

CURRICULUM VITAE ¹

ANNA MARIA VEGNI

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¹Updated on October 7, 2021

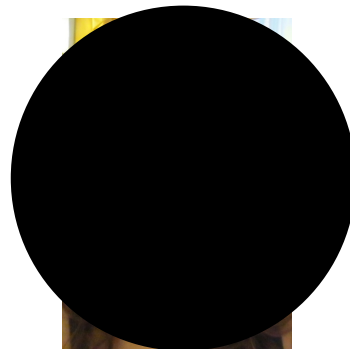
ADDRESS

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IMPACT OF THE RESEARCH AND BIBLIOMETRIC INDEXES

- *h-index*: 20 (source: Scopus), 25 (source: Google Scholar)
 - *Number of citations*: 1454 (source: Scopus), 2266 (source: Google Scholar)
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EDUCATION

- Since 09/2021 Tenure-track Assistant Professor at Department of Industrial, Electronic and Mechanical Engineering, Roma Tre University, Rome (Italy).
- 03/2020 - 08/2021 Tenure-track Assistant Professor at Department of Engineering, Roma Tre University, Rome (Italy).
- 12/2010 - 02/2020 Non-tenured Assistant Professor at Department of Engineering, Roma Tre University, Rome (Italy).
- 03/2010 PhD in Electronics Engineering of Biomedical Science, Electromagnetics and Telecommunications, Department of Applied Electronics, Roma Tre University, Rome (Italy).
- 05 – 10/2009 Visiting Researcher at Multimedia Communication Laboratory, Boston University, Boston, MA (USA). Supervisor: Prof. Thomas D.C. Little. Research activity on: Vehicular Networking.
- 11/2006 Aptitude to the profession of Engineer (100/100 mark).
- 07/2006 Advanced Degree (Laurea Magistralis) *cum laude* in Electronics Engineering, Telecommunication field, from Roma Tre University –Rome, Italy.
- 07/2004 First Degree (Laurea) *cum laude* in Electronics Engineering from University of “Roma Tre” –Rome, Italy.

11/2002– 11/2003 Winner of collaborative award in the Digital Signal Processing Multimedia and Optical Communications Laboratory, at Roma TRE University. Lab. Director: Prof. Alessandro Neri.

THESIS

PhD Thesis – 03/2010. “*Multimedia Mobile Communications in Heterogeneous Wireless Networks*”. Supervisor: Prof. Alessandro Neri. Co-advisor: Prof. Thomas D.C. Little (Boston University, USA).

Advanced Degree (*Laurea Magistralis*) – 07/2006. “*Analysis of performances of optical coherent PSK codes in OCDMA networks*”. Thesis advisor: Prof. Gabriella Cincotti (Roma Tre University).

First Degree (*Laurea*) – 07/2004. “*Dynamic optimization of a data transmission system for wideband connections*”. Thesis advisor: Prof. Gaetano Giunta (Roma Tre University).

TECHNICAL SKILLS

Programmation C/C++, Java.

Tools MatLab, Mathematica, Network Simulator (NS-2/3), SUMO, VanetMobiSim, Visual Studio, Microsoft Office, Latex.

LANGUAGE KNOWLEDGE

Italian	native
English	good writing and speaking skills
French	good writing and speaking skills

RESEARCH PROJECTS

Since 01/2021 “**H2020 AB4Rail**” (Alternative Bearers for Railway), funded by the European Commission under grant agreement No 101014517.

Since 09/2020 “**COST Action NEWFOCUS**” (European Network on Future Generation Optical Wireless Communication Technologies) OC-2019-1-23857, funded by the European Commission.

05/2018 – 05/2020 “**RESISTO**” (Resilience enhancement and risk control platform for communication infrastructure operators), funded by the European Commission, H2020 Grant Agreement No786409.

- 09/2013 – 09/2016 “**ISITEP**” (Inter System Interoperability for Tetra-tEtraPol networks project), funded under the Seventh Framework Programme. ISITEP aims at developing the procedures, technology and legal agreements to achieve a cost effective global solution for Public Protection & Disaster Relief (PPDR) networks interoperability. A. M. Vegni is managing the project as participant at Roma TRE University.
- 01/2013–01/2016 “**D-BOX**” (Demining tool-BOX for humanitarian clearing of large scale area from anti-personal landmines and cluster munitions) – FP 7 security 2011. A. M. Vegni is managing the project as local coordinator at RadioLabs consortium. D-BOX intends to address the issue of the clearance of anti-personnel land mines and cluster munitions through innovative easy-to-use, cost-effective solutions, contained in a comprehensive toolbox.
- 09/2012–05/2013 “**GAPACOM**” (Galileo Advanced Payloads network Addressing COmmunication Mission), applied research project, cofounded by MIUR, and under realization by Thales Alenia Space (Rome, Italy). Design of a communication payload for the European Navigation system GALILEO, September 2012 to May 2013. A. M. Vegni managed the project through lectures on Satellite Navigation and Mobility Management at LUISS University (Rome, Italy).
- 01/2012–01/2015 “**3inSat**”, Train Integrated Safety Satellite System - ESA IAP project, aiming at developing and validating a new satellite-based platform to be integrated into a Safety Integrity Level 4 (SIL4) Train Control and Management System. This satellite-supported solution is not yet available on the market because of the very challenging safety SIL4 requirements that a railway signalling system shall comply with. A. M. Vegni is managing the project as member of Radiolabs consortium.
- 05/2012 “**Smart Lighting Proposal**”, selected for oral presentation at “GTTI for the Future – Multinational Enterprises meet Young Italian ICT Researchers”, May 8, 2012, CONFINDUSTRIA FIRENZE, Florence, Italy. A. M. Vegni devised the project and gave the oral presentation.
- 06/2011–12/2011 “**GEOSENSE**”, applied research project. Design of an integrated platform with a network of sensors installed on board of vehicles for the seismic observation. A. M. Vegni managed the project as member of Radiolabs consortium.
- 01/2011–06/2012 “**SAFEDEM**” (Space Assets For Enhanced DEMining), applied research project ESA AO 1-6392. SAFEDEM concept aims to exploit the space assets (Earth Observation, Navigation and Satellite Communications) for enhance humanitarian demining systems. SAFEDEM system is structured in a

- Space & Airborne Survey Segment, a Field Survey Segment, and a Head?Quarter Segment. A. M. Vegni devised and managed the project as member of Radiolabs consortium.
- 12/2010 “**CALIPSO**” (CommunicAtion using LockSat for IP Satellite Operations) Telespazio Innovation Award Winner 2010. This proposal regards the application of LockSat concept to IPsec protocol. It is particularly suited for satellite systems since it can provide security services without wasting radio resources, which are scarce and expensive for a satellite connectivity link. A. M. Vegni devised the project as member of Radiolabs consortium.
- Since 06/2010 “**DAHMS**” (Distributed Architecture Home Modular Multifunctional Systems), project funded by the Italian Ministry of Economic Development in the field of “New Technologies for the Made in Italy”. DAHMS represents the Industrial Research and Development of multifunction and modular integrated systems, addressed to both Domotics and Remote Healthcare for old people at risk with chronic pathologies and/or differently abled. Anna Maria Vegni is responsible for Task D.1.2 “Wideband Wireless Network”. A. M. Vegni managed the project as member of Roma TRE University.
- 04/2010–12/2010 “**LOCKSAT**” (LOCAl Key Synchronization and generation for data security in sATEllite communications), in collaboration with ESA and Telespazio S.p.A. LOCKSAT is aimed at securing and optionally ensuring integrity of data transmitted over an insecure channel, by efficiently managing the key renewal of a secure connection. It represents an innovative key management technique suited for satellite systems and based on local key synchronization and generation. A. M. Vegni managed the project as member of Radiolabs consortium.
- Since 05/2010 “**Free-Space-Optical Visible-Spectrum Communications (Visible Light Communications)**”, scientific-technical cooperation with the Smart Lighting Research Center at Rensselaer Polytechnic Institute (NY, USA) and Boston University (MA, USA), under the Memorandum of Understanding. Adaptation of novel LED-based materials and devices for the support of visible-light-based communication and communications networking. A. M. Vegni managed the project as member of Roma TRE University.
- 11/2006–03/2008 “**Seamless Roaming (mobile-home, mobile-office) in Heterogeneous Networks**”, in collaboration with University of Rome “Sapienza”, University of Rome “Tor Vergata”, and Telecom Italia Mobile Laboratory TiLab (Turin –Italy). Technical advisor: Prof. Roberto Cusani, University of Rome “Sapienza”. A. M. Vegni managed the project during the PhD course, as member of Roma TRE University.

NATIONAL RESEARCH COLLABORATIONS

Sapienza University of Rome (Rome, Italy) Research activity on (i) seamless connectivity in heterogeneous wireless networks and (ii) visible light communications / positioning. (Prof. R. Cusani and Prof. M. Biagi). Since 2006 – today

Università Mediterranea di Reggio Calabria, DIIES Department (Reggio Calabria, Italy) Research activity on (i) connectivity modelling in vehicular networks and (ii) study of features of vehicular social networks. (Dr. C. Campolo, Dr. G. Ruggeri). Since 2013 – today

Consorzio Università Industria - Laboratori di Radiocomunicazioni - RadioLabs (Rome, Italy) Research activity on (i) satellite radio navigation and (ii) wireless communications. (Prof. A. Neri). Since 2007 – today

INTERNATIONAL RESEARCH COLLABORATIONS

Northumbria University (Newcastle upon Tyne, UK) Research activity on optical camera communications. (Prof. Z. Ghassemlooy). Since 2016 – today

INRIA Lille-Nord Europe (Lille, France) Research activity on (i) nanocommunications and (ii) vehicular networks. (Dr. V. Loscri). Since 2013 – today

Universitat Politècnica de València (Valencia, Spain) Research activity on vehicular social networks. (Prof. P. Manzoni). Since 2019 – today

University of Avignon (Avignon, France) Research activity on interconnectivity between Social Internet of Vehicles and online social networks. (Prof. A. Benslimane). Since 2019 – today

University of Lorraine (Nancy, France) Research activity on interconnectivity in heterogeneous networks (vertical handover) and communication protocols in vehicular ad-hoc networks. (Prof. E. Natalizio). 2013 – 2016

University of Cincinnati (Cincinnati, OH, USA) Research activity on vehicular ad-hoc networks with cognitive aspects. (Prof. Dharma P. Agrawal). 2011 – 2015

Boston University, Department of Electrical and Computer Engineering (Boston, MA USA) Research activity on wireless optical communications, mobility, handover in VLC and in vehicular communications. (Prof. Thomas D.C. Little). Since 2009 – today

Boston University, Department of Computer Science (Boston, MA USA) Research activity on opportunistic vehicular networks. (Prof. I. Matta, Dr. F. Esposito). 2009 – 2013

Georgia Institute of Technology (Atlanta, USA) Research activity on molecular communications. (Dr. Bige Unluturk, PhD student under the supervision of Prof. Ian F. Akyildiz). Since 2016 – today

SCHOLARSHIPS

- 15–17/10/2012 Course on “*Propagation effects, channel models and related error sources on GNSS*”, ESA/ESAC, Madrid, (Spain).
- 05/2009–10/2009 Visiting Researcher at Multimedia Communication Laboratory, Boston University, Boston, MA, USA. Director of the lab: Prof. Thomas D.C. Little.
- 30/06–04/07/2008 *Summer School of Information Engineering in Wireless Sensor Networks*, Bressanone (Italy).
- 08/2007 *Third SatNEx International Summer School 2007*, hosted by the Institute of Information Science and Technologies (ISTI), Pisa (Italy).
- 30/04–04/05/2007 *ECRYPT 07 PhD Summer School: Emerging topics in Cryptographic Design and Cryptanalysis*, Samos (Greece).
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TEACHING

- 2012 – 2013 Seminars about Network Simulator 2 at Wireless Telecommunications course (Laurea Magistralis in Computer Engineering, Management & Automation Engineering – Roma Tre University);
- 2011 – 2012 Seminars about Network Simulator 2 at Wireless Telecommunications course (Laurea Magistralis in Computer Engineering, Management & Automation Engineering – Roma Tre University);
- 2010 – to present Professor of Telecommunications Networks Laboratory course (First Degree in Electronics Engineering – Roma Tre University);
- 2009 – 2019 Teaching assistant at Wireless Telecommunications course (Laurea Magistralis in Computer Engineering, Management & Automation Engineering – Roma Tre University);
- 2007 – 2019 Teaching assistant at Digital Signal Processing course (Laurea Magistralis in Electronics Engineering – Roma Tre University).

SCIENTIFIC PUBLICATIONS

Books

- B.2 **A.M. Vegni**, V. Loscrí, and A.V. Vasilakos, “Vehicular Social Networks” CRC Taylor & Francis Group, March 2017, ISBN: 9781498749190
- B.1 **A.M. Vegni**, and D.P. Agrawal, “Cognitive Vehicular Networks” CRC Taylor & Francis Group, February 2016, 245 Pages, ISBN: 978-1498721912.

Book Chapters

- BC.11 C. Razafimandimby, V. Loscrí, and **A.M. Vegni**, “Towards Efficient Deployment in Internet of Robotic Things,” (2018) Internet of Things, (9783319612997), pp. 21-37. DOI: 10.1007/978-3-319-61300-0_2.
- BC.10 R. Giuliano, F. Mazzenga, A. Neri, and **A.M. Vegni**, “Security Protocols for IoT Access Networks,” in *Security and Privacy in Internet of Things (IoTs): Models, Algorithms, and Implementations*, F. Hu (Ed.), Taylor & Francis LLC, CRC Press, 2016. ISBN:9781498723183
- BC.9 A. Mostafa, D.P. Agrawal, and **A.M. Vegni** “Towards Cognitive Vehicular Networks,” in *Cognitive Vehicular Networks*, A.M. Vegni, and D.P. Agrawal (Eds.), CRC Taylor & Francis Group, 2015, ISBN: 9781498721912.
- BC.8 V. Loscrí, **A.M. Vegni**, and D.P. Agrawal, “Opportunistic Cognitive Networks,” in *Cognitive Vehicular Networks*, A.M. Vegni, and D.P. Agrawal (Eds.), CRC Taylor & Francis Group, 2015, ISBN: 9781498721912.
- BC.7 V. Loscrí, A. Maskooki, N. Mitton, and **A.M. Vegni**, “Wireless Cognitive Networks Technologies and Protocols”, in “Modeling and Simulation of Computer Networks and Systems: Methodologies and Applications,” M.S. Obaidat, F. Zarai and P. Nicopolitidis (Eds.), Elsevier, 2015, ISBN: 9780128011584.
- BC.6 R. Iovine, V. Loscrí, S. Pizzi, R. Tarparelli, and **A.M. Vegni**, “Electromagnetic Nanocommunications for Sensing and Drug Delivery”, in “Modeling, Methodologies and Tools for Molecular and Nano-scale Communications”, Springer, 2015.
- BC.5 **A.M. Vegni**, and T.D.C. Little, “VANETs as an Opportunistic Mobile Social Network,” in “Opportunistic Mobile Social Networks”, J. Wu, and Y. Wang (Eds.), CRC Press, Taylor & Francis Group, August 2014.

- BC.4 **A.M. Vegni**, C. Campolo, A. Molinaro, and T.D.C. Little, “*Modeling of Intermittent Connectivity in Opportunistic Networks: The Case of Vehicular Ad hoc Networks*,” in “Routing in Opportunistic Networks”, I. Woungang, S.K. Dhurandher, A. Anpalagan, and T. Vasilakos (Eds.), Springer, 2013.
- BC.3 **A.M. Vegni**, M. Biagi, and R. Cusani “Smart Vehicles, Technologies, and main Applications for Vehicular Ad hoc Networks,” in “Vehicular Technologies – Deployment and Applications,” L. Galati Giordano (Ed.), ISBN 978-953-51-0992-1, InTech, February 2013.
- BC.2 **A.M. Vegni**, and R. Cusani, “*Connectivity Support in Heterogeneous Wireless Networks*”, in “Recent Advances in Wireless Communications and Networks”, ISBN 978-953-307-274-6, published by InTech, pages 454, August 2011.
- BC.1 **A.M. Vegni**, T. Inzerilli, and R. Cusani, “*Seamless Connectivity Techniques in Vehicular Ad-hoc Networks*”, in “Advances in Vehicular Networking Technologies”, ISBN 978-953-307-241-8, published by InTech, pages 432, April 2011.

International Journals

- J.45 Y. Sahraoui, C. Abdelaziz Kerrache, M. Amadeo, A.M. Vegni, A. Korichi, and M. Imran, “A Cooperative Crowdsensing System based on Flying and Ground Vehicles to Control Respiratory Viral Disease Outbreaks,” in Elsevier Ad Hoc Networks, 2021.
- J.44 R. Giuliano, E. Innocenti, F. Mazzenga, A.M. Vegni, and A. Vizzarri, “IMPERSONAL: an Iot-aided coMPutER viSiON framework for sociAL distancing for health safety,” in IEEE Internet of Things, 2021, doi: 10.1109/JIOT.2021.3097590.
- J.43 A.M. Vegni, C. Borrego and V. Loscrì, “MOVES: a MemOry-based VEhicular Social Forwarding Technique,” in Computer Networks, Volume 197, 2021, 108324, ISSN 1389-1286, <https://doi.org/10.1016/j.comnet.2021.108324>.
- J.42 M. Hammouda, A.M. Vegni, and V. Loscrì, “On the Noise Effect on Fingerprinting-based Positioning Error in Underwater Visible Light Networks,” Sensors 2021, 21, 5398. <https://doi.org/10.3390/s21165398>
- J.41 V. Loscrì and A.M. Vegni, “Enabling Molecular Communication through Chirality of Enantiomers,” in ITU Journal on Future and Evolving Technologies, 2021
- J.40 A.M. Vegni, V. Loscrì, C. T. Calafate, and P. Manzoni, “Communication Technologies Enabling Effective UAV Networks: a Standard Perspective,” to appear in IEEE Communications Standards Magazine, 2021

- J.39 M. Ojaroudi, V. Loscrì, and A.M. Vegni, "Design and Analysis of a Reconfigurable Intelligent Metasurface for Vehicular Networks," in *ITU Journal on Future and Evolving Technologies*, Volume 1 (2020), Issue 1, 11 December 2020.
- J.38 L. Chancay-García, E. Hernández-Orallo, P. Manzoni, **A.M. Vegni**, V. Loscrì, J.C. Cano, and C.T. Calafate, "Optimising message broadcasting in opportunistic networks," in *Elsevier Computer Communications*, Vol. 157, 2020, pp. 162-178, ISSN 0140-3664, <https://doi.org/10.1016/j.comcom.2020.04.031>.
- J.37 **A.M. Vegni**, C. Souza, V. Loscrì, E. Hernandez-Orallo, and P. Manzoni, "Data Transmissions using Hub Nodes in Vehicular Social Networks," in *IEEE Transactions on Mobile Computing*, vol. 19, no. 7, pp. 1570-1585, 1 July 2020, doi: 10.1109/TMC.2019.2928803.
- J.36 **A.M. Vegni**, V. Loscrì, and A. Benslimane, "SOLVER: a Framework for the Integration of Online Social Networks with Vehicular Social Networks," in *IEEE Network*, vol. 34 (1), pp.204-213, 2020, doi:10.1109/MNET.001.1900259.
- J.35 J. Lui, **A.M. Vegni**, L. Colace, A. Neri, and C. Menon, "Preliminary design and characterization of a low-cost and low-power visible light positioning system," in *Applied Optics*, 58, 7181-7188 (2019).
- J.34 N.B. Hassan, Z. Ghassemlooy, S. Zvanovec, M. Biagi, **A.M. Vegni**, M. Zhang, and Y. Huang, "Interference Cancellation in MIMO NLOS Optical Camera Communication-based Intelligent Transport Systems," in *Applied Optics* 58, 9384-9391 (2019).
- J.33 N.B. Hassan, Z. Ghassemlooy, S. Zvanovec, M. Biagi, **A.M. Vegni**, M. Zhang, and P. Luo, "Non-Line-of-Sight MIMO Space-Time Division Multiplexing Visible Light Optical Camera Communications," in *IEEE/OSA Journal of Lightwave Technology*, vol. 37, no. 10, pp. 2409-2417, 15 May, 2019. doi: 10.1109/JLT.2019.2906097
- J.32 **A.M. Vegni** and M. Biagi, "Optimal LED placement in indoor VLC Networks," in *Optics Express*, 27, 8504-8519 (2019), <https://doi.org/10.1364/OE.27.008504>.
- J.31 C.A. Kerrache, N. Lagraa, R. Hussain, S. Hassan Ahmed, A. Benslimane, C.T. Calafate, J.-C. Cano, and **A.M. Vegni**, "TACASHI: Trust-Aware Communication Architecture for Social Internet of Vehicles," in *IEEE Internet of Things Journal*, 2018. doi: 10.1109/JIOT.2018.2880332.
- J.30 C. Razafimandimby, V. Loscrì, **A.M. Vegni**, and A. Benslimane, "Neuro-Dominating Set Scheme for a Fast and Efficient Robot Deployment in Internet of Robotic Things," in

Ad Hoc Networks (Elsevier), Volume 86, 2019, Pages 36-45, ISSN 1570-8705, <https://doi.org/10.1016/j.adhoc.2018.08.016>

- J.29 V. Loscrí, B. Unluturk, and **A.M. Vegni**, “A Molecular Optical Channel Model based on Phonon-Assisted Energy Transfer Phenomenon,” in *IEEE Transactions on Communications*, vol. 66, no. 12, pp. 6247-6259, Dec. 2018. doi: 10.1109/TCOMM.2018.2865895
- J.28 M. Hammouda, **A.M. Vegni**, J. Peissig, and H. Haas, “Resource Allocation for Interference Management in VLC Networks with Fairness Aspects,” in *Elsevier Physical Communication: Special Issue on Optical Wireless Communications*, Volume 31, 2018, Pages 169-180, ISSN 1874-4907, <https://doi.org/10.1016/j.phycom.2018.04.014>. 2018.
- J.27 M. Hammouda, S. Akin, **A.M. Vegni**, H. Haas, and J. Peissig, “Link Selection in Hybrid RF/VLC Systems under Statistical Queueing Constraints,” in *IEEE Transactions on Wireless Communications*, vol. 17, no. 4, pp. 2738-2754, April 2018. doi: 10.1109/TWC.2018.2802937.
- J.26 M. Hammouda, **A.M. Vegni**, J. Peissig, and M. Biagi, “Resource Allocation in a multi-color DS-OCDMA VLC Cellular Architecture,” in *Optics Express*, 26(5), 5940-5961, 2018, doi: 10.1364/OE.26.005940.
- J.25 **A.M. Vegni**, and V. Loscrí, “Analysis of the Chirality Effects on the Capacity of Wireless Communication Systems in the THz band,” in *IEEE Transactions on Wireless Communications*, vol. 16, no. 12, pp. 7848-7858, Dec. 2017, doi: 10.1109/TWC.2017.2754259.
- J.24 Y. Liu, A. Neri, A., Ruggeri, and **A.M. Vegni**, “A MPTCP-Based Network Architecture for Intelligent Train Control and Traffic Management Operations,” in *IEEE Transactions on Intelligent Transportation Systems*, vol. 18, no. 9, pp. 2290-2302, Sept. 2017. doi: 10.1109/TITS.2016.2633531.
- J.23 S. Pergoloni, Z. Mohamadi, **A.M. Vegni**, Z. Ghassemlooy and M. Biagi, “Metameric Indoor Localization Schemes Using Visible Lights,” in *Journal of Lightwave Technology*, vol. 35, no. 14, pp. 2933-2942, July 15, 2017. doi: 10.1109/JLT.2017.2706527.
- J.22 R. Giuliano, F. Mazzenga, A. Neri, and **A.M. Vegni**, “Security Access Protocols in IoT Capillary Networks,” (2017) in *IEEE Internet of Things Journal*, 4 (3), art. no. 7733119, pp. 645-657. DOI: 10.1109/JIOT.2016.2624824
- J.21 V. Loscrí, and **A.M. Vegni**, “Capacity evaluation of a quantum-based channel in a biological context,” in *IEEE Transactions on Nanobioscience*, Volume 15, Issue 8, December 2016, Article number 7676276, Pages 901-907. DOI: 10.1109/TNB.2016.2620719.

- J.20 **A.M. Vegni**, and V. Loscrí, “Characterization and performance analysis of a chiral-metamaterial channel with Giant Optical Activity for terahertz communications,” in *Nano Communication Networks*, Volume 9, September 2016, Pages 28-35, ISSN 1878-7789, <http://dx.doi.org/10.1016/j.nancom.2016.07.004>.
- J.19 **A.M. Vegni**, and V. Loscrí, “Chirality effects on channel modeling for THz-band wireless communications in LoS/NLoS propagation,” in *Nano Communication Networks (Elsevier)*, Vol. 10, Dec. 2016, pp. 27–37, <http://dx.doi.org/10.1016/j.nancom.2016.07.007>.
- J.18 V. Loscrí, L. Matekovitz, I. Peter, and **A.M. Vegni**, “In-body Network Biomedical Applications: from Modeling to Experimentation,” in *IEEE Transaction on Nanobioscience*, 2016.
- J.17 V. Loscrí, **A.M. Vegni**, and G. Fortino, “On the Interaction between a Nanoparticulate System and the Human Body in Body Area Nanonetworks,” in *Micromachine*, 2015, 6, 1213-1235.
- J.16 **A.M. Vegni**, and V. Loscrí, “Vehicular Social Networks: A Survey,” in *IEEE Communications Surveys & Tutorials*, vol.PP, no.99, pp.1-1, doi: 10.1109/COMST.2015.2453481.
- J.15 V. Loscrí, and **A.M. Vegni**, “An Acoustic Communication Technique of Nanorobot Swarms for Nanomedicine Applications,” in *IEEE Trans. on Nanobioscience*, vol.14, no.6, pp.598-607, Sept. 2015.
- J.14 M. Biagi, S. Pergoloni, and **A.M. Vegni**, “LAST: a framework to Localize, Access, Schedule and Transmit in Indoor VLC Systems,” in *Journal of Lightwave Technology*, vol.33, no.9, pp.1872,1887, May1, 1 2015.
- J.13 M. Biagi, **A.M. Vegni**, and S. Pergoloni, P. Butala, and T.D.C. Little, “Trace-Orthogonal PPM-Space Time Block Coding under Rate Constraints for Visible Light Communication,” in *Journal of Lightwave Technology*, vol.33, no.2, pp.481,494, Jan.15, 15 2015.
- J.12 **A.M. Vegni**, and E. Natalizio, “Forwarder Smart Selection Protocol for Limitation of Broadcast Storm Problem,” in *Journal of Networks and Computer Applications (Elsevier)*, Volume 47, January 2015, pp. 61-71, ISSN 1084-8045, 2015.
- J.11 A. Mostafa, **A.M. Vegni**, and D.P. Agrawal, “A probabilistic routing by using multi-hop retransmission forecast with packet collision-aware constraints in vehicular networks,” in *Ad Hoc Networks (Elsevier)*, Volume 14, March 2014, pp. 118-129, ISSN 1570-8705, 2014.

- J.10 **A.M. Vegni**, and E. Natalizio, "A hybrid (N/M)CHO soft/hard vertical handover technique for heterogeneous wireless networks," in *Ad Hoc Networks (Elsevier)*, Volume 14, March 2014, pp. 51-70, ISSN 1570-8705, 2013.
- J.9 R. Iovine, V. Loscrí, R. Tarparelli, S. Pizzi, and **A.M. Vegni**, "Model of Multi-source Nanonetworks for the Detection of BRCA1 DNA Alterations based on LSPR Phenomenon," in *Advances in Nanoparticles*, vol. 2, no. 4, pp. 301–312, 2013.
- J.8 C. Vegni, M. Tosti, and **A.M. Vegni**, "Innovative Radiating Systems for Train Localization in Interference Csonditions", in *Hindawi Intl. J. of Antennas and Propagation*, vol. 2013, 13 pages, 2013.
- J.7 V. Palma, and **A.M. Vegni**, "On the Optimal Design of a Broadcast Data Dissemination System over VANET providing V2V and V2I Communications –The Vision of Rome as a Smart City–", in *Journal of Telecommunications and Information Technology (JTIT)*, no.1, 2013 (MS 76412).
- J.6 A. Mostafa, **A.M. Vegni**, T. Oliveira, T.D.C. Little, and D.P. Agrawal "QoSHVCP: Hybrid Vehicular Communications Protocol with QoS Priorization for Safety Applications," in *ISRN Communications and Networking journal*, Vol. 2012, 14 pages, 2012.
- J.5 **A.M. Vegni**, and T.D.C. Little, "Hybrid vehicular communications based on V2V-V2I protocol switching," in *Int. J. Vehicle Information and Communication Systems*, Vol. 2, Nos. 3/4, pp. 213–231, 2011.
- J.4 T. Inzerilli, **A.M. Vegni**, A. Neri, and R. Cusani, "A Cross-Layer Location-Based Approach for Mobile-Controlled Connectivity," in *Intl. J. of Digital Multimedia Broadcasting*, vol. 2010, Article ID 597105, 13 pages, 2010.
- J.3 A. Neri, A. Di Nepi, and **A.M. Vegni**, "DOA and TOA based Localization Services Protocol in IEEE 802.11 Networks", in *Wireless Personal Communications Journal*, March 2009, DOI 10.1007/s11277-009-9719-y.
- J.2 **A.M. Vegni**, A. Di Nepi, A. Neri, and C. Vegni, "Local Positioning Services on IEEE 802.11 Networks," in *Radio-engineering Journal –Proc. of Czech and Slovak Technical Universities and URSI Committees*, Vol. 17, No. 2, June 2008, pp. 42–47.
- J.1 G. Manzacca, **A.M. Vegni**, G. Cincotti, X. Wang, N. Wada, and K. Kitayama, "Performance analysis of a multi-port encoder/decoder in OCDMA scenario," in *IEEE Journal of Selected Topics in Quantum Electronics (JSTQE)*, Vol.13, No.5, September/October 2007, pp.1415–1421.

National Journals

- N.1 A. Neri, **A.M. Vegni**, and A. Di Nepi, "TOA and DOA-based localization services in IEEE 802.11 networks", *Atti dell'Istituto Italiano di Navigazione –Rivista di Navigazione Aerea, Spaziale, Marittima e Terrestre*, No.187, January/February 2008, pp.81–90.

International Peer Reviewed Conferences

- C.59 H. Nguyen Minh, A.M. Vegni, V. Loscrì, and A. Benslimane, "Connectivity Management in an Integrated Heterogeneous Social Networks Framework in Vehicular Environments," in Proc. of ACM International Conference on Information Technology for Social Good (GoodIT 2021), 9-11 September 2021, Rome, Italy.
- C.58 A.M. Vegni, M. Hammouda, and V. Loscrì, "A VLC-based Footprinting Localization Algorithm for Internet of Underwater Things in 6G networks," in Proc. Of 5th International Workshop on Optical Wireless Communications (IWOW) in conjunction with the 7th International Symposium on Wireless Communications, on 6-9 Sept. 2021, Berlin, Germany, *virtual conference*.
- C.57 A.M. Vegni and V. Loscrì, "Evaluation of Channel Capacity of a 3D Curvilinear Metasurface in the THz band," in Proc. Of 12th Wireless Days Conference, 30 June – 2 July, 2021, *virtual conference*.
- C.56 C. Borrego, E. Hernandez-Orallo, P. Manzoni, and A.M. Vegni, "LAPSE: A Machine Learning Message Forwarding Approach based on Node Centrality Estimation in Sparse Dynamic Networks," in Proc. Of 12th Wireless Days Conference, 30 June – 2 July, 2021, *virtual conference*.
- C.55 V. Loscrì, A.M. Vegni, E. Innocenti, R. Giuliano and F. Mazzenga, "A joint Computer Vision and Reconfigurable Intelligent Meta-surface Approach for Interference Reduction in Beyond 5G Networks," in Proc. Of IEEE International Conference on High Performance Switching and Routing, 7-9 June 2021, Paris, France, *virtual conference*.
- C.54 R. Giuliano, F. Mazzenga, A.M. Vegni and A. Vizzarri, "Future Railway Communication Systems: the FRMCS and the ACS two contrasting approaches," in Proc. Of IEEE Future Network Security: Challenges & Opportunities Workshop (IEEE FNSEC), 22-24 March 2021, *virtual conference*.
- C.53 A. Taibi, A. Durant, V. Loscrì, **A.M. Vegni**, and L. La Spada, "Controlling Light by Curvilinear MetaSurfaces," in *Proc. of ACM Nanocom 2019*, September 25-27, 2019, Dublin, Ireland.

- C.53 V. Loscrí, P. Manzoni, M. Nitti, G. Ruggeri, and **A.M. Vegni**, “A Social Internet of Vehicles Sharing SIoT Relationships,” in *Proc. of ACM MobiHoc Workshop on Pervasive Systems in the IoT Era (PERSIST-IoT)*, July 2-5, 2019, Catania, Italy.
- C.53 L. La Spada, V. Loscrí, and **A.M. Vegni**, “MetaSurface Structure Design and Channel Modelling for THz Band Communications,” in *Proc. of INFOCOM 2019 Workshop, 1st IEEE Workshop on Ultra-High Broadband Terahertz Communication for 5G and Beyond Networks (UBTCN 2019)*, April 29-May 2, Paris, France.
- C.53 **A.M. Vegni**, V. Loscrí, and P. Manzoni, “Analysis of Small-World Features in Vehicular Social Networks,” in *Proc. of IEEE Consumer Communications Networking Conference*, 11-14 January 2019, Las Vegas, USA.
- C.53 L. La Spada and **A.M. Vegni**, “MetaSurface Structures for Sensing and Communications,” in *Proc. of 13th European Conference on Antennas and Propagation (EuCAP)*, 31 March-5 April 2019, Krakow, Poland.
- C.53 V. Loscrí and **A.M. Vegni**, “Error Probability Derivation in a Phonon-based Quantum Channel,” in *Proc. of IEEE Globecom 2018 Workshop on Quantum Communications and Information Technology*, 9-13 December 2018, Abu Dhabi, UAE.
- C.53 L. La Spada and **A.M. Vegni**, “A Tool for Modeling, Design and Applications of MetaSurfaces,” in *Proc. of OSA Latin America Optics and Photonics Conference (LAOP 2018)*, 12-15 November 2018, Lima, Peru.
- C.53 **A.M. Vegni**, V. Loscrí, and P. Manzoni, “Data Forwarding Techniques Based on Graph Theory Metrics in Vehicular Social Networks,” in *Proc. of IEEE 29th Annual Intl. Symp. on Personal, Indoor, and Mobile Radio Communications (PIMRC)*, 9-12 September 2018, Bologna, Italy.
- C.53 V. Loscrí, G. Ruggeri, **A.M. Vegni**, and I. Cricelli, “Social Structure Analysis in Internet of Vehicles,” in *Proc. of CoWPER Workshop (Toward A City-Wide Pervasive Environment)*, in conjunction with IEEE Intl. Conf. on Sensing, Communication and Networking (SECON), 11-13 June 2018, Hong Kong.
- C.53 M. Hammouda, S. Akin, **A.M. Vegni**, H. Haas, and J. Peisig, “Hybrid RF/VLC Systems under QoS Constraints,” in *Proc. of the 25th Intl. Conf. on Telecommunication*, Saint-Malo, France, June 26-28, 2018.

- C.54 T.D.C. Little, M. Rahaim, I. Abdalla, E. Lam, R. Mcallister, and **A.M. Vegni**, “A Multi-Cell Lighting Testbed for VLC and VLP,” in *Proc. of GLOBAL LIFI CONGRESS - 1st Edition*, Visible Light Communications, Paris, France, February 8-9, 2018.
- C.53 **A.M. Vegni**, V. Loscrí, and R. Petrolo, “SCARF: A SoCial-Aware Reliable Forwarding Technique for Vehicular Communications,” in Proc. of 3rd Workshop on Experiences with the Design and Implementation of Smart Objects (SMARTOBJECTS 2017), in conjunction with ACM MobiCom 2017, October 16th, 2017, Snowbird, Utah, USA. *INVITED PAPER*.
- C.52 C. Razafimandimby, V. Loscrí, **A.M. Vegni**, and A. Neri, “Efficient Bayesian Communication Approach For Smart Agriculture Applications,” accepted to VTC-Fall 2017, Toronto, Canada.
- C.51 C. Razafimandimby, V. Loscrí, **A.M. Vegni**, and A. Neri, “A Bayesian and smart gateway based communication for noisy IoT scenario,” in Proc. of Intl. Conf. on Computing, Networking and Communications (ICNC), Santa Clara, CA, 2017, pp. 481-485. doi: 10.1109/ICCNC.2017.7876176.
- C.50 M. Hammouda, J. Peissig and **A.M. Vegni**, “Design of a cognitive VLC network with illumination and handover requirements,” in Proc. of IEEE Intl. Conf. on Communications Workshops (ICC Workshops), Paris, 2017, pp. 451-456. doi: 10.1109/ICCW.2017.7962699.
- C.49 S. Pergoloni, Z. Mohamadi, **A.M. Vegni**, Z. Ghassemlooy and M. Biagi, “Visible Light indoor positioning through colored LEDs,” in Proc. of IEEE Intl. Conf. on Communications Workshops (ICC Workshops), Paris, 2017, pp. 150-155. doi: 10.1109/ICCW.2017.7962649
- C.48 C. Razafimandimby, V. Loscrí, **A.M. Vegni**, and A. Neri, “A Bayesian and Smart Gateway based Communication for Noisy IoT Scenario,” in Proc. of Intl. Conf. on Computing, Networking and Communications (ICNC 2017): Wireless Ad hoc and Sensor Networks, Silicon Valley, USA, Jan. 26-29, 2017.
- C.47 V. Loscrí, I. Peter, L. Matekovits, and **A.M. Vegni**, “Recent Advances in Body Area NanoNetworks: Electromagnetic, Materials and Communications,” in Proc. of 11th International Conference on Body Area Networks, December 15-16, 2016, Turin, Italy.
- C.46 **A.M. Vegni**, and V. Loscrí, “Performance of a Chirality-affected Channel exhibiting Giant Optical Activity for Terahertz Communications,” in Proc. of 3rd ACM Intl. Conf. on

Nanoscale Computing and Communication (ACM NANOCOM 2016), September 28-30, 2016, New York City, New York, USA.

- C.45 V. Loscrí, and **A.M. Vegni**, “Channel Modeling in a Phonon-based Quantum Network for Nano-communications,” in *Proc. of 3rd ACM Intl. Conf. on Nanoscale Computing and Communication (ACM NANOCOM 2016)*, September 28-30, 2016, New York City, New York, USA.
- C.44 S. Pergoloni, Z. Mohammadi, **A.M. Vegni**, and M. Biagi, “Metameric Indoor Localization using Visible Light,” in *Proc. of 2nd IEEE Workshop on Optical Wireless Communications*, in conjunction with IEEE Intl. Conference on Communications (ICC 2016), May 23-27, 2016, Kuala Lumpur, Malaysia.
- C.43 **A.M. Vegni**, V. Loscrí, A. Neri, and M. Leo, “A Bayesian Packet Sharing Approach for Noisy IoT Scenarios,” in *Proc. of 1st Intl. Workshop on Interoperability, Integration, and Interconnection of Internet of Things Systems (I4T)*, April 6-8, 2016, Berlin, Germany.
- C.42 C. Razafimandimby, V. Loscrí, and **A.M. Vegni**, “A neural network and IoT based scheme for performance assessment in Internet of Robotic Things,” in *Proc. of 1st Intl. Workshop on Interoperability, Integration, and Interconnection of Internet of Things Systems (I4T)*, April 6-8, 2016, Berlin, Germany.
- C.41 V. Loscrí, L. Matekovits, I. Peter, and **A.M. Vegni**, “Modeling and Experimental Analysis of an In-body Area Nanonetwork,” in *Proc. of 10th International Conference on Body Area Networks 2015*, September 29–October 1, 2015 Sydney, Australia.
- C.40 V. Loscrí, and **A.M. Vegni**, “On the Affection of the Human Immune System on a Nanoparticulate Nanomedicine System,” in *Proc. of 9th International Conference on Body Area Networks 2014*, September 29–October 1, 2014, London UK.
- C.39 A. Mostafa, **A.M. Vegni**, A. Bandaranayake, and D.P. Agrawal, “QoS-aware Node Selection Algorithm for Routing Protocols in VANETs,” in *Proc. of International conference on selected topics in Mobile and Wireless Networking (MoWNet 2014)*, September 8-9, 2014, Rome Italy.
- C.38 A. Neri, F. Rispoli, P. Salvatori, and **A.M. Vegni**, “A Train Integrity Solution Based on GNSS Double-Difference Approach,” in *Proc. of ION GNSS+ 2014*, September 8-12, 2014, Tampa, FL, USA.

- C.37 R. Giuliano, F. Mazzenga, A. Neri, and **A.M. Vegni**, “Security Access Protocols in IoT Networks with Heterogenous Non-IP Terminals,” in *Proc. of 2nd Intl. Workshop on Internet of Things – Ideas and Perspectives (IoTIP-14)*, in conjunction with IEEE DCOSS 2014, May 28th, 2014, Marina Del Rey, CA, USA.
- C.36 R. Iovine, R. Tarparelli, and **A.M. Vegni**, “Graphene Bowtie Nanoantenna for Wireless Communications in the Terahertz Band,” in *Proc. of 1st ACM Intl. Conf. on Nanoscale Computing and Communication*, May 13–14, 2014, Atlanta, Georgia, USA.
- C.35 M. Biagi, and **A.M. Vegni**, “Enabling High Data Rate VLC via MIMO-LEDs PPM,” in *Proc. of 4th IEEE Globecom 2013 Workshop on Optical Wireless Communications (OWC)*, December 9, 2013, Atlanta GA, USA.
- C.34 R. Iovine, R. Tarparelli, and **A.M. Vegni**, “Detection of DNA Alterations using Gold Nanoparticles exploiting the LSP phenomenon,” in *Proc. of IEEE 21st International Conference on Applied Electromagnetics and Communications (ICECOM 2013)*, October 14–16, 2013, Dubrovnick, Croatia.
- C.33 C. Vegni, A. Caporale, and **A.M. Vegni**, “Design of Miniaturized Radiating Systems for GNSS Applications in Interference Conditions,” in *Proc. of IEEE 21st International Conference on Applied Electromagnetics and Communications (ICECOM 2013)*, October 14–16, 2013, Dubrovnick, Croatia.
- C.32 A. Neri, V. Palma, F. Rispoli, and **A.M. Vegni**, “Track Constrained PVT Estimation based on the Double-Difference Technique for Railway Applications,” in *Proc. of EUSIPCO 2013*, September 9–13, 2013, Marrakech, Morocco.
- C.31 A. Neri, **A.M. Vegni**, and F. Rispoli, “PVT Estimation for the ERTMS Train Control Systems in presence of Multiple Tracks,” in *Proc. of ION GNSS+ 2013*, September 16–20, 2013, Nashville, TN, USA.
- C.30 **A.M. Vegni**, A. Stramacci, and E. Natalizio, “Opportunistic Clusters Selection in a Reliable Enhanced Broadcast Protocol for Vehicular Ad hoc Network,” in *Proc. of 10th Annual Conference on Wireless On-Demand Network Systems and Services (WONS)*, March 18–20, 2013, Banff, Alberta, Canada.
- C.29 **A.M. Vegni**, A. Mostafa, and D.P. Agrawal, “CAREFOR: Collision-Aware RELiable FORwarding Technique for Vehicular Ad hoc Networks,” in *Proc. of Intl. Conf. on Computing, Networking and Communications (ICNC), Mobile Com-*

puting & Vehicle Communications Symposium, January 28–31, 2013, San Diego, CA, USA.

- C.28 **A.M. Vegni**, and M. Biagi, “An Indoor Localization Algorithm in a Small-cell LED-based Lighting System,” in *Proc. of 3rd Intl. Conf. on Indoor Positioning and Indoor Navigation (IPIN)*, November 13–15, 2012, Sydney, Australia.
- C.27 M. Biagi, **A.M. Vegni**, and T.D.C. Little, “LAT Indoor MIMO-VLC –Localize, Access and Transmit–,” in *Proc. of Intl. Workshop on Optical Wireless Communications (IWOW 2012)*, October 22, 2012, Pisa, Italy.
- C.26 R. Giuliano, F. Mazzenga, A. Neri, **A.M. Vegni**, and D. Valletta, “Security Implementation in Heterogeneous Networks with Long Delay Channel,” in *Proc. of the 1st Intl. IEEE-AESS Conf. in Europe about Space and Satellite Telecommunications (ESTEL 2012), special track on Security and Privacy*, October 2–5, 2012, Rome, Italy.
- C.25 A. Neri, A. Filip, F. Rispoli, and **A.M. Vegni**, “An Analytical Evaluation for Hazardous Failure Rate in a Satellite-based Train Positioning System with reference to the ERTMS Train Control Systems,” in *Proc. of ION GNSS 2012*, September 17–21, 2012, Nashville, Tennessee.
- C.24 F. Lupi, V. Palma, and **A.M. Vegni**, “Performance Evaluation of Broadcast Data Dissemination over VANETs, “A Case Study in the City of Rome,” in *Proc. of 51st FITCE Congress “Everything in the Net - IPv6 and Internet of the Future Prospects”*, September 5–8, 2012, Poznan, Poland.
- C.23 T. Oliveira, F. Greve, **A.M. Vegni**, and D.P. Agrawal, “Reliability Tradeoffs for Energy Efficient Wireless Networks,” in *Proc. of Intl. Workshop on Mobile Ad-Hoc Wireless Networks (iWMANET), part of Intl. Conf. on Selected Topics in Mobile & Wireless Networking (iCOST 2012)*, July 2–4, 2012, Avignon, France.
- C.22 **A.M. Vegni**, A. Stramacci, and E. Natalizio, “SRB: A Selective Reliable Broadcast Protocol for Safety Applications in VANET,” in *Proc. of Intl. Conf. on Selected Topics in Mobile & Wireless Networking (iCOST 2012)*, July 2–4, 2012, Avignon, France.
- C.21 Z. Alazawi, M.B. Abdljabar, S. Altowajri, **A.M. Vegni**, and R. Mehmood, “ICDMS: An Intelligent Cloud based Disaster Management System for Vehicular Networks,” in *Proc. of Nets4Cars 4th Intl. Workshop on Communication Technologies for Vehicles*, Vilnius, Lithuania, April 25–27, 2012.
- C.20 **A.M. Vegni**, and T.D.C. Little, “Handover in VLC Systems with Cooperating Mobile Devices,” in *Proc. of Mobility and*

Communication for Cooperation and Coordination (MC3) workshop, part of the IEEE Intl. Conference on Computing, Networking and Communications (ICNC 2012), Maui Hawaii, USA, January 30 – February 2, 2012.

- C.19 M. Rahaim, **A.M. Vegni**, and T.D.C. Little, “A Hybrid Radio Frequency and Broadcast Visible Light Communication System”, in *Proc. of IEEE Globecom 2011 2nd Workshop on Optical Wireless Communications (OWC 2011)*, Houston TX, USA, December 5–9, 2011.
- C.18 V. Palma, E. Mammi, **A.M. Vegni**, and A. Neri, “A Fountain Codes-based Data Dissemination Technique in Vehicular Ad-hoc Networks”, in *Proc. of Intl. Workshop on Seamless Connectivity in Vehicular Networks (SCVN 2011)*, part of the *11th IEEE Intl. Conf. on ITS Telecommunications (ITST 2011)*, Saint-Petersburg, Russia, August 23–25, 2011.
- C.17 A. Mostafa, **A.M. Vegni**, R. Singoria, T. Oliveira, T.D.C. Little, and D.P. Agrawal, “A V2X-based approach for reduction of delay propagation in Vehicular Ad-Hoc Networks”, in *Proc. of Intl. Workshop on Seamless Connectivity in Vehicular Networks (SCVN 2011)*, part of the *11th IEEE Intl. Conf. on ITS Telecommunications (ITST 2011)*, Saint-Petersburg, Russia, August 23–25, 2011.
- C.16 F. Esposito, **A.M. Vegni**, I. Matta, and A. Neri, “On Modeling Speed-Based Vertical Handovers in Vehicular Networks—Dad, slow down, I am watching the movie—” in *Proc. of IEEE Globecom 2010 Workshop on Seamless Wireless Mobility (SWM 2010)*, Miami FL (USA), December 6–10, 2010.
- C.15 C. Vegni, I. Stojkovic, M. Tosti, and **A.M. Vegni**, “Dilution of Precision Factor in Galileo and GPS MEOSAR Constellations for European Coverage”, in *Proc. of IEEE 20th Intl. Conf. on Applied Electromagnetics and Communications (ICECOM 2010)*, Dubrovnik (Croatia), September 20–23, 2010.
- C.14 **A.M. Vegni**, M. Carli, and A. Neri, “Localization Services in Hybrid Self-organizing Networks,” accepted paper at *IEEE Intl. Conf. on Indoor Positioning and Indoor Navigation (IPIN)*, Zurich (Switzerland), September 15–17, 2010.
- C.13 **A.M. Vegni**, and T.D.C. Little, “A Message Propagation Model for Hybrid Vehicular Communication Protocols,” in *Proc. of 2nd Intl. Workshop on Communication Technologies for Vehicles (Nets4Cars 2010)*, in *7th IEEE Intl. Symp. on Communication Systems, Networks and DSP (CSNDSP 2010)*, Newcastle (UK), July 21–23, 2010.

- C.12 **A.M. Vegni**, and F. Esposito, “A Speed-based Vertical Handover Algorithm for VANET,” in *Proc. of 7th Intl. Workshop on Intelligent Transportation (WIT 2010)*, Hamburg (Germany), March 23–24, 2010.
- C.11 **A.M. Vegni**, C. Vegni, and T.D.C. Little, “Opportunistic Vehicular Networks by Satellite Links for Safety Applications,” accepted presentation at *The Fully Networked Car Workshop @ Geneva International Motor Show*, Geneva (Switzerland), March 3–4, 2010.
- C.10 **A.M. Vegni**, G. Tamea, T. Inzerilli, and R. Cusani, “A Combined Vertical Handover Decision Metric for QoS Enhancement in Next Generation Networks,” in *Proc. on 5th IEEE Intl. Conf. on Wireless and Mobile Computing, Networking and Communications (WiMob 2009)*, Marrakech (Morocco), October 12–14, 2009.
- C.9 **A.M. Vegni**, and F. Esposito, “Location Aware Mobility Assisted Services for Heterogeneous Wireless Technologies,” in *Proc. on IEEE MTT-S Intl. Microwave Workshop on Wireless Sensing, Local Positioning, and RFID (IMWS 2009)*, Cavtat (Croatia), September 24–25, 2009.
- C.8 G. Tamea, **A.M. Vegni**, T. Inzerilli, and R. Cusani, “A Probability based Vertical Handover Approach to Prevent Ping-Pong Effect,” in *Proc. of 6th Intl. Symp. on Wireless Communication Systems 2009 (ISWCS 2009)*, Siena (Italy), September 7–10, 2009.
- C.7 T. Inzerilli, **A.M. Vegni**, A. Neri, and R. Cusani, “A Location-based Vertical Handover algorithm for limitation of the ping-pong effect,” in *Proc. of 4th IEEE Int. Conf. on Wireless and Mobile Computing, Networking and Communications (WiMob 2008)*, Avignon (France), October 12–14, 2008.
- C.6 T. Inzerilli, and **A.M. Vegni**, “A reactive vertical handover approach for WiFi-UMTS dual-mode terminals”, in *Proc. of 12th IEEE Intl. Symp. on Consumer Electronics (ISCE 2008)*, Algarve (Portugal), April 14–16, 2008.
- C.5 **A.M. Vegni**, M. Carli, A. Neri, and G. Ragoša, “QoS-based vertical handoff in heterogeneous networks,” in *Proc. of 10th Intl. Symp. on Wireless Personal Multimedia Communications (WPMC 2007)*, CD-ROM no. of pages: 4, Jaipur (India), December 3–6, 2007, ISSN 1882-5621.
- C.4 **A.M. Vegni**, A. Di Nepi, and A. Neri, “DoA versus ToA based localization services in IEEE 802.11 networks,” in *Proc. of 10th Intl. Symp. on Wireless Personal Multimedia Communications (WPMC 2007)*, in nomination for the Best Paper Award. CD-ROM no. of pages: 4, Jaipur (India), December 3–6, 2007, ISSN 1882-5621.

- C.3 P.G. Bosco, T. Inzerilli, M. Leo, and **A.M. Vegni**, “Extended UPnP architecture for emergency applications,” in *Proc. of Wireless Rural and Emergency Communications (WRECOM 2007)*, CD-ROM no. of pages: 4, Rome (Italy), October 1–2, 2007.
- C.2 **A.M. Vegni**, A. Di Nepi, A. Neri, and C. Vegni, “Local positioning services on IEEE 802.11 Networks,” in *Proc. of 19th IEEE Intl. Conf. on Applied Electromagnetics and Communications (ICECOM 2007)*, Dubrovnik (Croatia), September 24–26, 2007, pp.63–66, ISBN 978-953-6037-51-3.
- C.1 F. Benedetto, G. Giunta, and **A.M. Vegni**, “Performing xDSL for QoS Requirements,” in *Proc. of IEEE 11th Intl. Symp. on Communications and Vehicular Technology (SCVT 2004)*, CD-ROM no. of pages: 5, Gent (Belgium), November 9, 2004.

National Peer Reviewed Conferences

- NC.2 **A.M. Vegni**, “Smart Lighting proposal,” GTTI for the future, Confindustria Firenze, Florence (Italy), May 8, 2012.
- NC.1 **A.M. Vegni**, and A. Di Nepi, “Localization on IEEE 802.11 Networks,” Annual meeting 2007 by Nation Telecommunication and Information Theory Group (GTTI), Rome (Italy), June 18–20, 2007.

Invited Talks

- T.1 **A.M. Vegni**, “Multimedia Mobile Communications in Heterogeneous Wireless Networks,” presentation of Ph.D. thesis at ESA–ESTEC, Noordwijk (The Netherlands), March 25–26, 2010.

SERVICES

Membership

Anna Maria Vegni is a member of the following associations:

- ACM;
- IEEE and IEEE Communications Society;
- Computer Communications, IEEE Computer Society Technical Committee on;
- GTTI, National Telecommunications and Information Theory Group;
- CNIT.

Member of Editorial Boards of International Journals

- Editor for IEEE Communications Magazine, since September 2019.
- Editor for IEEE Journal of Communications and Networks, since May 2020.
- Editor for Ad Hoc Networks journal, Elsevier, since July 2016.
- Editor for NANOCOMNETS (Nano Communication Networks journal), Elsevier, since January 2016.
- Editor for JNCA (Journal of Networks and Computer Applications), Elsevier, since July 2015.
- Editor for Transaction on Emerging Telecommunications Technologies Wiley, since March 2018.
- Editor for Sensors MDPI, since November 2019.
- Editor for IET Smart Cities Journal, since December 2018.
- Editor for International Journal of Multimedia Intelligence and Security, since April 2018.
- Co-Editor for the TCSN (Technical Committee on Social Networks) Newsletter, 2019.
- Lead Editor of the Special Issue on “Towards vehicular networks in the 6G era”, ITU J-FET journal, <https://www.itu.int/en/journal/j-fet/2022/001/Pages/default.aspx>, 2022.
- Guest Editor dello Special Issue on “Information Technology for Social Good”, Springer Journal of Multimedia Tools and Applications, 2021
- Guest Editor for the Elsevier Vehicular Communications, Special Issue on “Revolutionary Paradigms for Smart Connected Vehicles in the 6G Era”, to be published in 2021.
- LEAD EDITOR of Feature Topic on “Networking Technologies to Combat the COVID-19 Pandemic” at IEEE Communications Magazine. <https://www.comsoc.org/publications/communications-magazine/cfp/networking-technologies-combat-covid-19>
- LEAD GUEST EDITOR dello Special Issue on Recent Advances in Connected and Autonomous Unmanned Aerial/Ground Vehicles, Elsevier Computer Networks journal. <https://www.journals.elsevier.com/computer-networks/call-for-papers/connected-and-autonomous-unmanned-aerial-ground-vehicles>
- Guest Editor for the Elsevier Pervasive and Mobile Computing journal Special Issue on “Mobile and Social Sensing,” to be published in 2020.
- Guest Editor for the Elsevier Cognitive Systems Research journal Special Issue on “Cognition in Software Defined Sensor Networks for the Next Generation Cellular Services,” to be published in 2020.
- Guest Editor for the IEEE Access journal Special Section on “Protocols for Nanocommunication Networks,” 2019.

- Guest Editor for the IEEE Internet of Things journal Special Issue on “Recent Advances on Social Internet of Vehicles,” 2018.
- Guest Editor for Ad Hoc Networks (Elsevier) Journal, Special Issue on “Internet of Things security and privacy: design methods, detection, prevention and countermeasures”, 2014.

Conference Chair

- Steering committee member of the conference CSNDSP 2022, July 20-22, 2022, Porto, Portugal.
- Session chair in “Communications II” at the conference IEEE SECON 2021 - <https://secon2021.ieee-secon.org/program/#session5>
- TPC Chair and Local Chair at the ACM International Conference on Information Technology for Social Good (GoodIT 2021), 9-11 September 2021, Rome, Italy
- Member of the Organizing committee of the 7th Colloquium on Optical Wireless Communications (CSNDSP 2022)
- Member of the Organizing committee of the 5-th International Workshop on Optical Wireless Communications (IWOW), in conjunction with ISWCS 2021
- PUBLICITY Co-chair of the 12th Wireless Days Conference (WD 2021), 30 June - 02 July, 2021, Paris, France (Virtual Conference)
- TPC member of the conference IEEE SECON 2021
- TPC member of the conference MSN 2021 (The 17th International Conference on Mobility, Sensing and Networking)
- Co-chair of Mobile & Wireless Networks Symposium at “IEEE GLOBECOM 2020”, 7-11 December 2020, Xinyi District, Taipei City Taiwan.
- Social media Co-chair of “IEEE GLOBECOM 2020”, 7-11 December 2020, Xinyi District, Taipei City Taiwan.
- Executive co-chair of the “16th WiMob Conference (IEEE International Conference on Wireless and Mobile Computing, Networking and Communications),” October 12-14, 2020, Thessaloniki, Greece.
- Workshop co-chair of the “9th Networking Networking Women (N2WOMEN) Workshop”, co-located with the 16th International Conference on Wireless and Mobile Computing, Networking and Communications, 12 October 2020, Thessaloniki, Greece.
- Special session co-chair on “Simulation of Urban Traffic Management and ITS” at IEEE/ACM DS-RT 2020, the 24th International Symposium on Distributed Simulation and Real Time Applications, September 14-16, 2020, Prague, Czech Republic.

- Organizer of the “1st Workshop on Pervasive Systems in the IoT era (PERSIST-IoT)” in conjunction with ACM MobiHoc 2019, Catania, Italy, July 2-5, 2019.
- Workshop chair of the “Twelfth International Workshop on Selected Topics in Wireless and Mobile computing (STWiMob 2019)” in conjunction with IEEE WiMob 2019, Barcelona, Spain, 21-23 October 2019.
- Special session co-chair on “Simulation of Urban Traffic Management and ITS at IEEE/ACM DS-RT 2019”, the 23rd International Symposium on Distributed Simulation and Real Time Applications, October 7-9, 2019, Cosenza, Italy.
- Local Arrangements Co-Chairs at “ICHMS 2020 conference, the 1st IEEE International Conference on Human-Machine Systems,” April 6-8, 2020, Rome, Italy.
- Publicity Co-chair and Travel Grant Chair of the “15th International Conference on Wireless and Mobile Computing, Networking and Communications (IEEE WiMob),” 21-23 October 2019, Barcelona, Spain.
- Local Organization Co-chair of the “15th International Conference on Wireless and Mobile Computing, Networking and Communications (IEEE WiMob),” 21-23 October 2019, Barcelona, Spain.
- Conference Co-chair of the “4th IEEE International Conference on Computing Communication and Security (ICCCS 2019),” 10-12 October 2019, Rome, Italy.
- Chair of the Keynote: Back to the Future: Hardware-specialized Cloud Networking, Giuseppe Bianchi (University of Rome Tor Vergata, Italy), at the 4th IEEE International Conference on Computing Communication and Security (ICCCS 2019), 10-12 October 2019, Rome, Italy.
- Chair of the “Technical Session: Security and Privacy, at the 4th IEEE International Conference on Computing Communication and Security (ICCCS 2019),” 10-12 October 2019, Rome, Italy.
- Technical Program Co-chair of the “6th ACM/IEEE Intl. Conf. on Nanoscale Computing and Communication (ACM/IEEE NANOCOM),” 23-25 September 2019, Dublin, Ireland.
- Track Co-chair of “Social Networks and Computing (SNC) track” at the 28th Intl. Conf. on Computer Communications and Networks (ICCCN 2019), July 29 - August 1, 2019, Valencia, Spain.
- Publicity Co-chair of “IEEE International Conference on Sensing, Communication and Networking (IEEE SECON),” 10-13 June 2019, Boston, Massachusetts, USA.
- Organizer of the “5th Workshop on Optical Wireless Communications (OWC),” in conjunction with IEEE International Conference on Communications (ICC), 20-24 May 2019, Shanghai, China.

- Organizer of the “Special Session on Mobile Social Networks” at IEEE PIMRC 2018, September 9-12, 2018, Bologna, Italy.
- TPC Co-Chair of the “4th Workshop on Experiences with the Design and Implementation of Smart Objects (SMARTOBJECTS)” at ACM MobiHoc 2018, June 26-29, 2018, Los Angeles, California, USA.
- Workshop Co-Chair of “the 14th Intl. Conf. on Wireless and Mobile Computing, Networking and Communications (WiMob 2018),” October 15-17, 2018, Limassol, Cyprus.
- Finance Co-Chair of “the 5th ACM Intl. Conf. on Nanoscale Computing and Communication,” Reykjavik, Iceland, September 5-7, 2018.
- Finance Co-Chair of “BalkanCom: Second Intl. Balkan Conference on Communications and Networking,” Podgorica, Montenegro, June 4-8, 2018.
- Organizer of the “Fourth Workshop on Optical Wireless Communications (OWC),” in conjunction with IEEE International Conference on Communications (ICC), 20-24 May 2018, Kansas City, MO, USA.
- Local Chair of “WiMob 2017: The 13th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications,” Oct 9-11, 2017, Rome, Italy.
- Finance Chair of “BalkanCom: Int. Balkan Conference on Communications and Networking,” Tirana, Albania, June 1-3, 2017.
- Finance Chair of the “4th ACM International Conference on Nanoscale Computing and Communication”, Washington D.C., USA, September 2017.
- Organizer of the “3rd Workshop on Optical Wireless Communications (OWC),” in conjunction with IEEE International Conference on Communications (ICC), 21-25 May, 2017 Paris, France.
- Financial Co-chair of “3rd ACM International Conference on Nanoscale Computing and Communication,” New York, New York, USA, September 28-30, 2016.
- Organizer of the “Second Workshop on Optical Wireless Communications” (OWC), in conjunction with IEEE International Conference on Communications (ICC), 23-27 May, 2016 Kuala Lumpur, Malaysia.
- TPC Co-Chair for the “International Conference on Selected Topics in Mobile & Wireless Networking,” 11–13 April, 2016, Cairo, Egypt.
- Organizer of the Special Track “Body Area NanoNetworks: Electromagnetic, Materials, and Telecommunications,” (BAN²-EMC), in conjunction with the 10th International Conference on Body Area Networks, September 28–30, 2015 Sydney, Australia.
- Organizer of the Special Track “Electromagnetic-Body Area NanoNetworks,” (E-BANNET 2014), in conjunction with the 9th International Conference on Body Area Networks, September 29–October 1, 2014 London, Great Britain.

- Chair of the Session “MoWNet’2014: MoWNet M1: VANET”, and “MoWNet’2014: MoWNet M5: P2P Networking and Security”, of Fourth International Conference on Selected Topics in Mobile & Wireless Networking (MoWNet’2014), September 8–10, 2014, Rome, Italy.
- Publicity and Local Organizer Co-chair of the Fourth International Conference on Selected Topics in Mobile & Wireless Networking (MoWNet’2014), September 8–10, 2014, Rome, Italy.
- Publicity Co-chair of the Third International Conference on Selected Topics in Mobile & Wireless Networking (MoWNet’2013), August 19–21, 2013, Montreal, Canada.
- Organizer of the Second IEEE SPS Italy Chapter Summer School on Signal Processing, July 7–11, 2014, Frascati (Rome, Italy).
- Chair of the session “Wireless Routing protocols” at the IEEE International Conference on Selected Topics (iCOST 2012) in Mobile and Wireless Networking, Avignon, France, July 2–4, 2012.
- Publicity Co-chair of the IEEE International Conference on Selected Topics (iCOST 2012) in Mobile and Wireless Networking, Avignon, France, July 2–4, 2012.
- Organizer of the IEEE International Workshop on Seamless Connectivity in Vehicular Networks (SCVN 2011) in conjunction with the 11th IEEE International Conference on ITS Telecommunications (ITST 2011), Saint-Petersburg, Russia, August 23–25, 2011.
- Chair of the session “TOF TDOA” at the IEEE International Conference on Indoor Positioning and Indoor Navigation (IPIN 2010), September 15–17, 2010, Zurich, Switzerland.

Member of Scientific Committee

- Session Chair of “Session 7: Electromagnetic Communication: Link and Network Layers, Wireless Networks on Chip” of the conference 3rd ACM NANOCOM (International Conference on Nanoscale Computing and Communication), New York, New York, USA, sept. 28-30, 2016.
- TPC Co-Chair of the conference iCOST 2016 (International Conference on Selected Topics in Mobile & Wireless Networking), April 11-13, 2016, Cairo, Egypt.
- TPC member of CCNC 2016 - Vehicular Communications and Applications in Water, Land and Sky track, in conjunction with the 13th Annual IEEE Consumer Communications and Networking Conference.
- TPC member of 5th colloquium on Optical Wireless Communications, in conjunction with the 10th IEEE IET International Symposium on Communication Systems, Networks and DSP, Prague, Czech Republic, 20-22 July 2016.

- TPC member of the First IEEE International Smart Cities Conference (ISC2-2015), Guadalajara, Mexico, October 25-28, 2015.
- TPC member of BODYNETS, 10th International Conference on Body Area Networks, September 28–30, 2015 Sydney, Australia.
- TPC member of Smart Spaces and IoT Networking track, in conjunction with IEEE Consumer Communications & Networking Conference (CCNC), 9–12 January, 2015 Las Vegas, USA.
- TPC member of IEEE TENSYP conference (theme: Internet of Things), May 13–15, 2015, Ahmedabad, India.
- SWANSITY 2014 (Self-organizing Wireless Access Networks for Smart CITY Workshop), in conjunction with IEEE SECON 2014, June 30 – July 3, 2014, Singapore.
- IoTIP'14, 2nd International Workshop on IoT - Ideas and Perspectives, Marina Del Rey, USA - May 28th, 2014.
- IEEE 11th Workshop on Wireless Ad hoc and Sensor Networks (WWASN 2014), in conjunction with the ICDCS 2014.
- ICCVE 2013 (2013 International Conference on Connected Vehicles & Expo), December 2–6, 2013, Las Vegas, USA.
- ITST 2013 (2013 The 13th International Conference on ITS Telecommunications), November 5–7, 2013, Tampere, Finland.
- The 4th International Workshop on Recent Advances in Broadband Access Networks (RABAN), co-located with ITST 2013.
- 3rd International Conference on Selected Topics in Mobile & Wireless Networking (MoWNet 2013), August 19–21, 2013, Montreal, Canada.
- International Workshop on Internet of Things — Ideas and Perspectives, in conjunction with IEEE DCOSS 2013, (IoTIP-13), May 20–23, 2013, Boston, USA.
- IEEE 10th Workshop on Wireless Ad hoc and Sensor Networks (WWASN 2013), in conjunction with the ICDCS 2013, the 33rd International Conference on Distributed Computing Systems, July 08–11, 2013, Philadelphia, PA.
- IEEE 3rd International Workshop on Recent Advances in Broadband Access Networks, St. Petersburg, Russia, October 3–5, 2012.
- The 4th International Workshop on Communication Technologies for Vehicles (Nets4Cars), Vilnius, Lithuania, April 25–27, 2012.
- IEEE International Workshop on Seamless Connectivity in Vehicular Networks (SCVN 2011), in conjunction with the 11th IEEE International Conference on ITS Telecommunications (ITST 2011), Saint-Petersburg, Russia, August 23–25, 2011.

- IEEE 9th Workshop on Wireless Ad hoc and Sensor Networks (WWASN 2012), in conjunction with the 31st Intl. Conf. on Distributed Computing Systems (ICDCS 2012), Macau, China, June 18–21, 2012.
- IEEE 8th Workshop on Wireless Ad hoc and Sensor Networks (WWASN 2011), in conjunction with the 31st Intl. Conf. on Distributed Computing Systems (ICDCS 2011), Minneapolis, MN, USA, June 21–24, 2011.
- IEEE International Conference on Indoor Positioning and Indoor Navigation, from 2010 to 2015.

Member of PhD Committee

- Reader on the Prospectus Defense Committee for M. Rahaim (advisor Prof. T.D.C. Little), February 13, 2012, Department of Electrical and Computer Engineering, College of Engineering, Boston University, Boston MA, USA.

Reviewer of International Journals

- Ad Hoc Networks, Elsevier since 2012
- Wireless Networks, Springer 2012
- IEEE Transactions on Intelligent Transportation Systems, 2012
- International Journal of Communication Systems, 2012
- IEEE Transactions on Computers, 2011
- IEEE Transactions on Vehicular Technology, 2011-2012
- Physical Communication, 2010
- International Journal of Communication Systems (IJCS), 2010.
- ACM Monet Journal for the Special Issue of Wireless Heterogeneous Networks and Next Generation Internet, 2009.
- Radioengineering Journal