Giuseppe Caso

CV Date: **October 2017**

Personal Information

First Name: **Giuseppe**
Last Name: **Caso**

IEEE Member since 2012

Education

PostDoctoral Fellow **December 2015 – ongoing**
DIET Department
Sapienza University of Rome, Italy
Supervisor: Prof. Maria-Gabriella Di Benedetto
Focus: 5G Communications, Cognitive Radio & Context-aware Networking, Ultra Wide Band Communications, and Indoor Positioning Systems

Ph.D., Information and Communication Engineering **November 2012 – May 2016**
DIET Department
Sapienza University of Rome, Italy
Supervisor: Dr. Luca De Nardis
Focus: Cognitive Radio Networking and Indoor Positioning Systems
Thesis: Offine and Online strategies for accurate, low-complexity WiFi Fingerprinting Indoor Positioning Systems

M.Sc., Electrical Engineering **November 2009 – July 2012**
Sapienza University of Rome, Italy
Leibniz University Hannover, Germany
Thesis: Cooperative Spectrum Sensing and Network Organization in Mobile Cognitive Radio Networks
Advisor: Dr. Luca De Nardis (Sapienza)
Co-advisor: Dr. Maria-Dolores Perez Guirao (Leibiniz)
Area of Study: Cognitive Radio
Grade: 110/110

B.Sc., Electrical Engineering **November 2005 – June 2009**
Federico II University of Naples, Italy
Thesis: Security of Critical Information Infrastructures: the importance of establishing appropriate metrics and monitoring procedures
Advisor: Prof. Leopoldo Angrisani
Co-advisors: Dr. Mattia Siciliano – Dr. Gustavo Mastrobuoni
Area of Study: Critical Information Infrastructures
Grade: 105/110

Publications

Journal Papers

1. **Caso, G.**; De Nardis, L.; Di Benedetto, M.G.; "Toward Contex-Aware Dynamic Spectrum Management for 5G" – in IEEE Wireless Communications, 2017, vol. 24 (5), pp. 38-43; doi: 10.1109/MWC.2017.1100090.
2. **Caso, G.**; De Nardis, L.; T. Puong Le, M.; Maschietti, F.; Fiorina, J.; Di Benedetto, M.G.; "Performance Evaluation of Non-prefiltering vs. Time Reversal prefiltering in distributed and uncoordinated IR-UWB Ad-Hoc networks" – in Springer Mobile Networks and Applications, 2017; doi:10.1007/s11036-017-0829-6.
3. **Caso, G.**; De Nardis, L.; "Virtual and Oriented WiFi Fingerprinting Indoor Positioning based on Multi-Wall Multi-Floor Propagation Models'' – in Springer Mobile Networks and Applications, 2016; doi: 10.1007/s11036-016-0749-x.
4. **Caso, G.**; De Nardis, L.; Di Benedetto, M.-G.; "A Mixed Approach to Similarity Metric Selection in Affinity Propagation-Based WiFi Fingerprinting Indoor Positioning" – in MDPI Sensors, 2015, vol. 15 (11), pp. 27692-27720; doi:10.3390/s151127692.

Conference Proceedings

1. Lemic, F.; Handziski, V.; **Caso, G.**; Crombez, P.; De Nardis, L.; Wolisz, A.; Van Haute, T.; De Poorter, E.; "Toward Extrapolation of WiFi Fingerprinting Performance Across Environments" – in Mobile Computing Systems and Applications (HotMobile'16), ACM International Workshop on, Feb. 2016.
2. Lemic, F., Handziski, V., **Caso, G.**; De Nardis, L.; Wolisz, A.; "Enriched Training Database for Improving the WiFi RSSI-based Indoor Fingerprinting Performance" – in Consumer Communications & Networking Conference (CCNC'16), IEEE International Conference on, Jan. 2016.
3. **Caso, G.**; De Nardis, L.; "On the Applicability of Multi-Wall Multi-Floor propagation models to WiFi Fingerprinting Indoor Positioning" – in Future access enablers of ubiquitous and intelligent infrastructures (FABULOUS'15), EAI International Conference on, Sept. 2015.
4. **Caso, G.**; De Nardis, L.; Di Benedetto, M.-G.; "Frequentist Inference for Wifi Fingerprinting 3D Indoor Positioning" – in Communications (ICC'15), Workshop ANLN'15, IEEE International Conference on, June 2015.
5. **Caso, G.**; Soleimani, H.; De Nardis, L.; Tosti, A.; Di Benedetto, M.-G.; SENSIC: Mobility-aware Cluster-based Cooperative Spectrum Sensing for Cognitive Radio Networks – in Ultra-Wideband (ICUWB'14), IEEE International Conference on, Sept. 2014.
6. Soleimani, H.; **Caso, G.**; De Nardis, L.; Di Benedetto, M.-G.; Ultra Wideband and Bluetooth detection based on energy features – in Ultra-Wideband (ICUWB'14), IEEE International Conference on, Sept. 2014.
7. **Caso, G.**; De Nardis, L.; Ferrante, A.; Di Benedetto, M.-G.; Cognitive Indoor Positioning in TV White Spaces – in Indoor Positioning and Indoor Navigation (IPIN'13), IEEE-GRSS International Conference on, Oct. 2013.
8. **Caso, G.**; De Nardis, L.; Ferrante, G.C.; Di Benedetto, M.-G.; Cooperative Spectrum Sensing based on Majority decision under CFAR and CDR constraints – in Personal Indoor and Mobile Radio Communications (PIMRC'13), Workshop MACNET'13, IEEE International Symposium on, Sept. 2013.
9. **Caso, G.**; De Nardis, L.; Holland, O.; Di Benedetto, M.-G.; Impact of Spatio-Temporal Correlation in Cooperative Spectrum Sensing for Mobile Cognitive Radio Networks – in Wireless Communication Systems (ISWCS'13), Workshop CRAFT'13, International Symposium on, Aug. 2013.

Book Chapters

1. **Caso, G.**; De Nardis, L.; Di Benedetto, M.-G.; "Offline and Online strategies for low-complexity WiFi Fingerprinting Indoor Positioning Systems" – in J. Conesa, R. Montoliu, A.

Pérez, J. Torres-Sospedra (eds.), Using geographical and fingerprinting data to create systems for indoor positioning and indoor/outdoor navigation: challenges, experiences and technology roadmap, *to appear* in Elsevier International Publishing, series "Intelligent Data-Centric Systems", 2017/2018.

2. **Caso, G.**; T. P. Le, M.; De Nardis, L.; Di Benedetto, M.-G.; "Non-Cooperative and Cooperative Spectrum Sensing for 5G Cognitive Networks" – in W. Zhang (eds.), Handbook of Cognitive Radio, Springer International Publishing, 2017.
3. **Caso, G.**; De Nardis, L.; Holland, O.; Simulation of Cognitive Radio Networks in OMNeT++ - in M.-G. Di Benedetto, A.F. Cattoni, J. Fiorina, F. Bader, L. De Nardis (eds.), Cognitive radio and Networking for Heterogeneous Wireless Networks, Springer International Publishing, 2015.
4. **Caso, G.**; De Nardis, L.; Thobaben, R.; Di Benedetto M.-G.; Cooperative Sensing of Spectrum opportunities – in O.Holland, H. Bogucka, A. Medeisis (eds.), Opportunistic Spectrum Sharing and White Spaces Access: The Practical Reality, Wiley International Publishing, 2015.

Teaching

1. **2015 – Ongoing** – Teaching Activities for the course "Ultrawide-band Radio Fundamentals" at Sapienza University of Rome
2. **2014 – Ongoing –** Teaching Assistant for the online course on Electrical Communications of the International Telematic University UNINETTUNO (Instructors: Prof. Roberto Garello (until 2015), Antonio Meloni (since 2016))
3. **2012 – Ongoing –** Teaching Assistant for two courses, Electrical Communications (I&II) at Sapienza University of Rome (Instructor: Prof. Maria-Gabriella Di Benedetto)

Visiting and Scholarship

1. **2015 (6 Months)** – Visiting Researcher
   Telecommunication Networks Group (TKN) – Department of Telecommunication Systems
   Faculty of Electrical Engineering and Computer Science
   Technische Universitaet Berlin (TUB) (Germany)
   Topic: "WiFi Fingerprinting Indoor Positioning"
2. **2012 (1 Month)** – Visiting Researcher – Short Term Scientific Mission (STSM) granted by COST Action IC0902
   Institute for Telecommunications – King's College London (UK)
   Topic: "Mobility Modeling in Cooperative Spectrum Sensing Applications"
3. **2011 – 2012** – Erasmus scholarship
   M.Sc. Thesis at the Institut für Kommunikationstechnik – Leibniz University Hannover (Germany) **(8 Months)**
4. **2010–2011** – Scholarship "Mobility and abroad Thesis" – Faculty of Engineering, Computer Science and Statistics – Sapienza University of Rome

Honors and Other Activities

1. **2017** – Finalist with Mai T. P. Le, Luca De Nardis e Maria-Gabriella Di Benedetto at the eWINE Grand Challenge, during the EuCNC'2017 conference, with project proposals "Network Access: Smart Detection and QoE-based selection (NASDAQ)", and "Indoor Positioning by UWB Fingerprinting (I-PUF)"
2. **2016** – Technical Program Committee for IEEE ICC 2016 (Cognitive Radio and Networks Symposium)
3. **2016** – Invited Speaker at Symposium "Challenges of Fingerprinting in Indoor Positioning and Navigation" organized by Universitat Oberta de Catalunya (UOC)
4. **2015** – Finalist with Dr. Eng. Luca De Nardis and Prof. Maria-Gabriella Di Benedetto at Mobile Computing and Networking (MobiCom'15), ACM International Conference on, App

Contest, for developing the SPinV – Supporting People indoor: a navigation Venture application, Sept. 2015.

5. **2015** – Technical Program Committee for IEEE Vehicular Technology Conference 2015 Spring (VTC2015-Spring) (Track: Spectrum Efficient Management, Sensing and Cognitive Radio)
6. **2014 – Ongoing** – Reviewer for IET Electronics Letters, IEEE Transactions on Vehicular Technology, Elsevier Ad Hoc Networks Journal, MDPI Sensors, Springer Mobile Networks and Applications, IEEE Photonics Technology Letters, Hindawi Wireless Communication and Mobile Computing, Sage International Journal of Distributed Sensor Networks, and several international IEEE conferences.
7. **2013** – Session chair at ISWCS 2013 and IPIN 2013 conferences
8. **2012 – 2013** – Involved in Network of Excellence (NoE) ACROPOLIS, COST Action IC0902 and COST TERRA

Personal Skills and Competences

Native Language: **Italian**
Others Languages:

- **English** (Self-assessment C1/C2)
- **German** (Self-assessment A1/A2)

ECDL – European Computer Driving License (since 2009).
Programming: MATLAB, C++, LATEX, OMNeT++, PHP, Eclipse.
Analytical Skills: Analog/Digital and Wired/Wireless Communications, Dynamic Spectrum Access, Cognitive Radio Networks, Cellular Networks, Heterogeneous Networks, Clustering, Mobility Models, Indoor Positioning, Indoor Propagation Modeling, Ultra Wide Band communications, Data Analysis and Statistical Inference, Databases.