O.C., November 17–21 2002. (**Cited 75 times.**)
- [21] S. Basagni, R. Bruno, and C. Petrioli. Device discovery in Bluetooth networks: A scatternet perspective. In E. Gregori, M. Conti, A. T. Campbell, G. Omidyar, and M. Zuckerman, editors, *Proceedings of the Second IFIP-TC6 Networking Conference, Networking 2002* (acceptance rate: 26%), LNCS 2345, pages 1087–1092, Pisa, Italy, May 19–24 2002.
- [22] S. Basagni and C. Petrioli. Multihop scatternet formation for Bluetooth networks. In *Proceedings of the 55th IEEE Semiannual Vehicular Technology Conference, VTC 2002 Spring* (acceptance rate: 39%), volume 1, pages 424–428, Birmingham, AL, May 6–9 2002. (**Cited 137 times.**)
- [23] S. Basagni, K. Herrin, D. Bruschi, and E. Rosti. Secure pebblenets. In *Proceedings of the 2001 ACM International Symposium on Mobile Ad Hoc Networking & Computing, MobiHoc 2001* (acceptance rate: 16%), pages 156–163, Long Beach, CA, October 4–5 2001. (**Cited 383 times.**)
- [24] S. Basagni, I. Chlamtac, A. Faragó, V. R. Syrotiuk, and R. Talebi. Route selection in mobile multimedia ad hoc networks. In *Proceedings of the Sixth IEEE International Workshop on Mobile Multimedia Communications, MoMuC 1999* (acceptance rate: 21%), pages 97–103, San Diego, CA, November 15–17 1999. (**Cited 39 times.**)

- [25] A. Faragó, I. Chlamtac, and S. Basagni. Virtual path network topology optimization using random graphs. In *Proceedings of IEEE Infocom 99. The Conference on Computer Communications* (acceptance rate: 30%), volume 2, pages 491–496, New York, NY, March 21–25 1999.
- [26] S. Basagni, I. Chlamtac, V. R. Syrotiuk, and B. A. Woodward. A distance routing effect algorithm for mobility (DREAM). In *Proceedings of the Fourth Annual ACM/IEEE International Conference on Mobile Computing and Networking, MobiCom 98*, (acceptance rate: 18%) pages 76–84, Dallas, TX, October 25–30 1998. (Cited **2006** times.)

7. Refereed Conference Articles at Other Conferences, Symposia and Workshops

- [1] B. Antonescu, M. Tehrani Moayyed, and S. Basagni. mmWave channel propagation modeling for V2X communication systems. In *Proceedings of IEEE PIMRC WVCN 2017*, pages 1–6, Montreal, Quebec, Canada, October 8–13 2017.
- [2] S. Basagni, V. Di Valerio, G. Koutsandria, and C. Petrioli. Wake-up radio-enabled routing for green wireless sensor networks. In *Proceedings of IEEE VTC 2017 Fall*, pages 1–6, Toronto, Ontario, CA, September 24–27 2017.
- [3] Y. M. Aval, Y. Han, A. Tu, S. Basagni, M. Stojanovic, and Y. Fei. Testbed-based performance evaluation of handshake-free MAC protocols for underwater acoustic sensor networks. In *Proceedings of MTS/IEEE OCEANS 2016*, pages 1–7, Monterey, CA, September 19–23 2016.
- [4] R. G. Cid-Fuentes, M. Y. Naderi, S. Basagni, K. R. Chowdhury, A. Cabellos-Aparicio, and E. Alarcon. An all-digital receiver for low power, low bit-rate applications using simultaneous wireless information and power transmission. In *Proceedings of IEEE ISCAS 2016*, Montreal, Canada, May 22–26 2016.
- [5] K. Kaushik, D. Mishra, S. De, J.-B. Seo, S. Jana, K. R. Chowdhury, S. Basagni, and W. Heinzelman. RF energy harvester-based wake-up radio for WSNs. In *Proceedings of IEEE Sensors 2015*, Busan, South Korea, November 1–4 2015.
- [6] A. V. Sheshashayee and S. Basagni. WiEnum: Node enumeration in wireless networks. In *Proceedings of IEEE Milcom 2015*, Tampa, FL, October 26–28 2015.
- [7] M. Y. Naderi, K. R. Chowdhury, and S. Basagni. Wireless sensor networks with RF energy harvesting: Energy models and analysis. In *Proceedings of IEEE WCNC 2015*, New Orleans, LA, March 9–12 2015.
- [8] S. Basagni, C. Petrioli, R. Petrocchia, and D. Spaccini. Channel replay-based performance evaluation of protocols for underwater routing. In *Proceedings of IEEE MTS/OCEANS 2014*, pages 1–7, Saint John, NL, Canada, September 14–19 2014.
- [9] M. Girolami, S. Chessa, S. Basagni, and F. Furfari. Service discovery in mobile social networks. In *Proceedings of IEEE PIMRC 2014*, pages 1464–1468, Washington, DC, September 2–5 2014.
- [10] D. Mishra, K. Kaushik, S. De, S. Basagni, K. R. Chowdhury, S. Jana, and W. Heinzelman. Implementation of multi-path energy routing. In *Proceedings of IEEE PIMRC 2014*, pages 1834–1839, Washington, DC, September 2–5 2014.
- [11] M. Y. Naderi, K. R. Chowdhury, S. Basagni, W. Heinzelman, S. De, and S. Jana. Surviving wireless energy interference in RF-harvesting sensor networks: An empirical study. In *Proceedings of IEEE SECON 2014, Workshop on Energy Harvesting Communications*, pages 1–6, Singapore, June 30 2014.

- [12] B. Antonescu and S. Basagni. Wireless body area networks: Challenges, trends and emerging technologies. In *Proceedings of BodyNets 2013*, Boston, MA, September 30–October 2 2013.
- [13] K. Kaushik, D. Mishra, S. De, S. Basagni, W. Heinzelman, K. R. Chowdhury, and S. Jana. Experimental demonstration of multi-hop RF energy transfer. In *Proceedings of IEEE PIMRC 2013*, London, U.K., September 8–11 2013.
- [14] S. Basagni, C. Petrioli, R. Petroccia, and D. Spaccini. Channel-aware routing for underwater wireless networks. In *Proceedings of IEEE OCEANS 2012*, pages 1–9, Yeosu, South Korea, May 21–24 2012.
- [15] S. Basagni and M. A. Nanni. Mobile ad hoc backbones for multi-radio networks. In *Proceedings of IEEE WCNC 2012*, pages 2614–2619, Paris, France, April 1–4 2012.
- [16] A. Faragó and S. Basagni. Connecting two worlds: Physical models and graph models of wireless network topologies. In *Proceedings of the 13th International Workshop on Future Trends of Distributed Computing Systems, FTDCS 2011*, pages 739–744, Banff, Canada, September 2–4 2011.
- [17] M. A. Nanni and S. Basagni. M-Backs: Mobile backbones for multi-hop wireless networks. In *Proceedings of IEEE WCNC 2011*, pages 944–949, Cancun, Mexico, March 28–31 2011.
- [18] S. Basagni, C. Petrioli, R. Petroccia, and M. Stojanovic. Choosing the packet size in multi-hop underwater networks. In *Proceedings of IEEE OCEANS 2010*, pages 1–9, Sydney, Australia, May 24–27 2010.
- [19] S. Basagni, C. Petrioli, R. Petroccia, and M. Stojanovic. Optimizing network performance through packet fragmentation in multi-hop underwater communications. In *Proceedings of IEEE OCEANS 2010*, pages 1–7, Sydney, Australia, May 24–27 2010.
- [20] M. A. Nanni and S. Basagni. Mobile ad hoc backbones: Formation and maintenance. In *Proceedings of the IEEE Radio and Wireless Symposium, RWS 2010*, pages 613–616, New Orleans, LA, January 10–14 2010.
- [21] S. Basagni, C. Petrioli, R. Petroccia, and M. Stojanovic. Multiplexing data and control channels in random access underwater networks. In *Proceedings of IEEE OCEANS 2009*, pages 1–7, Biloxi, MS, October 26–29 2009.
- [22] S. Basagni, M. A. Nanni, and C. Petrioli. BlueFlows: Routing and flow admission in Bluetooth PANs. In *Proceedings of the IEEE Radio and Wireless Symposium, RWS 2009*, pages 115–118, San Diego, CA, January 18–22 2009.
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8. Technical Reports

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Sponsored Research

1. *MRI: SEANet: Development of a Software-Defined Networking Testbed for the Internet of Underwater Things*. Tommaso Melodia, PI, Stefano Basagni, Co-PI, Militsa Stojanovic, co-PI, Matteo Rinaldi, Co-PI. National Science Foundation, CISE Directorate, CNS Division, Major Research Instrumentation. October 1, 2017—September 30, 2020. \$1,100,00 + \$330,000 (NU-provided cost sharing).
2. *Early Research/Creative Endeavor Award: Using Mobile Applications for Controlling the Northeastern University Marine Observatory Network*. Stefano Basagni, PI, Andrew Fish, Co-PI. Northeastern University. September 1, 2017—December 31, 2017. \$3,000.
3. *Global Underwater Wireless Sensor Networking From Design and Modeling to In-Field Testing*. Stefano Basagni, PI. Università di Roma “La Sapienza.” April 1, 2017—August 1, 2017. €9,000.

4. *PAWR: Northeastern University Proposal to Establish The Platform for Advanced Wireless Research (PAWR) Program Office (PPO)*. Tommaso Melodia, PI, Stefano Basagni, Co-PI, Kaushik R. Chowdhury, co-PI. National Science Foundation, CISE Directorate, CNS Division. April 1, 2017—March 31, 2022. \$2,400,000.
5. *Software-Defined Infrastructure-less Wireless Networking With Distributed Control*. Tommaso Melodia, PI, Stefano Basagni, Co-PI, Kaushik R. Chowdhury, co-PI, Miriam Leeser, Co-PI. Office of Naval Research. December 1, 2016—August 31, 2018. \$387,495.
6. *Sensing, Computation and Communication on the Fly: Connected UAS Mesh Networks*. Kaushik R. Chowdhury, PI, Stefano Basagni, Co-PI, Hanumant Singh, co-PI, Miriam Leeser, Co-PI. Office of Naval Research. December 1, 2016—August 31, 2018. \$387,495.
7. *Cross Layer Approach to 5G: Models and Protocols*. Stefano Basagni, PI, Kaushik R. Chowdhury, Co-PI. The Mathworks, Inc. May 1, 2016—April 30, 2019. \$200,000.
8. *MRI: Development of the Northeastern University Marine Observatory NETWORK (NU MONET)*. Stefano Basagni, PI, Yunsi Fei, Co-PI, Millitsa Stojanovic, Co-PI. National Science Foundation, CISE Directorate, CNS Division, Major Research Instrumentation. September 1, 2017—August, 31 2018. \$432,000 (includes 4 REUs) + \$120,000 (NU-provided cost sharing).
9. *GENI-SAVI Travel Grant for International Collaboration*. Stefano Basagni, PI. NSF GENI, June 1, 2016—July 31, 2016. \$6,000.
10. *GENI Travel Grants for participation to GENI events in 2016*. Stefano Basagni, PI. NSF GENI, January 1, 2016—December 31, 2016. \$5,000.
11. *Mathworks Micro-grant: Modeling mmWave Channels for 5G Communications*. Stefano Basagni, PI. The Mathworks, Inc. September 1, 2014—April 30, 2015. \$20,000.
12. *PC3: Collaborative Research: GENIUS: Green Sensor Networks for Air Quality Support*. Kaushik R. Chowdhury, PI, Stefano Basagni, Co-PI. National Science Foundation, CISE Directorate, CNS Division. January 1, 2012—June 30, 2015. \$211,219.
13. *Development of a Second-Generation Applications-Driven Wireless Sensor Networking Instrument*. Guevara Noubir, PI, Stefano Basagni, Co-PI, Peter Desnoyers, Co-PI, Marsette Vona, Co-PI. National Science Foundation, CISE Directorate, CNS Division, Major Research Instrumentation. Time supported by the grant: 100%. March 1, 2010—February 28, 2013. \$499,355.
14. *Modeling Networks with Multiple Physical Interfaces—The Case for Multi-Radio Networks*. Stefano Basagni, PI, András Faragó (UT Dallas), co-PI. National Science Foundation, CISE Directorate, CNS Division, Theoretical Foundations Program. October 1, 2006–September 30, 2010. \$350,000.
15. *Integer Linear Programming Models for Mobility in Wireless Networks*. Stefano Basagni, PI. National Science Foundation, CISE Directorate, CNS Division, Networking Technology and Systems–Wireless Networks Program. August 1, 2007–July 31, 2008. \$97,160.
16. *Small Antennas for Angle of Arrival Determination and Accurate Localization*. Stefano Basagni, PI. National Science Foundation, Engineering Directorate, Electrical, Communications and Cyber System Division, Integrative, Hybrid & Complex Systems Program. September 1, 2007–August 31, 2008. \$59,150.

Student Supervision

Supervision of post-doctoral researchers

1. Hovannes Kulhandjian. 2014–2015.
2. M. Yashar Aval. 2015–present.

Supervision of graduate students

- Current Ph.D. students

1. Miad Tehrani. Expected graduation date: TBD.
2. Bogdan Antonescu. Expected graduation date: TBD.
3. Abhimanyu Sheshashayee. Expected graduation date: TBD.
4. Leonardo Bonati (with Prof. Melodia). Expected graduation date: TBD.

- Ph.D. students graduated

1. M. Yousof Naderi (with Prof. Chowdhury), December 2015.
2. Maurizio A. Nanni, December 2010.
3. Michele Battelli, February 2007.
4. Luke Demoracski (with Prof. D. Avresky)
5. Rituparna Ghosh, May 2006.

- M.S. and undergraduate students

Since 2002 I have supervised around two dozens M.S. students who graduated with thesis and projects. I have also supervised several graduate and undergraduate students on research projects and independent studies.

Teaching

Courses taught 2002–2017. Northeastern University.

- Undergraduate courses

1. Fundamentals of Computer Networks (NU EECE 2540). Fall 2017. Enrollment: 19.
2. Fundamentals of Computer Networks (NU EECE 2540). Fall 2016. Enrollment: 49.
3. Fundamentals of Computer Networks (NU EECE 2540). Fall 2015. Enrollment: 61.
4. Computer and Telecommunication Networks (NU EECE 4628). Fall 2014. Enrollment: 50.
5. Computer and Telecommunication Networks and lab (NU EECE 4628/9). Fall 2013. Enrollment: 41.
6. Computer and Telecommunication Networks and lab (NU EECE 4628/9). Fall 2012. Enrollment: 11.
7. Software Engineering (EECE 4520). Spring 2012. Enrollment: 30.

8. Computer and Telecommunication Networks and lab (NU EECE 4628/9). Fall 2011. Enrollment: 26.
9. High Tech Tools and Toys (NU GE 1111). Spring 2011. Enrollment: 28.
10. Computer and Telecommunication Networks and lab (NU EECE 4628/9). Fall 2010. Enrollment: 21.
11. Optimization Methods (NU ECE U 326). Spring 2009. Enrollment 30.
12. Computer Networks and Lab (NU ECE U 628 and 629). Spring 2009. Enrollment: 24.
13. Computer Networks and Lab (NU ECE U 628 and 629). Fall 2008. Enrollment: 18.
14. Computer Networks and Lab (NU ECE U 628 and 629). Spring 2008. Enrollment: 38.
15. Optimization Methods (NU ECE U 326). Spring 2008. Enrollment: 21.
16. Computer Networks and Lab (NU ECE U 628 and 629). Spring 2007. Enrollment: 33.
17. Computer Networks and Lab (NU ECE U 628 and 629). Fall 2005. Enrollment: 33.
18. Computer Networks and Lab (NU ECE U 628 and 629). Spring 2005. Enrollment: 44.
19. Optimization Methods (NU ECE 1320). Winter 2003. Enrollment: 31.
20. Optimization Methods (NU ECE 1320). Fall 2002. Enrollment: 34.
21. Optimization Methods (NU ECE 1320). Winter 2002. Enrollment: 22.

- Graduate courses

1. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2017. Enrollment: TBA.
2. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2016. Enrollment: 44.
3. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2015. Enrollment: 48.
4. Fundamentals of Computer Networking (NU EECE 7374). Spring 2015. Enrollment: 46.
5. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2014. Enrollment: 61.
6. Fundamentals of Computer Networking (NU EECE 7374). Spring 2014. Enrollment: 56.
7. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2013. Enrollment: 62.
8. Special Topics in CE: Fundamentals of Computer Networking (EECE 7366). Fall 2012. Enrollment: 27. **Newly developed graduate course.**
9. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2012. Enrollment: 72.
10. Special Topics in CE: Fundamentals of Software Construction (NU EECE 7366). Fall 2011. Enrollment: 20. **Newly developed graduate course.**
11. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2011. Enrollment: 62.
12. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2010. Enrollment: 49.
13. Fundamentals of Computer Engineering (NU EECE 7205). Fall 2009. Enrollment: 56.
14. Fundamentals of Computer Engineering (NU ECE G 205). Fall 2008. Enrollment 54.
15. Fundamentals of Computer Engineering (NU ECE G 205). Fall 2007. Enrollment 63.
16. Fundamentals of Computer Engineering (NU ECE G 205). Fall 2006. Enrollment: 27.
17. Fundamentals of Computer Engineering (NU ECE G 205). Fall 2005. Enrollment: 38.
18. Fundamentals of Computer Engineering (NU ECE G 205). Fall 2004. Enrollment: 36.

19. Mobile and Wireless Networking (NU ECE G 364). Spring 2004. Enrollment: 18. (Taught also via Network Northeastern.)
 20. Fundamentals of Computer Engineering (NU ECE G 205). Fall 2003. Enrollment: 28. **Newly developed graduate course.**
 21. Mobile and Wireless Networking (NU ECE 3656). Winter 2003. Enrollment: 19. (Taught also via Network Northeastern.)
 22. Mobile and Wireless Networking (NU ECE 3656). Spring 2002. Enrollment: 14. **Newly developed graduate course.**
- **Courses taught 2000-2001.** The University of Texas at Dallas.
 1. Bluetooth and Ad Hoc Networking (UTD CS 6V81). Fall 2001. **Newly developed graduate course.**
 2. Discrete Mathematics I (UTD CS 2305). Fall 2001. (Undergraduate course for freshmen.)
 3. Advanced Data Structures and Algorithms (UTD CS 4349). Spring 2001. (Undergraduate course for seniors.)
 4. Advanced Data Structures and Algorithms (UTD CS 4349). Fall 2000. (Undergraduate course for seniors.)

Course evaluation scores: Fall 2011–Fall 2016

The following tables illustrate the course Teacher Rating And Course Evaluation (TRACE) scores for classes taught from Fall 2011 to Fall 2016, included. Specifically, scores refers to two TRACE evaluation questions: “I learned a lot in this course” (Learning), and “What is your overall rating of this instructor’s teaching” (Instructor). All scores are out of a maximum of 5.

Table 1: Undergraduate courses.

Semester	Course number	Course title	Learning	Instructor
Fall 2016	EECE 2540	Fundamentals of Computer Networks	4.1	4.3
Fall 2015	EECE 2540	Fundamentals of Computer Networks	4.5	4.4
Fall 2014	EECE 4628	Computer and Telecommunication Networks	4.3	4.3
Fall 2013	EECE 4628/9	Computer and Telecommunication Networks and lab	4.3	4.2
Fall 2012	EECE 4628/9	Computer and Telecommunication Networks and lab	5	4.9
Spring 2012	EECE 4520	Software Engineering	3.5	4.2
Fall 2011	EECE 4628/9	Computer and Telecommunication Networks and lab	4.2	4.2

Selected Invited Talks

Since I completed my Ph.D. I have delivered over six dozen keynote speeches, invited talks and lectures, including, most recently:

1. *Smart Usage of Wake-up Radio and Energy Harvesting for Long Lasting IoT Systems.* Invited talk. The University of Kentucky (Computer Science Dept.), Lexington, KY. October 20 2017.

Table 2: Graduate courses.

Semester	Course number	Course title	Learning	Instructor
Fall 2016	EECE 7205	Fundamentals of Computer Engineering	3.8	3.9
Fall 2015	EECE 7205	Fundamentals of Computer Engineering	4.5	4.4
Spring 2015	EECE 7374	Fundamentals of Computer Networking	4.4	4
Fall 2014	EECE 7205	Fundamentals of Computer Engineering	4	4.1
Spring 2014	EECE 7374	Fundamentals of Computer Networking	3.9	4.2
Fall 2013	EECE 7205	Fundamentals of Computer Engineering	4.3	4.4
Fall 2012	EECE 7205	Fundamentals of Computer Engineering	4.5	4.4
Fall 2012	EECE 7366	Fundamentals of Computer Networking	4.5	4.8
Fall 2011	EECE 7205	Fundamentals of Computer Engineering	4.2	4.1
Fall 2011	EECE 7366	Fundamentals of Software Construction	4.4	4.7

2. *Wake-up Radio, Energy Harvesting and Multi-modality! Oh My! (A Few Tricks for Long-lived IoT.)* Invited talk. Temple University (Computer Science Dept.), Philadelphia, PA. September 29 2017.
3. *The Internet of Everything, Everywhere.* A 20 hour course for the Ph.D. students of the Computer Science department. Università di Pisa (Computer Science Dept.), Pisa, Italy. June 26–July 7 2017.
4. *Smart Usage of Wake-up Radio and Energy Harvesting for Long Lasting IoT Systems.* Invited talk. Università di Pisa (Information Engineering Dept.), Pisa, Italy. July 5 2017.
5. *Smart Usage of Wake-up Radio and Energy Harvesting for Long Lasting IoT Systems.* Keynote speech. LANMAN 2017. Osaka, Japan. June 12, 2017.
6. *Wake-up Radio, Energy Harvesting and Multi-modality! Oh My! (A Few Tricks for Long-lived IoT.)* Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. May 16 2017.
7. *Wake-up Radio, Energy Harvesting and Multi-modality! Oh My! (Very Long-lived Wireless Sensing Systems for the IoT.)* Invited talk. Nokia–IE, Dublin, Ireland. May 11 2017.
8. *RIP, OSPF and BGP: Internet Routing Yesterday and Today.* Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. April 12 2017.
9. *Networking: Delays, Losses, and Their Impact on Network Performance.* Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. March 1 2017.
10. *Beyond Duty Cycling: How Wake-up Radio Technology and Semantic Addressing Finally Enable Very Long-lived Wireless Sensing Systems.* Keynote speech. INW 2017. Falcade, Italy. January 11, 2017.
11. *Multi-modal Communication and its Implications on the Performance of Underwater Wireless Sensor Networks.* Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. June 21 2016.
12. *Beyond Duty Cycling: How Wake-up Radio Technology and Semantic Addressing Finally Enable Very Long-lived Wireless Sensing Systems.* Keynote speech. IFIP Wireless Days 2016. Toulouse, France. March 23, 2016.

13. *CTP-WUR: The Collection Tree Protocol in Wake-up Radio WSNs for Critical Applications*. Invited talk. IEEE ICNC 2016. Kauai, HI. February 18, 2016.
14. *Beyond Duty Cycling: How Wake-up Radio Technology and Semantic Addressing Finally Enable Very Long-lived Wireless Sensing Systems*. Invited talk. Università di Pisa, Pisa, Italy. July 23, 2015.
15. *Building the NU MONET: Lesson Learned*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. July 7 2015.
16. *Beyond Duty Cycling: How Wake-up Radio Technology and Semantic Addressing Finally Enable Very Long-lived Wireless Sensing Systems*. Invited talk. Politecnico di Milano, Milano, Italy. July 3, 2015.
17. *Beyond Duty Cycling: How Wake-up Radio Technology and Semantic Addressing Finally Enable Very Long-lived Wireless Sensing Systems*. Invited talk. KTH Royal Institute of Technology Stockholm, Sweden. May 13, 2015.
18. *CARP: Channel-aware Routing for Underwater Wireless Sensor Networks*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. June 25 2014.
19. *Routing for the Internet of Things: Avoiding Holes and Other Stories*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. May 21 2014.
20. *Routing for the Internet of Things: Avoiding Holes and Other Stories*. Invited talk. Colorado School of Mines, Golden, CO. April 14 2014.
21. *Routing for the Internet of Things: Research Guidelines*. Invited talk. Meeting of the NU HKN. Northeastern University, Boston, MA. March 10 2014.
22. *Wireless Sensor Networks, a Primer*. Invited talk. Meeting of the NU IEEE. Northeastern University, Boston, MA. February 11 2014.
23. *Routing for the Internet of Things: Avoiding Holes and Other Stories*. Invited talk. Università di Roma “La Sapienza,” (Telecommunication Engineering Dept.), Roma, Italy. July 23 2013.
24. *Vehicular Ad Hoc Networks: Technologies and Applications*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. May 24 2013.
25. *Routing for the Internet of Things: Avoiding Holes and Other Stories*. Invited talk. Consiglio Nazionale delle Ricerche (CNR), Pisa, Italy. May 20 2013.
26. *Wireless LAN: WiFi and their Close Relatives*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. May 17 2013.
27. *Finding Paths for AUV in Underwater Wireless Sensor Networks*. Invited talk. Sandia National Laboratories, Albuquerque, NM. March 6 2013.
28. *Can Mobility Improve the Performance of Wireless Sensor Networks?* Invited talk. University of Central Florida, Orlando, FL. February 28 2013.
29. *Modeling Sink Mobility in Wireless Sensor Networks*. Invited talk. Indian Institute of Technology, New Delhi, India. January 7 2013.
30. *ALBA-R vs. Rotational Sweep: A Performance Comparison*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. December 20 2012.

31. *Research on Networking at Northeastern University*. Invited talk. Meeting of the NU IEEE. Northeastern University, Boston, MA. September 21 2012.
32. *Enumerating wireless sensor networks: Protocols*. Invited talk. Università di Milano, Milano, Italy. May 30 2012.
33. *Enumerating wireless sensor networks: Possibility Results*. Invited talk. Università di Milano, Milano, Italy. May 28 2012.
34. *VANET 2: Protocol Design and Standards*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. May 23 2012.
35. *VANET 1: Bringing Ad Hoc Networks to the Car*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. May 21 2012.
36. *Perspectives on Networking Research for Healthcare*. Invited talk. Plenary meeting of the EU project CHIRON, Amsterdam, The Netherlands. March 9 2012.
37. *Determining Routes Underwater*. Invited talk. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. February 27 2012.
38. *How to Design, Analyze and Test Protocols for Mobile Networks*. Cycle of five lectures. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. May 7–August 7 2011.
39. *Building Mobile Backbones*. Cycle of two lectures. Università di Roma “La Sapienza,” (Computer Science Dept.), Roma, Italy. February 27–March 6 2011.

Service and Affiliations

- **Service to the NU Department of Electrical and Computer Engineering (ECE)**

Committees I have served and I am serving on, as a member and/or chair, and events I helped to organize include: CE Freshman Forums, department council, hiring committee (chaired twice), Undergraduate Study Committee, ECE awards committee, faculty co-advisor of the IEEE student branch and Northeastern University (2002–2008), Ph.D. and M.S. thesis committees, Ph.D. qualifying exam committee, academic advising, and ECE Tenure & Promotion Committee.

- **Service to the NU College of Engineering (COE)**

Committees I have served and I am serving on, as a member and/or chair, and events I helped to organize include: 1st year faculty breakfast committee, “Welcome day,” COE awards committee, “Leadership Retreat” for COE student groups, COE “Open Houses” and “Building Bridges,” and COE Tenure & Promotion Committee.

- **Service to Northeastern University:**

2010-2014 Member of the University Senate.

2009-Present Member of the University Cadre (associate marshal).

2003–2009 Marshal at the NU commencement exercises (both undergraduate and graduate ceremonies).

- **Service to the discipline/profession**

An up-to-date list of: Book editorship, journal guest editorship, journal editorial boards membership, conference chairmanship, conference organization positions, and membership in conference Technical Program Committees can be found in my professional webpage (<http://www.ece.neu.edu/fac-ece/basagni/service.html>).

I am routinely invited to review research proposals submitted for fundings to major national and international funding agencies, including the National Science Foundation, agencies of the U.S. Department of Defense, the Canada National Research Council, the Canadian Killam Fellowship, the Canada Council for the Arts, agencies of the European Union, of private Italian institutions and of the Italian Government. I am also a recurrent panelist for the DoD/ASEE NDSEG and for the NSF fellowships, awarding aspiring graduate students over \$30,000 for their graduate studies.

- **Professional associations membership**

- Member of the Association for Computer Machinery, ACM. (**Distinguished scientist** since 2015.)
- Member of the Institute of Electrical and Electronics Engineers, IEEE. (**Senior member** since 2006.)
- Member of the Council on Undergraduate Research, CUR. (Since 2008.)
- Member of the American Society for Engineering Education, ASEE. (Since 2003.)