

# Stefano Basagni, Biographical Sketch

## (i) Professional Preparation

Università degli Studi di Pisa, Italy, Computer Science, B.S., December 1991.

Università degli Studi di Milano, Italy, Computer Science, Ph.D., May 1998.

The University of Texas at Dallas, TX, U.S.A., Electrical Engineering, Ph.D., December 2001.

## (ii) Appointments

July 2021-Present: Professor of Computer Eng., Northeastern University, Boston, MA

July 2008-June 2021: Associate Professor of Computer Eng., Northeastern University, Boston, MA

January 2002-June 2008: Assist. Professor of Comp. Eng., Northeastern University, Boston, MA

September 2000-December 2001: Assist. Professor of Comp. Sci., University of Texas, Dallas, TX

## (iii) Selection of recent publications

1. C. Greco, P. Pace, S. Basagni, and G. Fortino. Jamming detection at the edge of drone networks using Multi-layer Perceptrons and Decision Trees. *Applied Soft Computing*, 111:1–13, August 13 2021.
2. L. Bonati, S. D’Oro, M. Polese, S. Basagni, and T. Melodia. Intelligence and learning in O-RAN for data-driven NextG cellular networks. *IEEE Communications Magazine Series on Network Softwarization and Management*, W. Cerroni, A. Galis, K. Shiimoto, M. F. Zhani, series editors, pages 1–7, 2021.
3. L. Bonati, M. Polese, S. D’Oro, S. Basagni, and T. Melodia. Open, programmable, and virtualized 5G networks: State-of-the-art and the road ahead. *Computer Networks*, 182:1–28, 29 August 2020.
4. L. Bonati, S. D’Oro, L. Bertizzolo, E. Demirors, Z. Guan, S. Basagni, and T. Melodia. CellOS: Zero-touch softwarized open cellular networks. *Computer Networks*, 180:1–13, 23 June 2020.
5. G. Koutsandria, V. Di Valerio, D. Spenza, S. Basagni, and C. Petrioli. Wake-up radio-based data forwarding for green wireless networks. *Computer Communications. Special Issue on Machine Learning Approaches in IoT scenarios*, G. Maselli, L. Galluccio, I. Grida Ben Yahia, and N. Limam, eds., 160:172–185, June 3 2020.
6. V. Di Valerio, F. Lo Presti, C. Petrioli, L. Picari, D. Spaccini, and S. Basagni. CARMA: Channel-aware reinforcement learning-based multi-path adaptive routing for underwater wireless sensor networks. *IEEE Journal on Selected Area in Communications. Special issue on Machine Learning in Wireless Communications*, D. Gesbert, D. P. de Kerret, and M. van der Schaar, and D. Gunduz, C. Murthy, and D. Sidiropoulos, eds., 37(11):2634–2647, November 2019.
7. B. Antonescu, M. Tehrani Moayyed, and S. Basagni. Clustering algorithms and validation indices for a wide mmWave spectrum. *Information. Special issue on Emerging Topics in Wireless Communications for Future Smart Cities*, S. Djahel, C. Wu, Y. Hadjadj-Aoul, and C. Palazzi, eds., 10(9):1–17, September 19 2019.
8. A. V. Sheshashayee and S. Basagni. WiLE: Leader election in wireless networks. *Ad Hoc & Sensor Wireless Networks*, 44(1–2):1–23, June 2019.

9. S. Basagni, V. Di Valerio, P. Gjanci, and C. Petrioli. MARLIN-Q: Multi-modal communications for reliable and low-latency underwater data delivery. *Ad Hoc Networks*, (82):134–145, January 2019.
10. L. Bonati, S. D’Oro, S. Basagni, and T. Melodia. SCOPE: An open and softwarized prototyping platform for NextG systems. In *Proceedings of ACM MobiSys 2021*, pages 1–12, Mars, Solar System, Milky Way, June 24–July 2 2021.

**(iv) Recently awarded sponsored research**

1. *Colosseum NRDZ: A Large-Scale Emulation Platform to Shape Future National Radio Dynamic Zones*. Tommaso Melodia, PI, Stefano Basagni, co-PI, Kaushik R. Chowdhury, co-PI, Abhimanyu Gosain, co-PI. National Science Foundation, CISE Directorate, CNS Division. September 1, 2020–August 31, 2022. \$999,981. Effort: 33%.
2. *CCRI: Grand: Colosseum: Opening and Expanding the World’s Largest Wireless Network Emulator to the Wireless Networking Community*. Tommaso Melodia, PI, Stefano Basagni, co-PI, Kaushik R. Chowdhury, co-PI, Abhimanyu Gosain, co-PI. National Science Foundation, CISE Directorate, CNS Division. September 1, 2019–August 31, 2024. \$4,999,700.00. Effort: 25%.
3. *PROTECT: A Millimeter-wave Programmable Radio platfOrm and Tactical wirelEss Communication Testbed*. Tommaso Melodia, PI, Stefano Basagni, co-PI, Kaushik R. Chowdhury, co-PI, Abhimanyu Gosain, co-PI. Office of Naval Research DURIP. April 1, 2019–March 31, 2022. \$295,000.00. Effort: 25%.
4. *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 program. October 1, 2017–September 30, 2020. \$1,115,999.00 (includes 2 REU supplements) + \$330,000 (NU cost sharing). Effort: 20%.

**(v) Other**

1. Service to the scientific community-1. General co-chair of ACM/SIGMOBILE Dial M-POMC 2004. TPC co-chair of IFIP Wireless Days 2016, ICNC NAPE 2015, IEEE WiMob 2013, IEEE Globecom 2012, IEEE MASS 2013, IEEE SECON 2010 and of Med-Hoc-Net 2006. Member of the Organizing Committees and of the Technical Program Committees of over eight dozen international conferences (e.g., IEEE Infocom, IEEE ICC, IEEE Globecom, IEEE VTC, IEEE MASS, IEEE SECON, and IEEE Percom).
2. Service to the scientific community-2. Guest editor of four special issues: *Ad Hoc Networks, Algorithmica, Mobile Networks and Applications (MONET), Wireless Communications & Mobile Computing*. Co-editor of three books on networking (Advanced Lectures on Networking, Springer Verlag, 2002) and ad hoc networks (Mobile Ad Hoc Networking, IEEE Press and Wiley, 2004 and 2013). Member of the Editorial Board of the *Journal of Electrical and Computer Engineering*, of Elsevier *Ad Hoc Network*, of *Ad Hoc & Sensors Wireless Networks*, and of the *ACM/Springer WiNET*.
3. Senior member of the IEEE, distinguished scientist of the ACM, member of ASEE and of CUR.