



Ilario Filippini

Politecnico di Milano

*Dipartimento di Elettronica,
Informazione e Bioingegneria*

OVERVIEW

Associate Professor, IEEE Senior Member, Telecommunication Networks.
Advanced Network Technologies Laboratory (ANTLab) at Politecnico di Milano, Italy

PERSONAL DETAILS

<i>Address</i>	Politecnico di Milano, Dipartimento di Elettronica, Informazione e Bioingegneria Piazza L. da Vinci, 32 20133, Milano, Italy
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<i>Lab</i>	http://www.antlab.polimi.it

APPOINTMENTS

Associate Professor (SSD ING-INF/03 Telecomunicazioni) <i>Politecnico di Milano (Italy)</i> <i>Dipartimento di Elettronica, Informazione e Bioingegneria</i>	01/2020-
Assistant Professor (SSD ING-INF/03 Telecomunicazioni) <i>Politecnico di Milano (Italy)</i> <i>Dipartimento di Elettronica, Informazione e Bioingegneria</i>	11/2011-12/2019
Contract Professor <i>Università degli Studi di Bergamo (Italy)</i> <ul style="list-style-type: none">• Teaching Computer Networks courses	03/2011-09/2012
Postdoctoral Fellow <i>Politecnico di Milano, Italy</i> <ul style="list-style-type: none">• Researching on Cognitive Radio Networks performance analysis"	03/2009-08/2011
Visiting Scholar <i>The Ohio State University (Columbus, OH, USA)</i> <ul style="list-style-type: none">• Researching on routing in Cognitive Radio Networks at Department of Electrical and Computer Engineering	02/2008-08/2008

EDUCATION

PhD Information Engineering 01/2006-04/2009

Politecnico di Milano, Italy

Dipartimento di Elettronica e Informazione

First place in the admission ranking

Dissertation: Planning and Optimization of Heterogeneous Wireless multi-hop Networks

Thesis advisor: prof. Antonio Capone

Laurea Specialistica in Telecommunication Engineering 10/2003-10/2005

Politecnico di Milano, Italy

Thesis: Trajectory-based forwarding techniques for ad-hoc networks

M.Sc. equivalent, 110/110 Cum Laude

Academic advisor: prof. Antonio Capone

Laurea in Telecommunication Engineering 09/2000-10/2003

Politecnico di Milano, Italy

Thesis: Quality of Service in IP networks with Integrated Service

B.Sc. equivalent, 110/110

Academic advisor: prof. Antonio Capone

Scientific School Diploma 09/1995-07/2000

Liceo Scientifico Statale "A. Calini" in Brescia, Italy

96/100

QUALIFICATIONS

- Second-level Professorship (Associate Professor equivalent) qualification for sector 09/F2 Telecommunications from Italian Education Ministry, 03/2018
- Professional Information Engineer qualification from Milan Province Order of Engineers, 10/2006

AWARDS AND SCHOLARSHIPS

- 2020 Paper "RL-based Resource Allocation in mmWave 5G IAB Networks" received Runner-up Best Paper Award at IEEE MedComNet conference
- 2019 Distinguished Member of Technical Program Committee of IEEE INFOCOM conference
- 2018 Distinguished Member of Technical Program Committee of IEEE INFOCOM conference
- 2017 Recipient of "Fondo per il finanziamento delle attività base di ricerca (FFABR)" as a Researcher from the Italian Ministry of Public Education
- 2016 IEEE Senior Member
- 2016 Paper "The S-Aloha Capacity: Beyond the e-1 Myth" at IEEE INFOCOM conference selected for Fast Track on IEEE/ACM Transactions on Networking

- 2015 Paper “Asymptotic Analysis of Schoute’s Estimate for Dynamic Frame Aloha” at IEEE SoftCOM conference selected for Fast Track on Journal of Communications Software and Systems
- 2009 Paper “Optimal Placement of Multiple Interconnected Gateways in Heterogeneous Wireless Sensor Networks” at IFIP Networking conference selected for Fast Track on Elsevier Computer Communications (8 selected papers over 76)
- 2006 Doctoral program scholarship from Italian Government for years 2006-2008
- 2005 ACCENTURE Laurea Award recipient
- 2001 International Foundation Scholarship “Paolo Galli” granted by VERIZON - VODAFONE ITALIA in AY 2001/2002, 2002/2003 and 2003/2004

INVITED TALKS/PAPERS

- Invited speaker at “High frequency technologies for 5G Workshop” organized by Huawei at Politecnico di Milano, Milan, Italy, 11/18/2019
- Invited paper at IEEE International Symposium on “A World of Wireless, Mobile and Multimedia Networks” (WoWMoM) 2018: F. Devoti, I. Filippini, A. Capone, “Mm-wave Initial Access: A Context Information Overview”, Chania, Greece, 06/12 - 06/15/2018
- Invited lecturer at the PhD School “Energy Generation and Storage: The case of Energy Harvesting in Mobile Networks” organized within MSCA-ITN-ETN SCAVENGE Project, at University of Strathclyde, Glasgow, UK, 05/29 - 06/2/2017
- Invited lecturer at International Summer School “Game Theory and Telecommunication” for PhD students organized by Lake Como School of Advanced Studies, Campione d’Italia, Como, Italy, 09/07 - 09/12/2014

TEACHING

- Fall 20: **Traffic Theory**
Instructor, graduate course for Telecommunication Engineering M.Sc. program at Politecnico di Milano, 10 ECTS
- Spring 20: **Digital Technologies 2**
Instructor, undergraduate course for Management and Production Engineering B.Sc. program at Politecnico di Milano, 5 ECTS
- Fall 19: **Traffic Theory**
Instructor, graduate course for Telecommunication Engineering M.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 18: **Traffic Theory**
Instructor, graduate course for Telecommunication Engineering M.Sc. program at Politecnico di Milano, 10 ECTS

- Spring 18: **Fundamentals of Internet and Networks**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Spring 17: **Fundamentals of Internet and Networks**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 16: **Planning and Resource Management Models in Wireless Networks**
Instructor, doctoral course for Information Engineering PhD program at Politecnico di Milano, 5 ECTS
- Spring 16: **Fundamentals of Internet and Networks**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 14: **Communication Networks and Internet**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 13: **Communication Networks and Internet**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 12: **Communication Networks and Internet**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Politecnico di Milano, 5 ECTS
- Spring 12: **Fundamentals of Networks and Telecommunications**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Università degli Studi di Bergamo, Italy, 9 ECTS
- Spring 11: **Fundamentals of Networks and Telecommunications**
Instructor, undergraduate course for Computer Engineering B.Sc. program at Università degli Studi di Bergamo, Italy, 9 ECTS
- Fall 16: **Traffic Theory**
Teaching Assistant, graduate course for Telecommunication Engineering M.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 14: **Traffic Theory**
Teaching Assistant, graduate course for Telecommunication Engineering M.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 13: **Traffic Theory**
Teaching Assistant, graduate course for Telecommunication Engineering M.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 12: **Traffic Theory**
Teaching Assistant, graduate course for Telecommunication Engineering M.Sc. program at Politecnico di Milano, 10 ECTS

- Fall 10: **Fundamentals of Telecommunications Networks**
Teaching Assistant, undergraduate course for Telecommunications Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 07: **Fundamentals of Telecommunications Networks**
Teaching Assistant, undergraduate course for Telecommunications Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 06: **Fundamentals of Telecommunications Networks**
Teaching Assistant, undergraduate course for Telecommunications Engineering B.Sc. program at Politecnico di Milano, 10 ECTS
- Fall 05: **Fundamentals of Telecommunications Networks**
Teaching Assistant, undergraduate course for Telecommunications Engineering B.Sc. program at Politecnico di Milano, 10 ECTS

THESES SUPERVISED

Co-advised 22 master students and 5 PhD students.

Last advised students

- Bibo Zhang – PhD 2022 “Reinforcement Learning techniques in 5G Networks”
- Achilles Kiwanuka Machumilane – MS 2020 “DASH video streaming in Integrated Satellite-5G networks”
- Mert Yuksel – MS 2019 “Optimization Algorithms for 5G Millimeter-wave Access Networks with Integrated Access and Backhauling”
- Andres Herrera Alvarez – MS 2018 “LoRa and Narrow-band IoT Deployment and Radio Access Performance”
- Giuseppe Maldari – MS 2018 “Node Relocation in 5G Mm-wave Access Networks”
- Mohammad Nourifar – MS 2018 “Blockage-robust 5G mm-wave access network planning”
- Raffaele Pico – MS 2018 “Energy saving modelling and prediction in LTE networks”
- Fedor Zhukov – MS 2017 “3D directional cell discovery for mm-wave access”
- Johanna Bolivar Gonzalez – MS 2017 “Cell discovery algorithms for mm-wave access of highly directional devices”
- Nicola Rosada – MS 2016 “Clustered robust routing solutions in software defined networks”

EDITORIAL WORK AND SYNERGISTIC ACTIVITIES

Editorial board of:

- Elsevier Computer Networks (2017-)

- Wiley/Hindawi Wireless Communications and Mobile Computing (2016-2018)

Publicity Chair for: IEEE LANMAN 2017, IEEE MASS 2020.

Web Chair for IFIP/IEEE WONS 2011.

TPC member of:

- 2021: IEEE INFOCOM,
- 2020: IEEE INFOCOM, 5G World Forum
- 2019: IEEE INFOCOM, 5G World Forum, IEEE Globecom
- 2018: IEEE INFOCOM, IEEE VTC Spring, 5G World Forum, ICC Workshop - WDN-5G, IEEE Globecom
- 2017: IEEE INFOCOM, IEEE CSCN, IEEE Globecom
- up to 2015: IEEE VNC 2011, IEEE VNC 2012, IEEE ICC 2012, ICCVE 2013, IEEE NTMS 2014, IEEE GreenComm 2014

Scientific committee member of the Annual GTTI (Italian TLC and ICT academic association)
Award for Italian PhD Theses in the field of Communication Technologies: 2015, 2016, 2017, 2018.

Examiner/Opponent of Ph.D. Thesis:

- Lorela Cano, *Game-theoretic frameworks for the techno-economic aspects of infrastructure sharing in current and future mobile networks*, Polytechnique Montréal, Canada, April 2020
- Marco Giordani, *The Potential of Millimeter Waves for Future 5G Cellular and Vehicular Networks*, Università degli Studi di Padova, Italy, October 2019
- Nahla Ali, *Design and Experimental Evaluation of Advanced Smart Grid Infrastructure Using Concurrent Transmitters in Multi-Hop Wireless Networks*, Università degli Studi di Brescia, Italy, June 2018
- Yufeng Duan, *Cooperative Communications for 5G Networks*, Politecnico di Torino, Italy, March 2017

Regular reviewer for the following international journals:

- IEEE Journals/Magazines: Communication Magazine, Transactions on Mobile Computing, Transactions on Vehicular Technology, Transactions on Wireless Communications, Transactions on Networking, Transactions on Parallel and Distributed Systems, Transactions on Communications, Communications Magazine, Journal on Selected Areas in Communications, Wireless Communications Letters, Access, Transactions on Emerging Telecommunications Technologies
- Elsevier Journals: Pervasive and Mobile Computing, Ad hoc Networks, Computer Networks, Computer Communications

- Springer Journals: Wireless Networks

Reviewer for the main international networking conferences, like INFOCOM, GLOBECOM, SECON, MASS, PIMRC, etc.

Department, Faculty, and Study Program activities:

- MATLAB and Networking activities for high-school students involved in “Alternanza Scuola Lavoro” program at Dipartimento di Elettronica, Informazione e Bioingegneria of Politecnico di Milano: 2019 winter and summer editions, 2020 winter edition
- Webmaster of the Telecommunication Engineering Study Program web page at Politecnico di Milano
- Co-organizer of CommTech Talks: a series of seminars hold by industrial speakers at Dipartimento di Elettronica, Informazione e Bioingegneria of Politecnico di Milano to discuss on hot topics in Telecommunication Engineering
- Instructor for hands-on activities at HI-TECH 2013 and 2014 for Telecommunication Engineering in Politecnico di Milano. HI-TECH is a program to bring high-school students together to live Politecnico di Milano and its labs by spending one week in the campus to develop a technical project.
- Tutor for DEI Open Labs 2013: Open Days of departmental research laboratories for high-school students.
- Collaborator in the design and realization of materials for Telecommunication Engineering Open Days (logo, flyers, roll-ups, flag banners, etc.)

RESEARCH INTERESTS

Networks: Wireless Sensor Networks, Wireless Mesh Networks, Cognitive Radio Networks, 4G/5G Networks, Software Defined Networks, Mm-wave Access Networks

Topics: MAC and Routing, Network Planning and Optimization, Performance Evaluation, Network Selection, Resource Allocation, Green Networking

Operation Research: Optimization, Mathematical Programming, Integer Programming, Computational Complexity, Heuristic Algorithms, Game Theory, Machine Learning

BACKGROUND, METHODOLOGIES AND SKILLS

Background and Methodologies: Networking, Wireless communications, Wireless multi-hop Network issues, Network planning and optimization, Mixed-integer mathematical programming, OPL/AMPL modeling, Game Theory, Machine Learning, Heuristic approaches, Performance Analysis, Stochastic Processes, Queueing Theory, Protocol design, and Algorithm implementation

Skills: CPLEX optimization solver, OPL/AMPL modeling and scripting, MATLAB, NS2 simulator, Omnet++ simulator, C/C++ programming, reporting languages, bash scripting, Linux system and network administrator, L^AT_EXword processing.

PRIVATE RESEARCH PROJECTS

- Huawei Technologies Italy, “DESIRABLE: integrateD accEsS backhaulIng with pRogrAmmaBLemEsh architecture”, (Co-PI, 09/2019 - 08/2020).
- Vodafone Italia, “Indicatori prestazioni di rete, panificazione radio e testbed sperimentale”, (Technical Coordinator “Modelli per il consumo energetico delle stazioni radio base”⁰, 09/2019 -).
- Huawei Technologies Italy, “Design and Operation of mmWave Mesh Network”, (Co-PI, 09/2018 - 08/2019).
- Vodafone Italia, “Indicatori prestazioni di rete, panificazione radio e testbed sperimentale”, (Technical Coordinator “Modelli per il consumo energetico delle stazioni radio base”⁰, 05/2018 - 03/2019).
- Vodafone Italia, “Indicatori prestazioni di rete, panificazione radio e testbed sperimentale”, (Technical Coordinator “Profilazione energetica ed algoritmi di risparmio energetico”⁰, 04/2017 - 12/2017).
- Huawei Technologies France, “ARTS: Anticipatory and Robust Traffic Management in Advanced Software Defined Networks”, (Co-PI, 12/2016 - 06/2018).
- Vodafone Italia, “Indicatori prestazioni di rete, panificazione radio e testbed sperimentale”, (Technical Coordinator “Profilazione energetica ed algoritmi di risparmio energetico”⁰, 10/2015 - 03/2016).
- Vodafone Italia, “Indicatori prestazioni di rete, panificazione radio e testbed sperimentale”, (Technical Coordinator “Profilazione energetica ed algoritmi di risparmio energetico”⁰, 08/2014 - 03/2015).
- Vodafone Italia, “Indicatori prestazioni di rete, panificazione radio e testbed sperimentale”, (Researcher, 05/2018 - 03/2019).
- Vodafone Italia, “Definizione e analisi di indicatori sintetici di prestazioni per sistemi HSUPA”, (Researcher, 10/2012 - 05/2013).
- Vodafone Italia, “Definizione e analisi di indicatori sintetici di prestazioni per sistemi HSDPA ed LTE”, (Researcher, 10/2012 - 07/2013).
- Vodafone Italia, “Progetto per l’individuazione di metodi innovativi a supporto della pianificazione radiomobile LTE”, (Researcher, 09/2012 - 12/2012).
- Vodafone Italia, “Analisi e validazione di modelli per la stima delle prestazioni di rete radiomobile per servizi dati ad alta velocità”, (Researcher, 03/2012 - 04/12).

⁰One of the about 5 parallel activities of a long-term framework contract

PUBLIC RESEARCH PROJECTS

- FP7-ICT-2013-EU-Japan, “MiWEBA - Millimetre-wave Evolution for Backhaul and Access”, (Researcher, 2013-2016).
- ICT-2011.9.3 - FET Young Explorers, “GreenEyes - Networked energy-aware visual analysis”, (Researcher, 2013-2014).
- Regione Lombardia, “Green ICT & ICT for Green”, (Researcher, 2011-2012).
- GreenTouch Consortium, “BCG² - Beyond Cellular Green Generation”, (Researcher, 2011-2015).
- European Network of Excellence EuroNF, “CAVE-NET - Context-aware information dissemination in vehicular networks”, (Researcher, 2010-2011).
- European Network of Excellence EuroNF, “FI-WI - Future integrated Access Architecture Based on optical and Broadband Wireless Technologies”, (Researcher, 2008-2009).

PUBLICATIONS [\[Google Scholar\]](#)[\[Scopus\]](#)

Bibliometrics (updated Jul 1st, 2020)

SCOPUS h-index: 18, Citations: 935 (h-index: 18, Citations: 885 w/o self citations)

Google Scholar h-index: 21, Citations: 1419

JOURNAL PAPERS

20. F. Devoti, I. Filippini, “[Planning mm-wave Access Networks under Obstacle Blockages: A Reliability Approach](#)”, to appear in *Transactions on Networking* **TBD**, Jun 2020 (pp. 1-13), IEEE/ACM.
19. D. Sanvito, I. Filippini, A. Capone, S. Paris, J. Leguay, “[Clustered Robust Routing for Traffic Engineering in Software-Defined Networks](#)”, *Computer Communications* **144**, Aug 2019 (pp. 175-187), Elsevier.
18. V. Sciancalepore, I. Filippini, V. Mancuso, A. Capone, A. Banchs, “[A Multi-Traffic Inter-Cell Interference Coordination Scheme in Dense Cellular Networks](#)”, *Transactions on Networking* **26(5)**, Oct 2018 (pp. 2361-2375), IEEE/ACM.
17. I. Filippini, V. Sciancalepore, F. Devoti, A. Capone, “[Fast Cell Discovery in mm-wave 5G Networks with Context Information](#)”, *Transactions on Mobile Computing* **17(7)**, Jul 2018 (pp. 1538-1552), IEEE.
16. A. Barkat, M.T. Kechadi, G. Verticale, I. Filippini, A. Capone, “[Green Approach for Joint Management of Geo-Distributed Data Centers and Interconnection Networks](#)”, *Journal of Network and Systems Management* **26(3)**, Jul 2018 (pp. 723-754), Springer.
15. L. Barletta, F. Borgonovo, I. Filippini, “[The Throughput and Access Delay of Slotted-Aloha with Exponential Backoff](#)”, *Transactions on Networking* **26(1)**, Feb 2018 (pp. 451-464), IEEE/ACM.

14. I. Filippini, A. Redondi, A. Capone, “[Beyond Cellular Green Generation: Potential and Challenges of the Network Separation](#)”, *Mobile Information Systems* **2017**, Feb 2017 (pp. 1-11), Hindawi.
13. A. Capone, S. D’Elia, I. Filippini, A. Redondi, M. Zangani, “[Modeling Energy Consumption of Mobile Radio Networks: An Operator Perspective](#)”, *Wireless Communications* **24(4)**, Aug 2017 (pp. 120-126), IEEE.
12. F. Devoti, I. Filippini, A. Capone, “[Facing the Millimeter-wave Cell Discovery Challenge in 5G Networks with Context-awareness](#)”, *Access* **4**, Dec 2016 (pp. 8019-8034), IEEE.
11. L. Barletta, F. Borgonovo, I. Filippini, “[Asymptotic Analysis of Backlog Estimates for Dynamic Frame Aloha](#)”, *Journal of Communications Software and Systems* **12(1)**, Mar 2016 (pp. 83-90), IEEE.
10. A. Redondi, M. Cesana, M. Tagliasacchi, I. Filippini, G. Dan, V. Fodor, “[Cooperative Image Analysis In Visual Sensor Networks](#)”, *Ad Hoc Networks Journal* **28**, May 2015 (pp. 38-51), Elsevier.
9. S. Paris, F. Martignon, I. Filippini, L. Chen, “[An Efficient Auction-based Mechanism for Mobile Data Offloading](#)”, *Transactions on Mobile Computing* **14(8)**, August 2015 (pp. 1573-1586), IEEE.
8. F. Martignon, S. Paris, I. Filippini, L. Chen, A. Capone, “[Efficient and Truthful Bandwidth Allocation in Wireless Mesh Community Networks](#)”, *Transactions on Networking* **23(1)**, Feb 2015 (pp. 161-174), IEEE/ACM.
7. I. Filippini, M. Cesana, E. Ekici, “[A New Outlook on Routing in Cognitive Radio Networks: Minimum Maintenance Cost Routing](#)”, *Transactions on Networking* **21(5)**, Oct 2013 (pp. 1484-1498), IEEE/ACM.
6. E. Amaldi, A. Capone, M. Cesana, I. Filippini, “[Design of Wireless Sensor Networks for Mobile Target Detection](#)”, *Transactions on Networking* **20(3)**, Jun 2012 (pp. 784-797), IEEE/ACM.
5. I. Filippini, M. Cesana, “[Topology Optimization for Hybrid Optical/Wireless Access Networks](#)”, *Ad Hoc Networks* **8(6)**, Aug 2010 (pp. 614-625), Elsevier.
4. A. Capone, M. Cesana, D. De Donno, I. Filippini, “[Deploying Multiple Interconnected Gateways in Heterogeneous Wireless Sensor Networks: an Optimization Approach](#)”, *Computer Communications* **33(10)**, Jun 2010 (pp. 1151-1161), Elsevier.
3. A. Capone, G. Carello, I. Filippini, S. Gualandi, F. Malucelli, “[Routing, Scheduling and Channel Assignment in Wireless Mesh Networks: optimization models and algorithms](#)”, *Ad Hoc Networks* **8(6)**, Aug 2010 (pp. 545-563), Elsevier.
2. A. Capone, G. Carello, I. Filippini, S. Gualandi, F. Malucelli, “[Solving a Resource Allocation Problem in Wireless Mesh Networks: a Comparison Between a CP-based and a Classical Column Generation](#)”, *Networks* **55(3)**, May 2010 (pp. 221-233), Wiley.
1. E. Amaldi, A. Capone, M. Cesana, I. Filippini, F. Malucelli, “[Optimization Models and Methods for Planning Wireless Mesh Networks](#)”, *Computer Networks* **52(11)**, Aug 2008 (pp. 2159-2171), Elsevier.

BOOK CHAPTERS

1. A. Capone, I. Filippini, S. Gualandi, D. Yuan, *Resource Optimization in Multiradio Multi-channel Wireless Mesh Networks* in “MOBILE AD HOC NETWORKING: Cutting Edge Directions”, Second Edition, ed. by S. Basagni, M. Conti, S. Giordano, I. Stojmenovic, Wiley, 2013.

PATENTS

- A. Capone, I. Filippini, J. Leguay, S. Paris, D. Sanvito, Q. Cao, W. Chen, “**Devices and method for controlling network routing configurations**”, (PCT/EP2019/053098), Filed 8 Feb 2019, with HUAWEI TECHNOLOGIES CO., LTD.
- A. Capone, I. Filippini, J. Leguay, S. Paris, D. Sanvito, “**Controller and switch for traffic engineering in a software defined network**”, (International Patent WO 2019/210948 A1), 07 Nov. 2019, with HUAWEI TECHNOLOGIES CO., LTD.
- A. Capone, I. Filippini, J. Leguay, S. Paris, D. Sanvito, “**Apparatus and method for providing a robust routing configuration**”, (International Patent WO 2018/219420A1), 06 Dec. 2018, with HUAWEI TECHNOLOGIES CO., LTD.

CONFERENCE PAPERS

37. B. Zhang, F. Devoti, I. Filippini, “**RL-based Resource Allocation in mmWave 5G IAB Networks**”, *2020 Mediterranean Communication and Computer Networking Conference*, MedCom-Net 2020, Arona, Italy.
36. D. Sanvito, A. Marchini, I. Filippini, A. Capone,, “**CEDRO: an in-switch elephant flows rescheduling scheme for data-centers**”, *IEEE International Conference on Network Softwarization 2020*, NetSoft 2020, Ghent, Belgium.
35. F. Devoti, V. Sciancalepore, I. Filippini, X. Costa-Perez,, “**PASID: Exploiting Indoor mmWave Deployments for Passive Intrusion Detection**”, *39th Annual IEEE International Conference on Computer Communications 2020*, INFOCOM 2020, Beijing, China.
34. A. Tomaszewski, M. Pióro, D. Sanvito, I. Filippini, A. Capone, “**On Optimization of Semi-stable Routing in Multicommodity Flow Networks**”, *International Network Optimization Conference 2019*, INOC 2019, Avignon, France.
33. F. Devoti, I. Filippini, A. Capone, “**Mm-wave Initial Access: A Context Information Overview**”, *IEEE 19th International Symposium on A World of Wireless, Mobile and Multimedia Networks 2018*, WoWMoM 2018, Chania, Greece.
32. D. Sanvito, D. Moro, M.Gulli, I. Filippini, A. Capone, A. Campanella, “**ONOS Intent Monitor and Reroute service: enabling plug&play routing logic**”, *IEEE International Conference on Network Softwarization 2018*, NetSoft 2018, Montreal, Canada.
31. D. Sanvito, I. Filippini, A. Capone, S. Paris, J. Leguay, “**Adaptive Robust Traffic Engineering in Software Defined Networks**”, *IFIP Networking Conference 2018*, Networking 2018, Zurich, Switzerland.

30. M. Nourifar, F. Devoti, I. Filippini, “[Blockage-Robust 5G mm-Wave Access Network Planning](#)”, *IFIP Networking Conference 2018*, Networking 2018, Zurich, Switzerland.
29. L. Barletta, F. Borgonovo, I. Filippini, “[The Access Delay of Aloha with Exponential Back-off Strategies](#)”, *IEEE IFIP Annual Mediterranean Ad Hoc Networking Workshop 2016*, MedHocNet 2016, Vilanova i la Geltrú, Spain.
28. L. Barletta, F. Borgonovo, I. Filippini, “[The S-Aloha Capacity: Beyond the \$e^{-1}\$ Myth](#)”, *IEEE International Conference on Computer Communications 2016*, INFOCOM 2016, San Francisco, California, USA.
27. A. Capone, I. Filippini, V. Sciancalepore, D. Tremolada, “[Obstacle Avoidance Cell Discovery using mm-waves Directive Antennas in 5G Networks](#)”, *The 9th International WDN Workshop on Cooperative and Heterogeneous Cellular Networks for 5G 2015*, WDN-CN2015 Autumn, Hong Kong.
26. L. Barletta, F. Borgonovo, I. Filippini, “[Asymptotic Analysis of Schoute’s Estimate for Dynamic Frame Aloha](#)”, *International Conference on Software, Telecommunications and Computer Networks 2015*, SoftCOM 2015, Split, Croatia.
25. A. Capone, S. D’Elia, I. Filippini, M. Zangani, “[Measurement-based Energy Consumption Profiling of Mobile Radio Networks](#)”, *International Forum on Research and Technologies for Society and Industry 2015*, RTSI 2015, Torino, Italy.
24. A. Capone, I. Filippini, V. Sciancalepore, “[Context Information for Fast Cell Discovery in mm-wave 5G Networks](#)”, *The European Wireless Conference 2015*, EW 2015, Budapest, Hungary.
23. V. Sciancalepore, I. Filippini, V. Mancuso, A. Capone, A. Banchs, “[A semi-distributed mechanism for Inter-cell Interference Coordination exploiting the ABSF paradigm](#)”, *IEEE International Conference on Sensing, Communication, and Networking 2015*, SECON 2015, Seattle, Washington, USA.
22. R.J. Weiler, W. Keusgen, I. Filippini, A. Capone, “[Split Control Plane Functionality in Millimeter-Wave Overlay Access](#)”, *International Conference on 5G for Ubiquitous Connectivity 2014*, 5GU 2014, Levi, Finland.
21. R.J. Weiler, M.Peter, W. Keusgen, E. Calvanese Strinati, A. De Domenico, I. Filippini, A. Capone, I. Siaud, A. Ulmer-Moll, A. Maltsev, T. Haustein, K. Sakaguchi, “[Enabling 5G Backhaul and Access with millimeter-waves](#)”, *European Conference on Networks and Communications 2014*, EuCNC 2014, Bologna, Italy.
20. L. Barletta, F. Borgonovo, I. Filippini, “[Analysis of Dynamic Frame Aloha with Frame Restart](#)”, *IEEE IFIP Annual Mediterranean Ad Hoc Networking Workshop 2014*, MedHocNet 2014, Piran, Slovenia.
19. A. Redondi, I. Filippini, A. Capone, “[Context Management in Energy-efficient Radio Access Networks](#)”, *Tyrrhenian International Workshop on Digital Communications 2013*, TIWDC 2013, Genova, Italy.
18. I. Filippini, M. Cesana, I. Malanchini, “[Competitive Spectrum Sharing in Cognitive Radio Networks: A Queuing Theory based Analysis](#)”, *International Black Sea Conference on Communications and Networking 2013*, BlackSeaCom 2013, Batumi, Georgia.

17. S. Paris, F. Martignon, I. Filippini, L. Chen, “[A Bandwidth Trading Marketplace for Mobile Data Offloading](#)”, *IEEE International Conference on Computer Communications 2013*, INFOCOM 2013 (Mini-conference), Turin, Italy.
16. U. Barth, A. Capone, I. Filippini, B. Gloss, “[Rethinking Cellular System Architecture for Breaking Current Energy Efficiency Limits](#)”, *IFIP Conference on Sustainable Internet and ICT for Sustainability 2012*, SustainIT 2012, Pisa, Italy.
15. S. Paris, F. Martignon, I. Filippini, A. Capone, “[A Truthful Auction for Access Point Selection in Heterogeneous Mobile Networks](#)”, *IEEE International Conference on Communications 2012*, ICC 2012, Ottawa, Canada.
14. A. Capone, A.F. dos Santos, I. Filippini, B. Gloss, “[Looking Beyond Green Cellular Networks](#)”, *IEEE International Conference on Wireless On-Demand Network Systems and Services 2012*, WONS 2012, Courmayeur, Italy.
13. I. Filippini, F. Malandrino, G. Dan, M. Cesana, C. Casetti, I. Marsh, “[Non-cooperative RSU Deployment in Vehicular Networks](#)”, *IEEE International Conference on Wireless On-Demand Network Systems and Services 2012*, WONS 2012, Courmayeur, Italy.
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