

CURRICULUM VITAE ¹

ANNA MARIA VEGNI

ADDRESS

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PERSONAL DETAILS

Gender: Female
Date of birth: July 24th, 1982
Place of birth: Rome, Italy
Citizenship: Italian

EDUCATION

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| 12/2010 | 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) <i>cum laude</i> in Electronics Engineering, Telecommunication field, from Roma TRE University –Rome, Italy. |

¹Updated on November 4, 2015

- 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.
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THESIS

- PhD Thesis – 03/2010. “*Multimedia Mobile Communications in Heterogeneous Wireless Networks*”. Supervisor: Prof. Alessandro Neri. Co-advisor: Prof. Thomas D.C. Little.
- Advanced Degree (*Laurea Magistralis*) – 07/2006. “*Analysis of performances of optical coherent PSK codes in OCDMA networks*”. Thesis advisor: Prof. Gabriella Cincotti.
- First Degree (*Laurea*) – 07/2004. “*Dynamic optimization of a data transmission system for wideband connections*”. Thesis advisor: Prof. Gaetano Giunta.
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TECHNICAL SKILLS

- OS Windows 95/98/2000/XP/Vista/7/8, Windows CE, Linux, Unix, MAC OSX.
- Programmation C/C++, Java.
- Tools MatLab, Mathematica, Network Simulator (NS-2), SUMO, VanetMobiSim, Visual Studio, Microsoft Office, Latex.
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LANGUAGE KNOWLEDGE

- Italian** native
- English** good writing and speaking skills
- French** good writing and speaking skills
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RESEARCH PROJECTS

- Since 09/2013 “**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.

- Since 01/2013 “**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).
- Since 01/2012 “**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 “**GEONSENSE**”, 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.

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 – to present Teaching assistant at Wireless Telecommunications course (Laurea Magistralis in Computer Engineering, Management & Automation Engineering – Roma TRE University);
- 2007 – to present Teaching assistant at Digital Signal Processing course (Laurea Magistralis in Electronics Engineering – Roma TRE University).
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SCIENTIFIC PUBLICATIONS

Books

- B.1 **A.M. Vegni**, and D.P. Agrawal, “Cognitive Vehicular Networks” CRC Taylor & Francis Group, 2015 (in press).

Book Chapters

- 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, 2015. (in press)

- 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. Loscí, **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. Loscí, 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. Loscí, 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.17 V. Loscrí, **A.M. Vegni**, and G. Fortino, "On the Interaction between a Nanoparticulate System and the Human Body in Body Area Nanonetworks," *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," *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," *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," *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," *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," *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," *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," *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", *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–”, *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,” *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,” *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,” *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”, *Special Issue of the 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”, *Radioengineering 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”, *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.41 V. Loscrí, L. Matekovits, I. Peter, and **A.M. Vegni**, “Modeling and Experimental Analysis of an In-body Area Nanonet- work,” 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 Computing & 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. Abdjlabar, S. Altowajiri, **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. Ragoza, “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:

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

Member of Editorial Boards of International Journals

- Editor for JNCA (Journal of Networks and Computer Applications), Elsevier, since July 2015.
- Guest Editor for International Journal of Ad Hoc and Ubiquitous Computing, Special Issue on Quality of Service in Mobile & Wireless Networking, 2016.
- 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

- 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

- 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, to be held 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 TENSYPMP 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 DCSS 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, 2010 to present.

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

Reviewer of International Peer-reviewed Conferences

- Self-organizing Wireless Access Networks for Smart cITY (SWANSITY), IEEE SECON 2014 Workshop, June 30, 2014, Singapore.
- IEEE ICC 2013 (Wireless Communications Symposium), June 9–13, 2013, Budapest, Hungary.
- IEEE International Conference on Indoor Positioning and Indoor Navigation (IPIN 2012), November 13–15, 2012, Sydney, Australia.
- IEEE Wireless Communications and Networking Conference (WCNC) Workshop on Internet of Things Enabling Technologies: “Embracing the M2M Communications and Beyond”, April 1–4, 2012, Paris, France.
- IEEE 5th International Symposium on Communications, Controls and Signal Processing, May 2–4, 2012, Rome, Italy.
- International Conference on Advances in Computing, Communications and Informatics (ICACCI-2012), August 3–5, 2012, Chennai, India.
- IEEE 73rd Vehicular Technology Conference (VTC 2011-Spring), May 15–18, 2011, Budapest, Hungary.
- IEEE International Conference on Indoor Positioning and Indoor Navigation (IPIN 2010), September 15–17, 2010, Zurich, Switzerland.
- IEEE 7th International Symposium on Wireless Communications Systems (ISWCS), September 19–22, 2010, York, UK.
- IEEE GLOBECOM 2010, December 6–10, 2010, Miami, FL.
- VTC2010-Spring, IEEE 71st Vehicular Technology Conference, May 16–19, 2010, Taipei, Taiwan.

- VTC2009-Spring, IEEE 69th Vehicular Technology Conference, April 26–29, 2009, Barcelona, Spain.
- EUSIPCO 2009, 17th European Signal Processing Conference, August 24–28, 2009, Glasgow, Scotland.

PARTECIPATION TO INTERNATIONAL CONFERENCES AND EVENTS

- Fourth International Conference on Selected Topics in Mobile & Wireless Networking (MoWNet 2014), September 8–10 2014, Rome, Italy.
- International Workshop on Optical Wireless Communications (IWOW 2012), October 22, 2012, Pisa, Italy.
- ION GNSS 2012, September 17–21, 2012, Nashville, TN, USA.
- “Nanonetworks: A New Communication Paradigm”, Prof. Akyildiz’s talk at the INRIA Research Center, Lille, France, July 26, 2012.
- International Conference on Selected Topics in Mobile & Wireless Networks (ICOST 2012), July 2–4, 2012, Avignon, France.
- GTTI for the future – Multinational Enterprises meet Young Italian ICT researchers, May 8, 2012, Confindustria Firenze, Florence, Italy.
- Smart Spaces: Smart Lighting Engineering Research Center, Industry – Academia Days, February 13–15, 2012, Rensselaer Polytechnic Institute (RPI), Troy, NY, USA.
- IEEE International Conference on ITS Telecommunications (ITST 2011), August 23–25, 2011, Saint-Petersburg, Russia.
- IEEE Global Communications Conference (IEEE GLOBECOM 2010), December 3–10, 2010, Miami, FL USA.
- IEEE International Conference on Indoor Positioning and Indoor Navigation (IPIN 2010), September 15–17, 2010, Zurich, Switzerland.
- Nets4Cars 2010, 2nd International Workshop on Communication Technologies for Vehicles at 7th IEEE International Symposium on Communication Systems, Networks and DSP (CSNDSP 2010), July 21–23, 2010, Newcastle UK.
- WIT 2010, 7th International Workshop on Intelligent Transportation, March 23–24, 2010, Hamburg (Germany).
- The Fully Networked Car @ Geneva International Motor Show Workshop, March 3–4, 2010, Geneva (Switzerland).
- NSF Smart Lighting Research Center Year 1 Review, June 24–25, 2009, Troy, NY (USA).
- WiMob 2008, IEEE 4th International Conference on Wireless and Mobile Computing, Networking and Communications, October 12–14, 2008, Avignon (France).

- ISCE 2008, IEEE 12th International Symposium on Consumer Electronics, April 14–16, 2008, Algarve (Portugal).
- WPMC 2007, 10th International Symposium on Wireless Personal Multimedia Communications, December 3–6, 2007, Jaipur (India).
- WRECOM 2007, IEEE Wireless Rural and Emergency Communications, October 1–2, 2007, Rome (Italy).
- ICECOM 2007, IEEE 19th International Conference on Applied Electromagnetics and Communications, September 24–26, 2007, Dubrovnik (Croatia).
- GTTI 2007, Annual meeting 2007 by Nation Telecommunication and Information Theory Group, June 18–20, 2007, Rome (Italy).
- SCVT 2004, IEEE 11th Symposium on Communications and Vehicular Technology, November 9, 2004, Gent (Belgium).