

CV summary

Dr. Domenico Giustiniano is Research Associate Professor (tenured) at IMDEA Networks Institute, Madrid, Spain, and leader of the Pervasive Wireless Systems group. Before joining IMDEA in 2013, he was a Senior Researcher and Lecturer at ETH Zurich. He also worked for a total of four years as Post-Doctoral Researcher in industrial research labs (Disney Research Zurich and Telefonica Research Barcelona). He holds a PhD in Telecommunications and Microelectronic Engineering from the University of Rome Tor Vergata (2008).

The original contributions Dr. Giustiniano has made to his field of research are exemplified by publications in international and highly competitive conference venues such as ACM MobiCom (4), ACM Mobisys (2), ACM Mobihoc, ACM CoNEXT (9), IEEE INFOCOM (6), ACM/IEEE IPSN (5), ACM ICNP, ACM HotNets, and journals such as IEEE Journal on Selected Areas in Communications (3), IEEE/ACM Transactions on Networking (4) and IEEE Transactions on Wireless Communications. Dr. Giustiniano is leader of the OpenVLC project, an open-source platform for research in visible light communication networks and co-founder of the non-profit Electrosense association, a crowd-sourcing initiative to collect and analyse spectrum data. He has been the project coordinator of the H2020 European Training Network ENLIGHT'EM on low-energy Visible Light Communication for IoT (2019-2023). He has been General Vice-Chair of ACM Mobicom 2023, General Chair of EWSN 2018 and IFIP/IEEE SustainIT 2015, and regularly serves as TPC member in top conferences such as ACM Mobicom, ACM Conext and IEEE INFOCOM. Dr. Domenico Giustiniano is senior member of IEEE and ACM societies.

Contact Information

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Professional Experience

IMDEA Networks Institute, Madrid, Spain

Research Associate Professor (tenured)

February, 2016 - today

Group leader, currently managing a group of 2 PostDoc, five PhD Students and one engineer. Coordinator of several international and national research projects with funding from public agencies and industry. Leader of the open-source openvlc.org (<http://openvlc.org>) initiative, and co-funder and board member of the non-profit Electrosense association (<https://electrosense.org>). Co-founder of the spin-off SensoryFi, with technology researched and developed at IMDEA.

Research Assistant Professor (tenure-track)

November, 2013 - January, 2016

ETH Zurich, TIK Lab, Zurich, Switzerland

Senior Researcher and Lecturer

April, 2012 - October, 2013

Lecturer of courses for master students. Investigation of the optimal strategy to distribute a content from the cloud to interested users for opportunistic dissemination. Algorithms and methods to minimize the communication delay in time-critical operations with flying robots. Design and evaluation of chip-level link quality estimators and jamming detectors. Investigation of time-based indoor localization techniques based on WiFi technology.

Disney Research, The Walt Disney Company, Zurich, Switzerland

PostDoctoral Researcher

May, 2010 - March, 2012

Research to exploit low-power LEDs as transceivers for visible light communication, and design and implementation of half-duplex

channel access MAC protocol with collision detection and flickering avoidance. Devised a solution that allows accuracies in the distance estimation between two WiFi devices below 1 – 2 m with standard compliant off-the-shelf 802.11 hardware and driver-based solutions, with limited number of samples needed for convergence.

Telefonica Research, Scientific Group, Telefonica Cooperation, Barcelona, Spain

PostDoctoral Researcher

March, 2008 - March, 2010

Research for analysis, implementation and evaluation of a 2.5 layer solution running on the client-side that efficiently increases the speed of residential Internet Access, aggregating the speed of multiple last-mile technologies using a single WiFi radio card, and addressing the fair allocation of resources. Prototype system with a realistic deployment at Telefonica Research facilities.

University of Palermo, Italy

Research Assistant

December, 2007 - February, 2008

Performed measurement studies and analysis for outdoor mesh networks. Implementation of customized 802.11 MAC FPGA platform to validate experimental results obtained during the PhD studies.

Hamilton Institute, Maynooth NUI, Ireland

Phd Intern

April, 2007 - November, 2007

Design and implementation of a cross-layer MAC/PHY approach to measuring and understanding the causes of missed 802.11 transmission opportunities in WLAN networks on a per-link basis. The estimator requires only local measurements, exploiting several features in the 802.11 protocol. The project was in collaboration with Intel Research Lab, Pittsburgh - CMU, PA, USA, visited during May 2007.

University of Tor Vergata, Rome, Italy

PhD candidate

December, 2004 - March, 2007

Analysis and investigation of the dependency of link-measurement results with respect to proprietary undocumented algorithms implemented in the employed vendor specific firmware/driver. Discovered experimentally low-level PHY functionalities in off-the-shelf chipsets that can affect the experimental validation of PHY-level studies, leading to biased experimental trials and/or to erroneous interpretation of network-level experimental results.

University of Palermo, Palermo, Italy

Research Assistant

December, 2003 - November, 2004

Proposed and evaluated an equalizer for HSDPA coding schemes able to provide spatial and frequency diversity at the receiver over frequency selective fading channels. Investigated an algebraic code characterized by an efficient decoding scheme, able to exploit almost all the spatial diversity of the system without using expensive maximum likelihood equalizations.

Education

IE Business School, Madrid, Spain

January 2021 - June 2021

IE Executive Education, Field Of Study: Management Fundamentals and Skills for Scientists and Researchers. US grading system in the eight exams: 7 x A+ (Honors), 1 x B+ (Excellence)

University of Tor Vergata, Rome, Italy

December 2004 - March 2008

Ph.D., Telecommunications and Microelectronic Engineering

- Dissertation Title: “*Channel quality estimation and impairment mitigation in 802.11 networks*”
- Advisor: Prof. Giuseppe Bianchi

University of Palermo, Italy

September 1997 - July 2003

MSc (Italian degree laurea, 5 years) in Electronics Engineering, major Telecommunication. Final grade: 110/110 cum laude.

- Dissertation Title: “*Space time diagonal codes using the Hadamard matrix and linear block codes*”
- Advisors: Prof. Bossert (University of Ulm) and Prof. Campanella (University of Palermo)

Master Thesis at the TAIT Department, University of Ulm, Germany.

Research Projects - H2020 and other international calls

“SOMIRO - Soft Milli-robots”. Funded by EU H2020 ICT-47-2020, wireless robotic surface - Total project: 2,992k Euro, Granted for IMDEA: **349k Euro**. Role: IMDEA Principal Investigator. 2021-2024

“LOCUS - Localization and analytics on-demand embedded in the 5G ecosystem, for ubiquitous vertical applications”. Funded by EU H2020 ICT-20-2019-2020 - Total project: 5,999k Euro, Granted for IMDEA: **411k Euro**. Role: IMDEA Principal Investigator. 2019-2022

“ENLIGHT’EM - European Training Network in Low-energy Visible Light IoT Systems”. Funded by EU H2020-MSCA-ITN-2018 - Total project: 4.147k Euro, Granted for IMDEA: **735.8k Euro**. Role: Project coordinator. 2019-2023

“SOCRATES - Large Scale Collaborative Detection and Location of Threats in the Electromagnetic Space”. Funded by NATO Science for Peace and Security - Total project: 350k Euro, Granted for IMDEA: **115.2k Euro**. Role: Project coordinator. 2018-2021

“Location-aware MAC scheduling in Mobile and Dense Networks”. Funded by H2020 Future Internet Research & Experimentation (Fire) - Wishful 4-th Open Call. - Granted: **37.5k Euro**. Role: Project coordinator. 2017

“Flex5Gware - Flexible and efficient hardware/software platforms for 5G network elements and devices”. Funded by the EU under call H2020-ICT-2014-2. Granted: **251k Euro**. Role: IMDEA co-Principal Investigator. 2015-17

“mmMAGIC - Millimetre-Wave Based Mobile Radio Access Network for Fifth Generation Integrated Communications”. Funded by the EU under call H2020-ICT-2014-2. Granted: **384k Euro**. Role: IMDEA co-Principal Investigator. 2015-17

Research Projects - Industrial grants

“SpectrumCop programme”. Funded by Armasuisse – Science and Technology. - Yearly Grants from 2014 to 2023. Total granted: **984.5 kEuro**. Role: Project coordinator. 2014-2023.

Projects for supporting Spin-Off

“SensoryFi”. Funded by Community of Madrid for supporting new startups. - Granted: 80k Euro. Role: Co-PI (together with the three co-founders of the spin-off LiFi4Food). 2023

EIT Seedbed Incubator Programme for LiFi4Food product. Role: Co-PI. Granted: 6k Euro for Market discovery, 2023

Research Projects National and Regional calls

“6G-Enabled Localization and Sensing Analytics (6G-ELSA)”. Funded by Spanish Ministry of Science, Innovation and Universities. - Granted for IMDEA: **100k Euro**. Role: Project coordinator, together with Prof. Joerg Widmer. 2023-2025

“6G Technology Enablers for Integrated Communication and Sensing (ENABLE-6G)”. Funded by Spanish Ministry of Science, Innovation and Universities. - Total project: 1.762k Euro, Granted for IMDEA: **527k Euro**. Role: Project coordinator. 2022-2024

“Contact Tracing with 5G and Beyond Networks (CONTACT-CM)”. Funded by Ministry of Education and Research, Region of Madrid. - Granted for IMDEA: **1,257k Euro**. Role: Project coordinator. 2020-2022

“Anomalies in the wireless spectrum”. Funded by Ministry of Education and Research, Region of Madrid for hiring a PostDoc researcher. - Granted: **35k Euro**. Role: PI. 2019

“PinPoint5G+: Accurate, Pervasive and Low-Latency Positioning to Innovate 5G Networks and Beyond”. Funded by Spanish Ministry of Science, Innovation and Universities. - Granted for IMDEA: **192.5k Euro**. Role: Project coordinator, together with Prof. Joerg Widmer. 2019-2021

“Advanced Technologies to Enhance the Intelligence in 5G Networks (TAPIR-CM)”. Funded by Technology 2018 programme of Region of Madrid, Spain. - Total project: 820k Euro, Granted for IMDEA: **453.6k Euro**. Role: Project coordinator. 2019-2023

Funding from the University of Carlos III for the organization of conferences (Ayudas para la organización de congresos y reuniones científicas UC3M) - Granted: **3k Euro**. 2017

“Hyperadapt - Modeling and Online Performance Optimization of Adaptive Networks”. Funded by Spanish National Call. Granted: **175k Euro**. Role: IMDEA researcher. 2015

Funding from the University of Carlos III for the organization of conferences (Ayudas para la organización de congresos y reuniones científicas UC3M) - Granted: **3.5k Euro**. 2014

“TIGRE5 – CM - Tecnologías Integradas de Gestión y operación de RED 5G”. Funded by the Region of Madrid. Granted: **182k Euro**. Role: IMDEA researcher. 2014

Research Projects - Other grants

“Swarmix” funded by ETH Zurich - Granted: **8.4k Euro**. Role: Project coordinator. 2013

Funding from SSNF Switzerland for the organization of a workshop - Granted: **15k CHF**. 2013. Project proposal written with Dr. K. A. Hummel.

Honors and Awards

- Finalist of the “EIT Seedbed Incubator” Programme with the “LiFi4Food” team
- **Leader of the team that won the “EIT Jumpstarter 2022” in the Food Category** with the “LiFi4Food” start-up idea. EIT Jumpstarter is one of Europe’s best and more competitive program for early-stage start-ups. Final held on November 29, 2022, Krakow, Poland. The original number of teams was 210.
- **Best Student Paper Award** at IEEE NFV-SDN, November 2022.
- PassiveLiFi has been **covered by several media outlets**: Hackster, El Mundo (Largest newspaper in Spain) and ABC newspaper, Stacey on IoT, TechXplore, AzoSensors, ElectronicsForu. Furthermore, TeleMundo covered the news with an interview to the team. 2022
- Cited as **one of the 5 most prolific authors in ACM CoNEXT** conference in the report of 50 years of ACM Special Interest Group on Data Communications, SIGCOMM (published at Computer Communication Review, October 2019)
- **Cyber Award** for outstanding scientific contribution in Cyberspace and Information research program of Armasuisse Science and Technology. 3rd place in 2018, 2nd place in 2017, 2016, 2015.
- **Distinguished TPC Member Award** of the IEEE Infocom Technical Program Committee. Years: 2022, 2018, 2017, 2016
- **Best Paper Award Runner-up** at ACM CoNEXT ’16, December 2016.
- **Best Student Paper Award** at IEEE PIRMC ’16, September 2016.
- **First prize at Innovation & Entrepreneurship International Competition**, Munich division. June 2016. Award shared with PhD student Qing Wang.
- **Most Entertaining Video Award, and Nomination for the best video and best robot video** at the 10th AAAI Video Competition, Phoenix, February 12-17, 2016. Awarded to the video: Finding Linda - A Search and Rescue Mission by SWARMIX, SWARMIX project team.
- **Fellowship** ‘MARIE CURIE’ AMAROUT Europe Programme, funded by: European Union. ICT Programme FP7-PEOPLE CO-

FUND. November 2013.

- **Best Paper Award** at IFIP Wireless Days '12, November 2012.

- Disney Research, 2 **Disney Inventor Awards**, April 2012

- **Best Project Award** of 2010 Telefonica R&D centers for the innovation and visibility to the company and versus the clients.

- **Fellowship** for the PhD studies from the region of Lazio, Italy. Years: 2006 and 2007.

- **EU Grant** for Erasmus studies at the University of Ulm, 2002.

- **Grants** from the University of Palermo for MSc degree studies. 1999, 2000, 2001, 2002. **Grant** for English language study in UK. 2001.

Book chapters

Co-author of three chapters of the book “Positioning and Location-based Analytics in 5G and Beyond”, (Introduction and Fundamentals; Positioning Methods; Standardization in 5G and 5G Advanced Positioning), *John Wiley & Sons Inc*, October 2023

Journal Articles

S. Eleftherakis, G. Santaromita, M. Rea, X. Costa, D. Giustiniano, “SPRING+: Smartphone Positioning from a Single WiFi Access Point”, *IEEE Transaction on Mobile Computing*, February 2024.

D. Frometa, B. Genoves, G. Martena, R. Bian, H. Haas, D. Giustiniano, “A reinforcement learning algorithm for handover decision-making in hybrid LiFi and WiFi networks”, *Journal of Optical Communications and Networking*, January 2024

Y. Lizarribar, D. Giustiniano, G. Bovet, V. Lenders, “SkyPos: Real-world evaluation of self-positioning with aircraft signals for IoT devices”, *IEEE Journal on Selected Areas in Communications (J-SAC)*, January 2024.

S. Mir, B. Genoves, A. Varshney, D. Giustiniano, “LiFi for Low-Power and Long-Range RF Backscatter”, *IEEE/ACM Transaction on Networking*, December 2023

B. Genoves, S. Mir, D. Frometa, A. Galisteo, Q. Wang, D. Giustiniano, “Prototyping Visible Light Communication for the Internet of Things Using OpenVLC”, *IEEE Communication Magazine*, May 2023.

B. Genoves, J. Talavante, D. Frometa, S. Mir, D. Giustiniano, K. Obraczka, M. Loik, S. Childress, D. Wong, “Towards Sustainable Greenhouses Using Battery-Free LiFi-Enabled Internet of Things”, *IEEE Communication Magazine*, May 2023.

Y. Zeng, R. Calvo, D. Giustiniano, G. Bovet, and S. Banerjee, “Adaptive Uplink Data Compression in Spectrum Crowdsensing Systems”, *IEEE/ACM Transaction on Networking*, January 2023

S. Bartoletti, H. Wymeersch, T. Mach, O. Brunnegard, D. Giustiniano, P. Hammarberg, M. Furkan Keskin, J. Omar, S. Modarres Razavi, J. Ronnblom, F. Tufvesson, J. Widmer, N. Blefari Melazzi, “Positioning and Sensing for Vehicular Safety Applications in 5G and Beyond”, *IEEE Communication Magazine*, November 2021.

M. Rea, D. Giustiniano, P. Jimenez, Yago Lizarribar, J. Widmer, “Beam Searching for mmWave Networks with sub-6 GHz WiFi and Inertial Sensors Inputs: an experimental study”, *Elsevier Computer Networks*, September 2021.

D. Giustiniano, G. Bianchi, A. Conti, S. Bartoletti, and N. Blefari, “5G and beyond for contact tracing”, *IEEE Communication Magazine*, September 2021.

S. Bartoletti, L. Chiaraviglio, S. Fortes, T. Kennouche, G. Solmaz, G. Bernini, D. Giustiniano, J. Widmer, R. Barco, G. Siracusanò, A. Conti, and N. Blefari, "Location-based Analytics in 5G and Beyond", *IEEE Communication Magazine*, July 2021.

M. Rea, D. Giustiniano, "Location-aware Wireless Resource Allocation in Industrial-like Environment", *IEEE Transaction on Mobile Computing*, June 2021.

R. Calvo, H. Cordobes, M. Engel, M. Fuchs, P. Jain, M. Liechti, S. Rajendran, M. Schäfer, B. Van den Bergh, S. Pollin, D. Giustiniano, V. Lenders, "Electrosense+: Crowdsourcing Radio Spectrum Decoding using IoT Receivers", *Computer Networks*, June 2020.

J. Beysens, Q. Wang, A. Galisteo, D. Giustiniano, S. Pollin, "A Cell-free Networking System with Visible Light", *IEEE/ACM Transaction on Networking*, April 2020

S. Rajendran, W. Meert, and D. Giustiniano, V. Lenders, S. Pollin "Deep Learning Models for Wireless Signal Classification with Distributed Low-Cost Spectrum Sensors", *IEEE Transactions on Cognitive Communications and Networking*, September 2018.

Q. Wang, D. Giustiniano, M. Zuniga, "In Light and In Darkness, In Motion and In Stillness: A Reliable and Adaptive Receiver for the Internet of Lights", *IEEE Journal on Selected Areas in Communications (J-SAC)*, January 2018.

S. Rajendran, R. Calvo, M. Fuchs, B. Van den Bergh, H. Cordobes, D. Giustiniano, S. Pollin, Vincent Lenders, "Electrosense: Open and Big Spectrum Data", *IEEE Communication Magazine*, January 2018.

M. Rea, A. Fakhreddine, D. Giustiniano, V. Lenders, "Filtering noisy 802.11 time-of-flight ranging measurements from commoditized WiFi radios", *IEEE/ACM Transaction on Networking*, August 2017.

M. Asadpour, K. Hummel, D. Giustiniano, S. Draskovic, "Route or Carry: Motion driven Packet Forwarding in Micro Aerial Vehicle Networks", *IEEE Transactions on Mobile Computing*, March 2017.

Q. Wang, D. Giustiniano, "Intra-Frame Bidirectional Transmission in Networks of Visible LEDs", *IEEE/ACM Transactions on Networking*, December 2016.

V. Sciancalepore, D. Giustiniano, A. Banchs, A. Hossmann-Picu, "Offloading Cellular Traffic Through Opportunistic Communications: Analysis and Optimization", *IEEE Journal on Selected Areas in Communications (J-SAC)*, January 2016.

Q. Wang, D. Giustiniano, D. Puccinelli, "An Open-Source Research Platform for Embedded Visible Light Networking", *IEEE Wireless Communications*, April 2015.

M. Asadpour, B. Van den Bergh, D. Giustiniano, K. A. Hummel, S. Pollin, B. Plattner, "Micro Unmanned Aerial Vehicle Networks: An Experimental Analysis of Challenges and Opportunities", *IEEE Communication Magazine*, July 2014.

M. Spuhler, D. Giustiniano, V. Lenders, M. Wilhelm, and J. B. Schmitt, "Detection of Reactive Jamming in DSSS-based Wireless Communications", *IEEE Transactions of Wireless Communications*, March 2014.

D. Giustiniano, E. Goma, A. Lopez and G. Athanasiou, "Optimizing TCP Performance in Multi-AP Residential Broadband Connections via Mini-Slot Access", *Hindawi International Journal of Computer Networks and Communications*, March 2013.

D. Giustiniano, D. Malone, D. J. Leith, and D. Papagiannaki, "Measuring transmission opportunities in 802.11 links", *IEEE Transactions of Networking*, October 2010.

I. Tinnirello, D. Giustiniano, L. Scalia, G. Bianchi, "On the side effects of proprietary solutions for fading and interference mitigation in IEEE 802.11b/g outdoor links", *Elsevier Computer Network Journal*, February 2009.

D. Giustiniano, D. Malone, D. Leith and D. Papagiannaki, "Experimental Assessment of 802.11 MAC Layer Channel Estimators", *IEEE Communications Letters*, December 2007.

Conference and Workshop Papers

Y. Zeng, B. Liu, Y. Li, D. Giustiniano, S. Banerjee, "Sustainable Spectrum Crowdsensing", *IEEE DySpan 2024*, Washington, USA, May 2024

Y. Lizarribar, R. Calvo, A. Scalingi, G. Santaromita, G. Bovet, D. Giustiniano, "ORAN-Sense: Localizing Non-cooperative Transmitters with Spectrum Sensing and 5G O-RAN", *IEEE Infocom 2024*, Vancouver, Canada, May 2024

A. Scalingi, S. D'Oro, F. Restuccia, T. Melodia, D. Giustiniano, "Det-RAN: Data-Driven Cross-Layer Real-Time Attack Detection in 5G Open RANs", *IEEE Infocom 2024*, Vancouver, Canada, May 2024

D. Frometa, B. Genoves, D. Giustiniano, J. Widmer, "A System Architecture for Battery-free IoT Networks", *IEEE ICNP 2023*, Reykjavik, Iceland, October 2023

M. Mazaheri, R. Ruiz, D. Giustiniano, J. Widmer, O. Abari, "Bringing Millimeter Wave Technology to Any IoT Device", *ACM Mobicom 2023*, Madrid, Spain, October 2023

M. Mir, M. Cui, B. Genoves, Q. Wang, J. Xiong, D. Giustiniano, "LeakageScatter: Backscattering LiFi-leaked RF Signals", *ACM Mobihoc 2023*, Washington, USA, October 2023

I. Palamà, G. Santaromita, Y. Lizarribar, L. Monteforte, S. Bartoletti, D. Giustiniano, G. Bianchi, N. Blefari-Melazzi, "From Experiments to Insights: A Journey in 5G New Radio Localization", *IEEE MedComNet 2023*, Ponza, Italy, June 2023

J. Talavante, B. Genoves, D. Giustiniano, "Rethinking LiFi for Carbon Neutral Sunlight-Based Communication", *IEEE MedComNet 2023*, Ponza, Italy, June 2023

A. Scalingi, D. Giustiniano, R. Calvo, N. Apostolakis, G. Bovet, "A Framework for Wireless Technology Classification using Crowdsensing Platforms", *IEEE Infocom 2023*, New York, USA, May 2023

D. Frometa, S. Mir, B. Genoves, D. Giustiniano, "Visible Light or Infrared? Modulating LiFi for Dual Operation in the Visible and Infrared Spectra", *IEEE WONS 2023*, Madonna di Campiglio, Italy, February 2023

S. Mir, W. Yan, P. Dutta, D. Giustiniano, A. Varshney, "TunnelLiFi: Bringing LiFi to Commodity Internet of Things Devices", *ACM Hotmobile 2023*, February 2023

A. Pinto, G. Santaromita, C. Fiandrino, D. Giustiniano, F. Esposito, "Characterizing Location Management Function Performance in 5G Core Networks", *IEEE NFV-SDN 2022*, Chandler, AZ, USA November 2022. Best Student Paper Award

M. Mir, B. Genoves, A. Varshney, D. Giustiniano, "PassiveLiFi: Rethinking LiFi for Low-Power and Long Range RF Backscatter", *ACM Mobicom 2021*, New Orleans, USA, April 2022.

M. Mir, B. Majlesein, B. Genoves, J. Rufo, D. Giustiniano, "RGB LED bulbs for communication, harvesting and sensing", *IEEE PerCom 2022*, virtual, March 2022.

Y. Zeng, R. Calvo, D. Giustiniano, G. Bovet, S. Banerjee, "Adaptive Uplink Data Compression in Spectrum Crowdsensing Systems", *DySpan 2021*, virtual, December 2021.

- M. Mir, B. Majlesein, B. Genoves, J. Rufo, D. Giustiniano, "LED-to-LED based VLC Systems: developments and open problems", *Internet of Light Workshop*, Co-located with ACM MobiSys 2021, virtual, June 2021.
- J. Talavante, B. Genoves, D. Giustiniano, "Multi-cell Deployment for Experimental Research in Visible Light Communication-based Internet of Things", *Internet of Light Workshop*, Co-located with ACM MobiSys 2021, virtual, June 2021.
- M. Rea, D. Giustiniano, J. Widmer, "Virtual Inertial Sensors with Fine Time Measurements", *IEEE Mass 2020*, Delhi NCR, India, December 2020.
- M. Mir, B. Genoves, A. Galisteo, D. Giustiniano, "Non-linearity of LEDs for VLC IoT applications", *Light Up the IoT Workshop*, Co-located with ACM MobiCom 2020, London, UK, September 2020.
- R. Calvo-Palomino, A. Bhattacharya, G. Bovet, D. Giustiniano, "LSTM-based GNSS Spoofing Detection Using Low-cost Spectrum Sensor", *WoWMoM 2020*, Cork, Ireland, September 2020.
- M. Rea, D. Giustiniano, G. Bielsa, D. De Donno, J. Widmer, "Beam Search Strategy for MillimeterWave Networks with Out-of-Band Input Data", *IEEE MedComNet 2020*, Arona, Italy, June 2020.
- A. Galisteo, A. Varshney, D. Giustiniano, "Two to Tango: Hybrid Light and Backscatter Networks for Next Billion Devices", *ACM Mobisys 2020*, Toronto, Canada, June 2020.
- B. Reynders, F. Minucci, E. Perenda, H. Sallouha, R. Calvo, Y. Lizarribar, M. Fuchs, M. Schafer, M. Engel, B. Van den Bergh, S. Pollin, D. Giustiniano, G. Bovet, V. Lenders, "SkySense: Terrestrial and Aerial Spectrum Use Analysed Using Lightweight Sensing Technology with Weather Balloons", *ACM Mobisys 2020*, Toronto, Canada, June 2020.
- A. Galisteo, P. Marcocci, M. Zuniga, L. Mucchi, B. Genoves Guzman, D. Giustiniano, "Filtering Visible Light Reflections with a Single-Pixel Photodetector", *IEEE SECON 2020*, Como, Italy, June 2020.
- N. Blefari-Melazzi, S. Bartoletti, L. Chiaraviglio, F. Morselli, E. Baena, G. Bernini, D. Giustiniano, M. Hunukumbure, G. Solmaz, K. Tsagkaris, "LOCUS: Localization and analytics on-demand embedded in the 5G ecosystem", *EuCNC 2020*, Dubrovnik, Croatia, June 2020.
- M. Rea, T. Abrudan, D. Giustiniano, H. Claussen, V. Kolmonen, "Smartphone Positioning with Radio Measurements from a Single WiFi Access Point", *ACM CoNEXT 2019*, Orlando, USA, December 2019.
- Y. Zeng, V. Chandrasekaran, S. Banerjee, D. Giustiniano, "A Framework for Analyzing Spectrum Characteristics in Large Spatio-temporal Scales", *ACM Mobicom 2019*, Los Cabos, Mexico, October 2019.
- M. Rea, H. Cordobes, D. Giustiniano, "Time-of-flight Wireless Indoor Navigation System for Industrial Environment", *ACM WiNTECH 2019 workshop*, co-located with ACM Mobicom 2019, Los Cabos, Mexico, October 2019.
- R. Bloom, M. Zuniga, Q. Wang, D. Giustiniano, "Tweeting with Sunlight: Encoding Data on Mobile Objects", *IEEE INFOCOM 2019*, Paris, France, May 2019.
- R. Calvo-Palomino, H. Cordobes, F. Ricciato, D. Giustiniano, V. Lenders, "Collaborative Wideband Signal Decoding using Non-coherent Receivers", *ACM/IEEE IPSN 2019*, Montreal, Canada, April 2019.
- A. Galisteo, D. Juara, D. Giustiniano, "Research in Visible Light Communication Systems with OpenVLC1.3", *IEEE WF-IoT*, Limerick, Ireland, April 2019.
- J. Beysens, A. Galisteo, Q. Wang, D. Juara, D. Giustiniano, S. Pollin, "DenseVLC: A Cell-Free Massive MIMO System with Distributed LEDs", *ACM CoNEXT 2018*, Heraklion/Crete, Greece, December 2018

- D. Giustiniano, A. Varshney, T. Voigt, “Connecting Battery-free IoT Tags Using LED Bulbs”, *ACM HotNets 2018*, Redmond, Washington, USA, November 2018.
- M. Rea, D. Garlisi, H. Cordobés, D. Giustiniano, “Location-aware MAC Scheduling in Industrial-like Environment”, *BROADNETS 2018*, Faro, Portugal, September 2018.
- D. Giustiniano, M. Schalch, M. Liechti, V. Lenders, “Interference Suppression in Bandwidth Hopping Spread Spectrum Communications”, *ACM WiSec 2018*, Stockholm, Sweden, June, 2018.
- A. Fakhreddine, N. Tippenhauer, D. Giustiniano, “Design and Large-Scale Evaluation of WiFi Proximity Metrics”. *European Wireless 2018*, Catania, Italy, May 2018.
- A. Fakhreddine, D. Giustiniano and V. Lenders, “Data Fusion for Hybrid and Autonomous Time-of-Flight Positioning”, *ACM/IEEE IPSN 2018*, Porto, Portugal, April 2018.
- R. Calvo, F. Ricciato, B. Repas, D. Giustiniano and V. Lenders, “Nanosecond-precision Time-of-Arrival Estimation for Aircraft Signals with low-cost SDR Receivers”, *ACM/IEEE IPSN 2018*, Porto, Portugal, April 2018.
- A. Galisteo, D. Juara, Q. Wang, D. Giustiniano, “OpenVLC1.2: Achieving Higher Throughput in Low-End Visible Light Communication Networks”, *WONS 2018*, Isola 2000, France, February 2018.
- A. Galisteo, Q. Wang, A. Deshpande, M. Zuniga, D. Giustiniano, “Follow that Light: Leveraging LEDs for Relative Two-Dimensional Localization”, *ACM CoNEXT 2017*, Seoul, South Korea, December 2017.
- R. Calvo, F. Ricciato, D. Giustiniano, V. Lenders, “LTISS-track: A Precise and Fast Frequency Offset Estimation for low-cost SDR Platforms”, *ACM WiNTECH*, Snowbird, USA, October 2017.
- R. Calvo, D. Giustiniano, V. Lenders, “Measuring Spectrum Similarity in Distributed Radio Monitoring Systems”, Tyrrhenian International Workshop on Digital Communications, *TIWDC 2017*, Mondello, Italy, September 2017.
- M. Filippou, D. De Donno, C. Priale, J. Palacios, D. Giustiniano, Joerg Widmer, “Throughput vs. Latency: QoS-centric Resource Allocation for Multi-User Millimeter Wave Systems”, *IEEE ICC 2017*, Paris, France, May 2017.
- R. Calvo, D. Giustiniano, V. Lenders, A. Fakhreddine, “Crowdsourcing Spectrum Data Decoding”, *IEEE INFOCOM 2017*, Atlanta, USA, May 2017.
- Q. Wang, M. Zuniga, D. Giustiniano, “Passive Communication with Ambient Light”, *ACM CoNEXT 2016*, Irvine, USA, December 2016. Best Paper Award Runner-up.
- J. Palacios, D. De Donno, D. Giustiniano, J. Widmer, “Speeding Up mmWave Beam Training through Low-Complexity Hybrid Transceivers”, *IEEE PIMRC 2016*, Valencia, Spain, September 2016. Best Student Paper Award.
- A. Fakhreddine, D. Giustiniano, V. Lenders, “Evaluation of Self-Positioning Algorithms for Time-of-Flight based Localization”, *IEEE WiOpt 2016*, Tempe, Arizona, USA, May 2016.
- D. De Donno, J. Palacios, D. Giustiniano, J. Widmer, “Hybrid Analog-Digital Beam Training for mmWave Systems with Low-Resolution RF Phase Shifters”, *International Workshop on 5G RAN Design in co-location with IEEE ICC 2016*, Kuala Lumpur, Malaysia, May 2016.

M. Heydariaan, S. Yin, O. Gnawali, D. Puccinelli and D. Giustiniano, "Embedded Visible Light Communication: Link Measurements and Interpretation", *ACM Madcom 2016*, EWSN Workshop, TU Graz, Austria, February 2016.

M. Liechti, V. Lenders, D. Giustiniano "Jamming Mitigation by Randomized Bandwidth Hopping", *ACM CoNEXT 2015*, Heidelberg, Germany, December 2015.

D. Giustiniano, T. Bourchas, M. Bednarek and V. Lenders, "Deep Inspection of the Noise in WiFi Time-of-Flight Echo Techniques", *ACM MSWiM 2015*, Cancun, Mexico, November 2015.

Q. Wang, D. Giustiniano, O. Gnawali, "Low-Cost, Flexible and Open Platform for Visible Light Communication Networks", *ACM HotWireless 2015*, ACM Mobicom 2015, Paris, France, September 2015.

J. Danihelka, D. Giustiniano, B. Plattner, "On a Cloud-Controlled Architecture for Device-to-Device Content Distribution", *ACM Chants 2015*, ACM Mobicom 2015, Paris, France, September 2015.

D. Pfammatter, D. Giustiniano and V. Lenders, "A Software-defined Sensor Architecture for Large-scale Wideband Spectrum Monitoring", *ACM/IEEE IPSN 2015*, Seattle, WA, USA, April 2015.

D. Giustiniano et al. (Participants of Microsoft Indoor localization Competition 2014), "A Realistic Evaluation and Comparison of Indoor Location Technologies: Experiences and Lessons Learned", *ACM/IEEE IPSN 2015*, Seattle, WA, USA, April 2015.

A. Beitler, A. Tollkuehn, D. Giustiniano, B. Plattner, "CMCD: Multipath Detection for Mobile GNSS Receivers", *ION ITM 2015*, Dana Point, California, USA, January 2015

Q. Wang, D. Giustiniano, "Communication Networks of Visible Light Emitting Diodes with Intra-Frame Bidirectional Transmission", *ACM CoNEXT 2014*, Sidney, Australia, December 2014.

A. Marcaletti, M. Rea, D. Giustiniano, V. Lenders, A. Fakhreddine, "Filtering Noisy 802.11 Time-of-Flight Ranging Measurements", *ACM CoNEXT 2014*, Sidney, Australia, December 2014.

Q. Wang, D. Giustiniano, D. Puccinelli, "OpenVLC: Software-Defined Visible Light Embedded Networks", *ACM Workshop on Visible Light Communication Systems*, co-located with ACM Mobicom 2014, Maui, Hawaii, USA, September 2014.

J. Danihelka, D. Giustiniano, T. Hossmann, "HyCloud: A system for device-to-device content distribution controlled by the cloud", *IEEE WoWMoM*, Sidney, Australia, June 2014.

M. Asadpour, D. Giustiniano, K. A. Hummel, S. Heimlicher, S. Egli, "Now or Later ? - Delaying Data Transfer in Time-Critical Aerial Communication", *ACM CoNEXT 2013*, Santa Barbara, USA, December 2013.

E. Goma, D. Giustiniano, "SmartAP: Practical WLAN Backhaul Aggregation", *IFIP Wireless Days 2013*, Valencia, November 2013.

M. Asadpour, D. Giustiniano, K. A. Hummel, "From Ground to Aerial Communication: Dissecting WLAN 802.11n for the Drones", *ACM WiNTECH 2013 Workshop*, co-located with ACM Mobicom 2013, Miami, USA, September 2013.

M. Asadpour, D. Giustiniano, K. A. Hummel, S. Heimlicher, "Characterizing 802.11n Aerial Communication", *ACM Airborne 2013 Workshop*, ACM Mobihoc 2013, Bangalore, India, July 2013.

D. Giustiniano, V. Lenders, J. Schmitt, M. Spuhler, M. Wilhelm, "Detection of Reactive Jamming in DSSS-based Wireless Networks", *ACM WiSec 2013*, Budapest, Hungary, April 2013.

M. Spuhler, V. Lenders, D. Giustiniano, "BLITZ: Wireless Link Quality Estimation in the Dark", *EWSN 2013*, Gent, Belgium, February 2013.

D. Giustiniano, N. Tippenhauer, S. Mangold, "Low-Complexity Visible Light Networking with LED-to-LED Communication", *IFIP Wireless Days 2012*, Dublin, Ireland, November 2012, Best Paper Award.

D. Giustiniano, S. Mangold, "CAESAR: Carrier Sense-Based Ranging in Off-The-Shelf 802.11 Wireless LAN", *ACM CoNEXT 2011*, Tokio, Japan, December 2011.

D. Giustiniano, V. Vukadinovic, S. Mangold, "Wireless Networking for Automated Live Video Broadcasting: System Architecture and Research Challenges", *IEEE WoWMoM 2011*, Lucca, Italy, June 2011.

D. Giustiniano, E. Goma, A. Lopez, J. Morillo, I. Dangerfield, P. Rodriguez, "Fair WLAN Backhaul Aggregation", *ACM Mobicom 2010*, Chicago, USA, September 2010.

M. Ciurana, D. Giustiniano, A. Neira, F. Barcelo-Arroyo, I. Martin-Escalona, "Performance stability of software TOA-based ranging in WLAN", *IEEE IPIN 2010*, Zurich, Switzerland, September 2010.

D. Giustiniano, E. Goma, A. Lopez, P. Rodriguez, "WiSwitcher: An Efficient Client for Managing Multiple APs", *ACM Presto 2009*, Sigcomm 2009, Barcelona, Spain, August 2009.

D. Giustiniano, E. Goma, A. Lopez, J. Morillo, P. Rodriguez, "ClubADSL: When Your Neighbors are Your Friends", *IEEE MediaWin 2009*, IEEE ISCC 2009, Sousse, Tunisia, July 2009.

L. Scalia, I. Tinnirello, D. Giustiniano, "Side Effects of Ambient Noise Immunity Techniques on Outdoor IEEE 802.11 Deployments", *IEEE Globecom 2008*, New Orleans, USA, December 2008.

G. Bianchi, D. Giustiniano, L. Scalia and I. Tinnirello, "Vendor Affected WLAN Experimental results: a Pandora Box?", *IEEE Macom 2008*, Saint Petersburg, Russia, June 2008.

D. Giustiniano, G. Bianchi, L. Scalia, I. Tinnirello, "An Explanation for Unexpected 802.11 Outdoor Link Level Measurements Results", *IEEE INFOCOM 2008*, April 2008.

D. Giustiniano, I. Tinnirello, L. Scalia, A. Levanti, "Revealing Transmit Diversity Mechanisms and their Side Effects in Commercial IEEE 802.11 Cards", *IEEE QoSIP 2008*, Venice, Italy, February 2008.

F. Lo Piccolo, N. Blefari, D. Giustiniano, "Power-measurement-based relative localization in GSM cellular networks", *IEEE IWSSC 2007*, Salzburg, Austria, September 2007.

D. Giustiniano, F. Lo Piccolo, N. Blefari, "Relative localization in 802.11/GPS systems", *IEEE IWSSC 2007*, Salzburg, Austria, September 2007.

D. Giustiniano, G. Bianchi, "Broadcast Link Quality Measurements in 802.11 Networks", *IEEE EXPONWIRELESS 2007*, IEEE WoW-MoM 2007, Helsinki, Finland, June 2007.

G. Bianchi, F. Formisano, D. Giustiniano, "802.11b/g Link Level Measurements for an Outdoor Wireless Campus Network", *IEEE EXPONWIRELESS 2006*, IEEE WoWMoM 2006, Buffalo USA, June 2006.

D. Giustiniano, G. Bianchi, "On the exploitation of ACK Cancellation for Spatial Reuse in Unplanned Multi hop WLANs", *IEEE MedHoc 2006*, Lipari, Italy, June 2006.

D. Giustiniano, S. Mangione, G. Garbo, G. Avellone, "Joint LMMSE equalizer for HSDPA in full rate STTD schemes", *IEEE VTC 2005*, Spring, Stockholm, Sweden, May June 2005.

D. Giustiniano, P. Lusina, G. Garbo, "Diagonal space time Hadamard codes with erasure decoding algorithm", *IEEE WCNC 2005*, New Orleans, LA, USA, March 2005.

D. Giustiniano, S. Mangione, P. Di Paola, G. Garbo, "Joint Space Time Synchronous WCDMA LMMSE equalization", *IEEE SCVT 2004*, Gent, Belgium, November 2004.

P. Lusina, D. Giustiniano, M. Bossert, "Diagonal space time Hadamard codes", *ISCTA 2003*, HW Communications Ltd, Ambleside, England, July 2003.

Other Publications (including invited papers, demos and posters)

D. Frometa, S. Mir, B. Genoves, A. Varshney, D. Giustiniano, "PassiveLiFi Demonstration: Rethinking LiFi for Low-Power and Long Range RF Backscatter", Demo at *ACM Mobicom 2023*, October 2023, Madrid, Spain

S. Eleftherakis, G. Santaromita, M. Rea, T. Otim, D. Giustiniano, "Covid-19 Contact Tracing through Multipath Profile Similarity", Student workshop at *ACM Conext 2022*, December 2022, Rome, Italy

A. Pinto, G. Santaromita, C. Fiandrino, D. Giustiniano, F. Esposito, "Experimenting with Localization Management Functions in 5G Core Networks", Demo at *ACM Mobicom 2022*, October 2022, Sidney, Australia

S. Mir, B. Genoves, D. Solanki, G. Marent, D. Giustiniano, "Poster: Integration between Home Automation and Visible Light Communications", Poster at *EWSN 2020*, February 2020, Lyon, France.

A. Galisteo, D. Juara, H. Cordobés, D. Giustiniano, "Demo: Video Transmission Using Low-Cost Visible Light Communication", Demo at *ACM MobiHoc 2019*, July 2019, Catania, Italy.

F. Minucci, B. Van den Bergh, S. Rajendran, D. Giustiniano, H. Cordobes, M. Fuchs, R. Calvo, V. Lenders, S. Pollin, "Demo: Electrosense - Spectrum Sensing with Increased Frequency Range", Demo at *EWSN 2018*, February 2018, Madrid, Spain.

D. Giustiniano, "Position: Health Effects in LED-based Communication Systems and Possible Mitigations", *ACM Workshop on Visible Light Communication Systems*, co-located with ACM Mobicom 2017, October 2017, Snowbird, Utah, USA

A. Galisteo, H. Wu, Q. Wang, D. Juara, M. Zuniga, D. Giustiniano, "Demo: OpenVLC1.2 for Increased Data Rate with Embedded Systems", Demo at *ACM Workshop on Visible Light Communication Systems*, co-located with ACM Mobicom 2017, October 2017, Snowbird, Utah, USA

M. Rea, H. Cordobes, D. Giustiniano, D. Garlisi, P. Gallo, S. Giannoulis, I. Moerman, "Poster: Integration of WiFi ToF Positioning System in the Open, Flexible and Adaptive WiSHFUL Architecture", Poster at *ACM WiNTECH 2017*, co-located with ACM Mobicom 2017, October 2017, Snowbird, Utah, USA

B. Van den Bergh, D. Giustiniano, H. Cordobes de la Calle, M. Fuchs, R. Calvo, S. Pollin, S. Rajendran, V. Lenders, “Electrosense: Crowdsourcing Spectrum Monitoring”, Demo at *IEEE DySPAN 2017*, March 2017, Baltimore, USA.

M. Rea, H. Cordobés, D. Giustiniano, V. Lenders, “Robust WiFi Time-of-Flight Positioning System” Demo at Microsoft Indoor Localization Competition, *ACM/IEEE IPSN 2016*, 11-14 April 2016, Vienna, Austria

Q. Wang, D. De Donno, D. Giustiniano, “Demonstration Abstract: Research Platform for Visible Light Communication and Sensing Systems”, Demo at *ACM/IEEE IPSN '16*, 11-14 April 2016, Vienna, Austria

Q. Wang, S. Yin, O. Gnawali, D. Giustiniano, “Demo: OpenVLC1.0 Platform for Research in Visible Light Communication Networks”, Demo at *ACM Mobicom 2015*, Paris, France, September 2015.

D. Giustiniano, Q. Wang, “OpenVLC, an Open-Source Platform for the Internet of Light”, Invited Paper at *2015 IEEE Summer Topicals Meeting Series*, Nassau, Bahamas, July 2015.

R. Calvo, D. Pfammatter, D. Giustiniano and V. Lenders, “Demonstration Abstract: A Low-cost Sensor Platform for Large-scale Wide-band Spectrum Monitoring”, Demo at *ACM/IEEE IPSN 2015*, Seattle, WA, USA, April 2015.

Q. Wang, D. Giustiniano, D. Puccinelli, “OpenVLC: Software-Defined Open Architecture for Visible Light Embedded Networks”, Demo at *ACM Workshop on Visible Light Communication Systems*, co-located with ACM Mobicom 2014, Maui, Hawaii, USA, September 2014.

M. Asadpour, S. Egli, K. A. Hummel, D. Giustiniano, “Routing in a Fleet of Micro Aerial Vehicles: First Experimental Insights”, Invited paper at *ACM Airborne 2014 Workshop*, co-located with ACM Mobihoc 2014, Philadelphia, PA, USA, August 2014.

A. Narula-Tam, K. Namuduri, S. Chaumette, D. Giustiniano, “Enabling Next Generation Airborne Communications”, Guest Editorial on *IEEE Communication Magazine*, May 2014.

A. Marcaletti, M. Rea, D. Giustiniano, V. Lenders, “WINS: Tracking of Mobile Devices with WiFi Time-Of-Flight”, Extended Abstract at Microsoft Indoor Localization Competition, *ACM/IEEE IPSN 2014*, Berlin, Germany, April 2014.

T. Bourchas, M. Bednarek, D. Giustiniano, V. Lenders, “Practical Limits of WiFi Time-of-Flight Echo Techniques”, Poster at *ACM/IEEE IPSN 2014*, Berlin, Germany, April 2014.

M. Asadpour, D. Giustiniano, K. A. Hummel, S. Egli, “UAV Networks in Rescue Missions”, Demo at *ACM WiNTECH 2013 Workshop*, ACM Mobicom 2013, Miami, USA, September 2013.

A. Noori, D. Giustiniano, “HyCloud: a hybrid approach toward offloading cellular content through opportunistic communication”, poster at *ACM Mobisys 2013*, Taiwan, June 2013.

N. Tippenhauer, D. Giustiniano, S. Mangold, “Toys communicating with LEDs: Enabling Toy Cars Interaction”, Demo at *IEEE CCNC 2012*, Las Vegas, USA, January 2012.

D. Giustiniano, S. Mangold, “Demo: distance tracking using WLAN time of flight”, Demo at *ACM Mobisys 2011*, Washington, USA, June 2011.

S. Schmid, M. Gorlatova, D. Giustiniano, V. Vukadinovic, S. Mangold “Poster: Networking Smart Toys with ToyTalk and ToyBridge”, Poster at *IEEE INFOCOM'11*, Shanghai, China, April 2011.

D. Giustiniano, D. Malone, D. J. Leith and K. Papagiannaki, "Local Estimators for 802.11 MAC Channel Quality", *RIA Colloquium on Emerging Trends in Wireless Communications*, Dublin, Ireland, April 2008.

D. Giustiniano, G. Bianchi, "Are 802.11 Link Quality Broadcast Measurements always Reliable?", Poster at *ACM CoNEXT Student Workshop 2006*, Lisbon, Portugal, December 2006.

Patents

D. Frometa, B. Genoves, D. Giustiniano, J. Widmer, "LiFi Access Point and LiFi Communication Network Comprising the Same", EP23383009, Filed in October 2023.

O. Abari, M. Hossein, J. Widmer, D. Giustiniano, R. Ruiz, "Systems and Methods for Incorporating Millimeter Waves into Wireless Devices", U.S. Provisional Patent Application No. 63/579,753, Filed in October 2023.

S. Mir, B. Genoves, D. Giustiniano, "RF backscatter system based on light fidelity", WO2023057618A1. Filed in October 2021, published in April 2023.

V. Lenders, D. Giustiniano, "Spread spectrum methods and devices". WO2016001342A1. Filed in July 2014, published in Jan. 2016.

D. Giustiniano, N. O. Tippenhauer, S. Mangold, "Visible Light Communication with flickering prevention". US8873965 B2. Filed in April 2012, *granted* in October 2014.

D. Giustiniano, S. Mangold, "Carrier sense-based ranging". US9057771B2. Filed in April 2012, *granted* in June 2015.

D. Giustiniano, E. Goma, A. Lopez, P. Rodriguez, "Method and radio station for fair aggregation of internet backhaul throughput using multiple access points". MX2013002987. Filed in November 2011, *granted* in April 2014.

D. Giustiniano, D. Malone, D. J. Leith, "Method and apparatus for estimating link quality". US20090252053. Filed in March 2009, *granted* in December 2011.

Selected Talks and Lectures (talks at peer-reviewed conferences are not included)

Keynote Speaker at NET4Us workshop, co-located with ACM Mobicom 2023. Title: "Visible Light Communication: the Journey from OpenVLC to Battery-free Applications", 6th of October, 2023

Invited Talk at Workshop 5G and Beyond Observatory, Milan, Italy, on 5G localization, 30th of June, 2022

Tutorial at IEEE Melecon 2022, Palermo, Italy on 5G localization, 14th of June, 2022

Invited lecture for Master class at University of Uppsala, Sweden. "Introduction to Visible Light Communication Networks", 2nd of December, 2020

Invited talk at Telefonica Research, Spain, on the Electrosense project. 26th of September, 2019.

Keynote Speaker at Military Applications of IoT workshop, co-located with IEEE World Forum on IoT (WF-IoT). Title: "SOCRAATES: Large Scale Collaborative Detection and Location of Threats in the Electromagnetic Space". Limerick, 16th of April, 2019.

Invited talk at Washington University, Seattle, USA, on the Electrosense project. 14th of November, 2018.

Invited talk at Trinity College, Dublin, Ireland. Title: “Connecting Battery-free IoT Tags Using LED Bulbs”. 13th of November, 2018

Keynote Speaker at the main conference of Crowncom 2018, 19th of September, 2018. Title: “Collaboration Models for Large-scale Spectrum Monitoring”

Invited talk at Stony Brook, USA, on the Electrosense project. 7th of September, 2018.

Invited panelist at the ACM Mobicom 2017 Workshop on Visible Light Communication Systems (VLCS 2017), Snowbird, UT, USA. Topic: “Hybrid VLC and Radio Communication: Potential, Challenges and Solutions for Coexistence”. 16th of October 2017.

Invited talk at the “Connected Objects In Defence And Security” workshop, organized by Federal Department of Defence, Civil Protection and Sport DDPS, Switzerland. Title: “From Conventional RF Monitoring to Open and Big Spectrum Data: Challenges and Opportunities”. 6th of September 2017.

Talk at the Researcher Night 2016, Madrid for students from Secondary School. 30th of September 2016.

Invited talk at the “FORA” workshop, organized by Federal Department of Defence, Civil Protection and Sport DDPS, Switzerland. Title: “Electrosense: Technologies and Collaboration Models for Large-scale Spectrum Monitoring”. 9th of June 2016.

Invited talk at the University of Bologna, Italy. Title: “Visible Light Communication and Sensing Systems with OpenVLC Platform”. 23th of November, 2015.

Invited speaker and panelist at the IEEE Summer Topical Events, Nassau, Bahamas. Title of the talk: “OpenVLC, an Open-Source Platform for the Internet of Light”. 13th of July, 2015.

Invited talk at INSA Lyon/INRIA-CITI Lab, France. Title: “Research in Visible Light Communication Networks with OpenVLC Platform”. Lyon, France. 12th of May, 2015.

Invited talk at Trinity College, Dublin, Ireland. Title: “Research in Visible Light Communication Networks with OpenVLC Platform”. 8th of May, 2015

Talk at the Researcher Night 2014, Madrid, for students from Secondary School. September 2014.

Invited tutorial at Uppsala University, Sweden. Topic: “Introduction to Visible Light Communication”. 3 hour of lecture. Co-lecturers: Prof. Dr. Marco Zuniga and Dr. Daniele Puccinelli. 27th of November, 2013.

Invited talk at UC3M university, Madrid, Spain. Title: “Low-Complexity Visible Light Networking with LED-to-LED Communication”. 16th of January, 2013.

Invited talk at the University of Zaragoza, Spain. Title: “Main Research Activities”. 14th of January, 2013.

Invited tutorial at the University of Palermo, Italy for MSc students. Title: “Seamless Localization with Smartphones”. Class on Mobile Networks. 3 hours of lecture. 20th of December, 2012.

Lecturer in the class of Advanced Topics in Communication Networks (ATCN) 2012 on the topic “When and Where: Navigating using Wireless Localization”. 6 hours of lecture, plus dedicated sessions on practical and theoretical exercises. November, 2012.

Invited talk. Title: “CAESAR: Carrier Sense-Based Ranging in Off-The-Shelf 802.11 Wireless LAN”. ETH Zurich, Switzerland. 1th of December 2011.

Invited talk at University of Palermo, Italy for MSc class. Title: “ClubADSL project”. 13th of April 2010.

Lectures for PhD students at the Universitat Politècnica de Catalunya (UPC), Barcelona, Spain. 4 hours of lecture. Title: “Wireless Home Networking and Internet Access”. 10th and 12th of November 2009.

Invited talk at the Universidad Carlos III, Madrid, for PhD Class. Title: “ClubADSL project”. 25th of May 2009.

Invited talk at Hamilton Institute, Ireland. Title: “ClubADSL: Enhancing Bandwidth Aggregation in your Neighborhood”. 20th of February, 2009.

Invited talk on “On the side-effects of proprietary solutions for fading and interference mitigation in IEEE 802.11b/g outdoor links” for PhD and Master Students, Universitat Pompeu Fabra (UPF), Barcelona, Spain. 23th of October 2008

Seminar at Campus Party, Valencia, Spain. Topic “Wireless Hacking” with live demos. Presentation and practical exercises. Total of 2 hours of lecture and exercises. With A. L. Toledo. 28th of July, 2008.

Supervision of PhD Theses

Maurizio Rea, “Time-based indoor positioning and context information using commodity WiFi chipsets“, University Carlos III of Madrid, June 2020. (“sobresaliente” grade of the PhD dissertation, plus proposal for “cum laude”).

Ander Galisteo, “Visible Light Communication Networks for IoT and its Applications“, University Carlos III of Madrid, June 2020. (“sobresaliente” grade of the PhD dissertation, plus proposal for “cum laude”).

Roberto Calvo, “Towards Large-Scale and Collaborative Spectrum Monitoring Systems using IoT Devices“, University Carlos III of Madrid, July 2019. (“sobresaliente” grade of the PhD dissertation, plus proposal for “cum laude”). Roberto Calvo is currently **Associate Professor** at the **University of Rey Juan Carlos, Madrid**.

Aymen Fakhreddine, “Opportunistic Timing Signals for Pervasive Mobile Localization“, University Carlos III of Madrid, June 2018. (“sobresaliente” grade of the PhD dissertation).

Qing Wang, “Visible Light and Device-to-Device Communications: System Analysis and Implementation“, University Carlos III of Madrid, May 2016. (“sobresaliente” and “cum laude” grade of the PhD dissertation, and “Outstanding thesis awards 2015/2016” from UC3M, Madrid, Spain). Qing Wang is currently **Tenured Assistant Professor** in the **Embedded and Networked Systems, TU Delft, The Netherlands**

Dayrene Frometa. In progress

Yago Lizarribar. In progress

Alessio Scalingi. In progress

Stavros Eleftherakis. In progress

Javier Talavante. In progress

Supervised PhD Interns

Yijing Zeng (Wisconsin University, USA), Giuseppe Santaromita (University of Palermo, Italy), Arani Bhattacharya (Stony Brook, USA), Patrizio Marcocci (University of Florence, Italy), Jona Beysens (KU Leuven, Belgium), Bertold Van den Bergh (KU Leuven, Belgium), Nils Ole Tippenhauer (ETH, Switzerland), Lukas Bruderer (ETH, Switzerland), Ian Dangerfield (Hamilton Institute, Ireland).

Scientific Posts - Executive Committees

General vice-chair of The 29th Annual International Conference On Mobile Computing And Networking (ACM Mobicom), October 2023, Madrid; 300+ participant

Financial Chair of ACM CoNEXT 2020, Virtual event (original location: Barcelona)

General chair of International Conference on Embedded Wireless Systems and Networks (EWSN) 2018 conference, February 2018, Madrid; 120+ participants.

Chair of Demo session of ACM Mobicom 2017, Snowbird, Utah, USA.

Chair of MadCom 2017 workshop, co-located with the International Conference on Embedded Wireless Systems and Networks 2017 (EWSN'17).

General chair of IFIP/IEEE SustainIT 2015 conference, April 2015, Madrid; 50+ participants.

Chair of SNSF FLYNET workshop, November 2014, Zurich.

Chair of "The 6th IMDEA Networks Annual International Workshop: 5G Network Revolution" workshop, June 2014, Madrid.

Editorial Board and Technical Program Committees

Editorial Board of Computer Networks (Elsevier) as an Area Editor since 2019

TPC member of ACM Mobicom 2024, 2022, 2020, 2019

TPC member of ACM Mobisys 2021

TPC member of IEEE Infocom 2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014

TPC member of ACM CoNEXT 2021, 2018, 2017

TPC member of ACM Mobicom 2022 Poster Session

TPC member of IEEE Secon 2019, 2018

TPC member of ACM Mobicom Workshop on Wireless Network Testbeds, Experimental evaluation and Characterization (WiNTECH 2022, 2021, 2020, 2019, 2018, 2017, 2016)

TPC member of IEEE Infocom 2018 Workshop on Computer and Networking Experimental Research using Testbeds (CNERT 2018)

TPC member of ACM Mobicom Workshop on Visible Light Communication Systems (VLCS 2017, 2016, 2014)

TPC member of ACM Sigcomm 2016, Poster and Demo Session.

TPC member of Workshop on Challenged Networks (CHANTS 2016, 2015).

TPC member of IFIP Networking 2016, IFIP Wireless Days 2016, TPC member of MadCom Workshop at EWSN' 16

Demo Chair of ACM Dronet Workshop at ACM Mobisys 2015, TPC member of IEEE ICNP 2015 PhD forum, IEEE ICC 2015 workshop on Visible Light Communication and networking (VLCN 2015), IFIP Wireless Days 2015.

TPC member of ACM Mobihoc 2014 Workshop on Airborne Networks and Communications, IEEE Mass 2014, IEEE PIMRC 2014, IWOW 2014, IFIP Wireless Days 2014.

Guest editor of IEEE communication magazine 2014 (special issue "Enabling Next Generation Airborne Communications").

ACM Mobiwac 2013, IFIP Wireless Days 2013.

IEEE WoWMoM 2012, IFIP Wireless Days 2012, IEEE VTC 2012.

Invited reviewer at several conferences and journals.

Other Services to the Research Community

PhD Defense Committee member of Kien Ngo, University of Palermo (Italy), December 2023.

PhD Defense Committee member of Ciara Mcdonald, University of Maynooth (Ireland), April 2023.

External reviewer of H2020 ERC starting grant, 2022.

Panelist of FCT - Call for Exploratory Research Projects under the Carnegie Mellon Portugal Program. 2021, 2019

PhD Defense Committee member of Yijing Zeng, University of Winsconsin (USA), May 2022.

PhD Defense Committee member of Timothy Otim, University of Deusto (Spain), December 2020.

Member of the ACM MobiCom 2019 best paper selection committee.

PhD Defense Committee member of Ambuj Varshney, University of Uppsala, May 2018.

Reviewer of proposal submitted to Serrapilheira Non-profit Institution to support high-risk high-impact projects from best young researchers in Brazil, November 2017.

PhD Defense Committee member of Shuai Li, University of Eindhoven and Philips Research, May 2017.

External reviewer of H2020 ERC consolidator grant, 2013.

Reviewer for the Research Funding Applications at the University of Trieste, Italy, 2013.

Judge member for the best paper award at the student workshop at ACM CoNEXT 2011.