

# Miquel Oliver, Ph.D.

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## Vita sketch

Since 2001, Miquel Oliver is Associate Professor at our Department and in charge of Communication and Promotion. He received his Ph.D. from Universitat Politècnica de Catalunya in 1999, a Degree in Business Administration (UOC, 2009) and GloColl Executive Education (Harvard, 2011-12). Before joining UPF, he was Associate Professor at the UPC and Visiting Scholar at Rutgers University (US, 1999). He is leading the multidisciplinary Networking and Strategies Research Group (NeTS) since its foundation. He has been Visiting Scientist at the MIT (2013-14) and in Columbia University (2011). His research is on wireless communications, with a multidisciplinary view including regulation, telecom policies and economic impact. Prof. Oliver has authored over 110 technical papers (Google-scholar), 36 counted in ISI WoK Journals, 37,9% in Top 10% Journals Percentiles according to SCOPUS, as well as edited three books, holds three patents, supervised twelve Ph.D. thesis and cofounded and advised one spinoff company. Four of his papers have received the best paper award in international conferences. He is active member of the panEuropean EUNICE network, created to foster the mobility in the field of ICT to promote research cooperation between its member institutions.

Dr. Oliver has lead the design and deployment of the Telecommunication Engineering Degree at the UPF, as well as the Master in ICT Strategic Management. He received two *Jaume Vicens Vives* distinctions (2004 and 2005) from the Generalitat de Catalunya to the Quality at Teaching. Miquel Oliver is currently the director of the Telefonica's Chair devoted to study the impact of MOOCs. In this area he has been pushing the UCATx MOOCs initiative from the Catalan Government to orchestrate a joint offer from 12 Catalan universities. UCATx, which started in April 2013, provides a framework to rethink higher education by pushing universities to design and adopt more blended learning strategies while defining institutional actions for online learning.

He has been involved in the government of the UPF since its arrival in 2001. First as Vice-Director of the Telecommunication Engineering School until 2004 when he became Director. Then, after a period serving the DTIC as Vice-Director, he was engaged with the UPF government as Vice-Rector for Institutional Strategy and Quality (2008-13). Thus, the commitment with both the DTIC and the UPF has been intense and combined always with continuous research and teaching activities. Recently he has chaired the committee to build the education strategic plan for the entire UPF.

In the recent external research evaluation report by an International committee managed by AQU (see the full report in the Annex of this CV) the evaluators highlighted the quite good level of publication as well as the h-index, together with an excellent level of funding involving many European Projects. The committee summarized *The Principal Investigator has a very good professional trajectory with an excellent involvement in research projects.*

M. Oliver got the accreditation as Full Professor from both the Spanish and Catalan Quality Agencies in 2014.

[DBLP](#)

[Google-Scholar](#)

[ResearcherID](#)

## Education

- Ph.D. in Telecommunications Engineering. [Universitat Politècnica de Catalunya](#), Barcelona, Spain. February 1999.

Dissertation: *Integrated dynamic channel assignment and power control for mobile wireless communication systems*.

- Ingeniero de Telecomunicación (5-year degree). [Universitat Politècnica de Catalunya](#), Barcelona, Spain. June 1994.
- Business Administration Degree (3-year degree). [Universitat Oberta de Catalunya](#), Barcelona, Spain. June 2009.
- Global Colloquium on Participant-Centered Learning (Executive Education). [Harvard Business School](#), Boston. July 2011.

## Academic Positions

- Associate Professor.  
Department of Information & Communication Technologies, [Universitat Pompeu Fabra](#), Barcelona, Spain. September 2001.

Department of Telematics, Universtat Politècnica de Catalunya, where he got tenure in February 2001.

- Lecturer in several levels at Department of Telematics, [Universitat Politècnica de Catalunya](#), Barcelona, Spain. from 1994 to 2001.
- Visiting:
  - [Wireless Information Networks Laboratory -WinLAB-](#). Rutgers University, NJ USA. 1999 and,
  - [Columbia Institute for Tele-Information](#) CITI at Columbia University, NY USA. Summer 2011
  - [MIT Computer Science and Artificial Intelligence Laboratory](#) (CSAIL). Massachusetts Institute of Technology, MA USA. 2013-14.

## Distinctions

- **Best paper award**, 4th International Workshop on Multiple Access Communications (MACOM 2011), Trento, Italy.
- **Best paper award**, 3rd International Workshop on Multiple Access Communications (MACOM 2010), Barcelona.
- **Best Paper Award**, Sixth International Symposium on Wireless Communication Systems (ISWCS 2009), Siena, Italy.
- **Best paper award**, 14th *Eunice* Open European Summer School 2008. Telecom Bretagne, Brest, France.
- **Award Finalist** Seventh Business Ideas/entrepreneurship contest CIDEM 2007 Edition. Company building project presented by Omega Mobile.

- **Jaume Vicens Vives** (2006) of the Generalitat de Catalunya to the Educational Quality of the Deployment of programs in Telecommunications Engineering with integration to the European Higher Education Area. The Government granted in 2006 a total of seven awards, three individual and four group, among all groups and Catalan universities.
- **Jaume Vicens Vives** (2005) of the Generalitat de Catalunya to the Educational Quality of the Teaching Innovation Project in the Faculty of Telecommunications Engineering, specializing in Telematics by adapting to the European Higher Education of the subjects of management with the introduction of a learning model based on the resolution of problems.

## University Committee Appointments

- Vice-Director of the ICT Department at UPF since 2015.
- Vicerector for Quality and Strategy UPF between 2009 and 2013.
- Vicerector of Information Resources and Evaluation UPF in 2008 and 2009
- Director of the M.Sc. in ICT Strategic Management. Barcelona School of Management. Since 2012.
- Coordinator of the M.Sc. in ICT Strategy Management. Since 2010.
- Vice-Director of the ICT Department at UPF 2007-08.
- Director of the Telecommunications Engineering School at UPF, from 2004 to 2005
- Vicedirector of the Telecommunications Engineering School at UPF, from 2001 to 2004
- Member of the Telematics Department Council -UPC- between 1996 and 1999
- Member of the Doctorate Commission Telematics Department Council -UPC- 2000

## Professional Service

### *Memberships*

- Senior Member, [IEEE \(Institute of Electrical and Electronics Engineers\)](#), since 1990
- Member of the IEEE Communications Society.
- Member of the IEEE Technology and Society.
- Member of the EUNICE European Network of Research Groups in Telematics

### *Board of Foundations and Technological Centers*

- Member of the Council and Executive Committee of Fundació Barcelona Digital since 2009.
- Member of the Council of Fundació Barcelona Media since 2009.
- Member of the Council and Executive Committee of Fundació i2CAT since its creation in 2004.
- Director of the Cisco Networking Academy Program (CNAP) of the Universitat Pompeu Fabra-IDEC. Since 2004.

### *Technical Program Committees*

- (chair and TPC) EUNICE International Summer School Workshop
- (TPC) JITEL, Jornadas en Ingeniería Telemática
- (local chair) MACOM, International Workshop on Multiple Access Communications

- (TPC) IWSCN, International Workshop on Security and Communication Networks.
- BCFIC, Baltic Congress on Future Internet Communications

### *Standards Participation*

- [Internet Engineering Task Force](#) peer to peer working group. 2008.

### *Review Activities*

- Served as reviewer for:
  - *IEEE Communications Letters*.
  - *IEEE Vehicular Technology Conference (VTC)*.
  - *IEEE Global Telecommunications Conference (GLOBECOM)*.
  - *IEEE International Conference on Communications (ICC)*.
  - *IEEE Wireless Communications and Networking Conference (WCNC)*.
  - *International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC)*.

## **Publications** (in chronological order)

### *Books*

1. Vinel, A., B. Bellalta, C. Sacchi, A. Lyakhov, M. Telek, and M. Oliver (Edit.), "Multiple Access Communications", Lecture Notes in Computer Science: Springer, 09/2010. **Book** ISBN 978-3-642-15427-0. Date: 09/2010. Editorial: Springer. Serie: LNCS 6235 <http://www.springer.com/computer/communication+networks/book/978-3-642-15427-0>
2. Oliver, M., and S. Sallent (Edit.), "The Internet of the Future", Lecture Notes in Computer Science, no. 5733, Springer 09/2009. Date: 09/2009. Editorial: Springer. Serie: LNCS 5733. **Book** ISBN 978-3-642-03699-6, <http://www.springer.com/computer/communication+networks/book/978-3-642-03699-6>
3. Narcís Parés, Miquel Oliver, (Edit.) "Interaction Design and Children", Proceedings of the 9th International Conference on Interaction Design and Children, IDC 2010, Barcelona, Spain, June 9-12, 2010 ACM 2010. **Book** ISBN 978-1-60558-951-0

### *Journal Papers*

1. Ruizhi Liao, Boris Bellalta, Miquel Oliver; "Modelling and Enhancing Full-duplex MAC in IEEE 802.11 networks". *IEEE Wireless Communications Letters* (2015).
2. Sancho-Vinuesa, T., Oliver M., and Gisbert, M.. "MOOCS in Catalonia: Fueling Innovation In Higher Education" *EDUC. XX1* 18.2 (2015): 125-146. ISSN 1139-613X. SSCI/JCR.
3. Adame T., A. Bel, Boris Bellalta, Jaume Barcelo, Miquel Oliver; "IEEE 802.11ah: The Wi-Fi Approach for M2M Communications". *IEEE Wireless Communications*, 2014 (Q1, IF=6.524).
4. R. Liao, B. Bellalta, M. Oliver, Z. Niu; "[MU-MIMO MAC Protocols for Wireless Local Area Networks: A Survey](#)", *IEEE Communications and Surveys*. December 2014. (Q1, IF: 6.490)

5. Ruizhi Liao, B. Bellalta, Trang Cao Minh, Jaume Barcelo, M. Oliver; "Uni-MUMAC: A Unified Down/Up-link MU-MIMO MAC Protocol for IEEE 802.11ac WLANs". Accepted in *Wireless Networks*, Springer, November 2014.
6. [A. Domingo](#), [B. Bellalta](#), [M. Palacin](#), [M. Oliver](#), and [E. Almirall](#), "[Public Open Sensor Data: Revolutionizing Smart Cities](#)", *IEEE Technology and Society Magazine*, vol. 32, issue 4, 12/2013.
7. B. Bellalta, A. Faridi, V. Daza, J. Barcelo, M. Oliver; "Performance Analysis of a Multiuser Multi-Packet Transmission System for WLANs in Non-Saturation Conditions". *Elsevier Computer Networks (Q1, IF= 1.282)*. January 2014. [[Arxiv preprint](#)][[preprint, pdf](#)].
8. Ruizhi Liao, Boris Bellalta, Jaume Barcelo, Victor Valls, Miquel Oliver; "Performance analysis of IEEE 802.11ac wireless backhaul networks in saturated conditions". *EURASIP Journal on Wireless Communications and Networking 2013*, 2013:226 (10 September 2013) [[Link](#)].
9. S. Pal, S. Oechsner, B. Bellalta, M. Oliver; "Performance Optimization of Multiple Interconnected Heterogeneous Sensor Networks via Collaborative Information Sharing". *Journal of Ambient Intelligence and Smart Environments (JAISE)*, IOS Press Journal. August, 2013. [Pre-print:[arXiv:1203.6316](#)]
10. Jaume Barcelo, Boris Bellalta, Cristina Cano, Azadeh Faridi, Miquel Oliver; "On the Distributed Construction of a Collision-Free Schedule in Multi-Hop Packet Radio Networks" *Telecommunication Systems (IF= 1.163)*, Springer. July 2013. [Pre-print:[arXiv:1206.4531](#)].
11. B. Bellalta, A. Faridi, D. Staehle, J. Barcelo, A. Vinel, M. Oliver; "Performance Analysis of CSMA/CA Protocols with Multi-packet Transmission". *Elsevier Computer Networks*. June, 2013 [[Link](#)].
12. Ruizhi Liao, B. Bellalta, Trang Cao Minh, Jaume Barcelo, M. Oliver; "Uni-MUMAC: A Unified Down/Up-link MU-MIMO MAC Protocol for IEEE 802.11ac WLANs". *Wireless Networks*, Springer, November 2014.
13. Trang Cao-Minh, B. Bellalta, M. Oliver; "Design of a Generic Management System for Wireless Sensor Networks". *Elsevier Computer Networks. Ad Hoc Networks 20: 16-35 (2014) (Q1)*
14. Valls V., Bellalta B., Cano C., Oliver M.; "Hierarchical Range Sectoring and Bidirectional Link Quality Estimation for On-demand Collections in WSNs ". *Elsevier Ad Hoc Networks*, 2013, *JCR IF: 1.592 (Q1)*
15. B. Bellalta, A. Faridi, J. Barceló, V. Daza. M. Oliver; "On the Performance of Packet Aggregation in IEEE 802.11ac MUMIMO WLANs". *IEEE Communications Letters 2012. ISSN: 1089-7798, Date: 2012 - Volumen: -Pages: 4 Quality index: JCR IF: 1.140 (Q2)*
16. S. Pal, S. Oechsner, B. Bellalta, M. Oliver; "On the Performance of Packet Aggregation in IEEE 802.11ac MUMIMO WLANs". *Journal of Ambient Intelligence and Smart Environments 2012. ISSN: 1876-1364, Date: 2012 Quality index: JCR IF: 0.630 (Q3)*

17. C. Cano, B. Bellalta, M. Oliver; "Quantitative Analysis of the Hidden Terminal Problem in Preamble Sampling WSNs". Elsevier AD HOC Networks. Volume 10, Issue 1, 2012, *JCR IF: 1.592 (Q1)*
18. C. Cano, B. Bellalta, M. Oliver; "Wake up after Transmissions and Reduced Channel Contention to Alleviate the Hidden Terminal Problem in Preamble Sampling WSNs". Elsevier Computer Networks. Volume 56, Issue 2, 2012, *JCR IF: 1.176 (Q2)*
19. C. Cano, B. Bellalta, M. Oliver, A. Sfaïropoulou; "Low Energy Operation in WSNs: A Survey of Preamble Sampling MAC Protocols". Elsevier Computer Networks, June 2011. *JCR/IF: 1.176 (Q2)*
20. C. Cano, B. Bellalta, A. Cisneros, M. Oliver; "Quantitative Analysis of the Hidden Terminal Problem in Preamble Sampling WSNs". Elsevier Ad-Hoc Networks, May 2011. [ScienceDirect][*JCR/SCIE-2009:1.293;Telecommunications:21/77-Q2*]
21. B. Bellalta, J. Barcelo, M. Oliver; "The role of the queueing process in the performance of Downlink SDMA systems". Wireless Personal Communications, Springer. May 2011. [SpringerLink] [*JCR/SCIE-2009:0.418;Telecommunications:49/77-Q3*]
22. A. Sfaïropoulou, B. Bellalta, C. Macián and M. Oliver "A Comparative Survey of Adaptive Codec Solutions for VoIP over Multi-rate WLANs: a Capacity vs Quality performance Trade-off," Accepted by the EURASIP Journal on Wireless Communications and Networking JWCN/534520. ISSN: 1687-1472, <http://www.hindawi.com/journals/wcn> Date: 2011 Quality index: *JCR IF: 0.732 (Q3)*
23. J. Barcelo, B. Bellalta, C. Cano, A. Sfaïropoulou, M. Oliver and K. Verma "Towards a Collision-Free WLAN: Dynamic Parameter Adjustment in CSMA/E2CA," Accepted by the EURASIP Journal on Wireless Communications and Networking JWCN/708617. ISSN: 1687-1472, <http://www.hindawi.com/journals/wcn> Date: 2011 - accepted, publication pending - Volumen: -Pages: Quality index: *JCR IF: 0.732*
24. B. Bellalta, V. Daza, M. Oliver; "An approximate queueing model for Multi-rate Multi-user MIMO systems". Accepted by the IEEE Communications Letters 2011, publication pending. ISSN: 1089-7798, <http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=4234> Date: 2011 -accepted, publication pending - Volumen: -Pages: 4 Quality index: *JCR IF: 1.140*
25. C. Cano, B. Bellalta, A. Sfaïropoulou, M. Oliver, J. Barcelo; "Taking Advantage of Overhearing in Low Power Listening WSNs: A Performance Analysis of the LWT-MAC Protocol". Mobile Networks and Applications (MONET), Springer 2010. ISSN: 1383-469X, <http://www.springerlink.com/content/y4h565202h513272/> Date: 2011 - accepted, publication pending - Volumen: -Pages: 16 Quality index: *JCR IF: 1.013*
26. Infante, J., R. Sagarra, C. Macian, and M. Oliver, "Public private partnership in FTTH passive infrastructure deployment: the 22@BCN case", International Journal of Management and Network Economics, vol. 3, issue 342, 03/2009. ISSN: 1754-2316, <http://inderscience.metapress.com/link.asp?id=c12m2788j23hru01> Date: 2009 - Volumen: 1 Num: 3 Pages: 15
27. B. Bellalta, M. Meo, M. Oliver; "VoIP Call Admission Control in WLANs in presence of elastic traffic". IEEE Journal of Communication Software and Systems.

- January 2007. ISSN 1845-6421, <http://lab405.fesb.hr/jcomss/index.php> Date: 2007 - Volumen: 2 Num: 4 Pages: 9 Quality: Scopus.com
28. Bellalta, M. Meo, M. Oliver; "A BEB-based Admission Control for VoIP calls in WLAN with coexisting elastic TCP flows". LNCS-JCR Springer, June 2006. ISSN 0302-9743, JCR-LNCS <http://www.springerlink.com/content/t157lu4g46881742/> Date: 2006 - Volumen:4003 Pages: 11 Quality: JCR JIF: 0,402; JII: 0,062; JCdH-L: 4,4; JCgH-L: 5,7
29. Bellalta, M. Meo, M. Oliver; "Comprehensive analytical models to evaluate the TCP performance in 802.11 WLANs". LNCS-JCR Springer, May 2006. ISSN 0302-9743, JCR-LNCS <http://dblp.uni-trier.de/rec/bibtex/conf/wwic/BellaltaMO06> Date: 2006 - Volumen:3970 Pages: 11 Quality: JCR JIF: 0,402; JII: 0,062; JCdH-L: 4,4; JCgH-L: 5,7
30. J. Barceló, M. Oliver, J. Infante. "Adapting a Captive Portal to enable SMS-based Micropayment for Wireless Internet Access". LNCS-JCR Springer, 2006 ISSN 0302-9743, JCR-LNCS <http://www.springerlink.com/content/d67p60124886k62k/> Date: 2006 - Volumen:4033 Pages: 11 Quality: JCR JIF: 0,402; JII: 0,062; JCdH-L: 4,4; JCgH-L: 5,7
31. J. Barceló, M. Oliver, M. Vives. "Implantación de un sistema multiproveedor para redes Wireless". Boletín de la Red Nacional de I+D, RedIRIS. 2005/ISSN 1139-207X , Edita: <http://dialnet.unirioja.es/servlet/articulo?codigo=1089640> Date: 2004-05 - Volumen:70-71 Pages:7-10
32. M. Oliver, A. Escudero. "Redes de Área Local inalámbricas según IEEE 802.11" *IEEE*, Edita: <http://ieee.upc.es/Buran/Buran.htm> Date: 12/1999 - Volumen:7 Pages 5
33. M. Oliver, O. Louro, "Mobile IP: la solución para la movilidad de los terminales en redes fijas" *IEEE*, Edita: <http://ieee.upc.es/Buran/Buran.htm> Date: 04/1999 - Volumen:7 Pages 8.

## Book Chapters

1. B. Bellalta, C. Cano, J. Barcelo, A. Sfaïropoulou, M. Oliver; " Wireless Quality of Service: Techniques, Standards, and Applications", chapter: "Policy-based QoS provision in WLAN Hotspots". Editorial: CRC Press, 2008. ISBN 9781420051308, <http://www.crcpress.com/product/isbn/9781420051308> Date: 09/2008. Editorial: CRC Press. 376 pages
2. J.Barceló, B.Bellalta, A.Sfaïropoulou, C. Cano, M. Oliver. "Advances in Ad Hoc Networking". Chapter "Ack in IEEE 802.11e Single-Hop Ad-Hoc VoIP Networks". Springer Publicshing Map 2008. ISBN 9780387094892, <http://www.agapea.com/libros/Advances-in-Ad-Hoc-Networking-isbn-038709489X-i.htm> Date: 2008. Editorial: Springer Publicshing Map. 238 pages

## Refereed International Conference Papers

### *Multidisciplinary research on Technology and Society*

1. Oliver M., Palacín M., Domingo A., "Sensor Information Fueling OpenData """, METHODS 07/2012, Izmir (Turkey).

2. Domingo A., Oliver, M., "Modeling the Effect of Duct Sharing in a NGAN Competition Market", Telecommunications Policy Research Conference TPRC, Washington, 09/2011.
3. Batikas, M., Oliver, M., Almirall, E.. "Participation Of Catalan SMEs To Free Libre Open Source Software Communities EURAM EBS Estonian Business School Tallin, Estonia. 06/2011
4. **[Core referenced]** Oliver, M., J. Zuidweg, and M. Batikas, "Wireless commons against the digital divide ", IEEE International Symposium on Technology and Society ISTAS2010, Australia, IEEE, 06/2010.
5. Infante, J., M. Oliver, and C. Macian, "P2PSIP: A new scenario for deploying collaborative Internet based services", 36th Telecommunications Policy Research Conference, Washington, USA, 09/2008.
6. Infante, J., R. Sagarra, C. Macian, and M. Oliver, Ducts, fibers, municipalities, barriers to entry and effective competition: A case study of successful public-private partnership in the provision of neutral FTTX infrastructure in Barcelona, 12/2008.
7. J. Infante, M. Oliver, C. Macián. "Neutral Networks: A real alternative to achieve both effective competition and social benefits?" 16th Biennial Conference of the International Telecommunications Society. ITS2006, July 2006. Beijing.
8. C. Macián, M. Oliver, J. Infante. "VoIP Traffic Exchange Points: An emerging new service in a framework of uncertainty". 16th Biennial Conference of the International Telecommunications Society. ITS2006, July 2006. Beijing.
9. J. Infante M. Oliver, C. Macián "Wi-Fi Neutral Operator: Promoting cooperation for network and service growth" ITS Conference on Regional Economic Development, July 2005. ISBN: 86-7466-218-8. Pontevedra.

### *Research on Wireless Technologies*

1. **[Best Paper Award]** J. Barcelo, B. Bellalta, M. Oliver, A. Banchs; "Collision-Free Operation in Wireless Ad-Hoc Networks". Multiple Access Communications (MACOM) 2011, Trento, Italy.
2. B. Bellalta, V. Daza, J. Barcelo, M. Oliver; "Buffer sizing in TxSDMA systems". Multiple Access Communications (MACOM) 2011, Trento, Italy. September 2011.
3. R. Liao, B. Bellalta, C. Cano, M. Oliver; "DCF/DSDMA: Enhanced DCF with SDMA Downlink Transmissions for WLANs". Baltic Conference on Future Internet Communications (BCFIC) 2011, Riga, Latvia.
4. **[Core referenced]** Barceló, J., A. López-Toledo, C. Cano, and M. Oliver, "Fairness and convergence of CSMA with Enhanced Collision Avoidance (ECA)", IEEE ICC 2010 - Wireless and Mobile Networking Symposium, Cape Town, Southafrica, IEEE, 05/2010.
5. **[Invited paper]** Bellalta, B., A. Vinel, and M. Oliver, "An Upper-bound queueing model for Multi-rate Downlink SDMA systems", The International Conference on Ultra Modern Telecommunications (ICUMT) 2010, Moscow, IEEE, 10/2010.
6. **[Best paper award]** Barcelo, J., B. Bellalta, C. Cano, A. Sfaïropoulou, and M. Oliver, "Dynamic Parameter Adjustment in CSMA/ECA", Multiple Access Communications (MACOM) 2010, Barcelona, Springer, 09/2010.



7. Liao, R., B. Bellalta, M. Oliver, and N. Garcia, "A queueing Model for SDMA Downlink Transmissions", Multiple Access Communications (MACOM) 2010, Barcelona, Springer, 09/2010.
8. **[Invited paper]** Barceló, J., B. Bellalta, A. Sfairopoulou, C. Cano, and M. Oliver, "CSMA with Enhanced Collision Avoidance: a Performance Assessment", IEEE VTC Spring, 2009.
9. **[Best paper award]** Cano, C., A. Sfairopoulou, B. Bellalta, J. Barcelo, and M. Oliver, "Analytical Model of the LPL with Wake up after Transmissions MAC protocol for WSNs", International Symposium on Wireless Communication Systems (ISWCS 09), Siena, Italy, 09/2009.
10. **[Core referenced]** Barcelo, J., B. Bellalta, C. Cano, A. Sfairopoulou, M. Oliver, and J. Zuidweg, "Traffic Prioritization for Carrier Sense Multiple Access with Enhanced Collision Avoidance", MACOM (ICC'09), Dresden, Germany, pp. 99, 06/2009.
11. Barceló, J., J. Infante, and M. Oliver, "Wireless Open Access Networks: State-of-the-Art and Technological Opportunities", 2009 First International Conference on Evolving Internet, Cannes, France, IEEE Computer Society, August 23-August, 2009.
12. Bellalta, B., and M. Oliver, "A Space-Time Batch-service Queuing Model for Multi-user MIMO communication systems", The 12-th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, Tenerife, Spain, ACM, 10/2009.
13. **[Best paper award]** Barceló, J., B. Bellalta, C. Cano, and M. Oliver, "Learning-BEB: Avoiding Collisions in WLAN", Eunice Summer School, 2008.
14. Barcelo, J., B. Bellalta, C. Cano, and M. Oliver "Dynamic P-Persistent Backoff for Higher Efficiency and Implicit Prioritization", JITEL 2008, 2008.
15. J.Barceló, B.Bellalta, A.Sfairopoulou, C. Cano, M. Oliver. "No Ack in IEEE 802.11e Single-Hop Ad-Hoc VoIP Networks". Med Hoc Net. Palma, (Spain). June 2008. IFIP Volume 265, Advances in Ad Hoc Networking
16. **[Core referenced]** C. Cano, B. Bellalta, M. Oliver. "Adaptive Admission Control Mechanism for IEEE 802.11e WLANs. ". IEEE PIMRC. Athens, (Greece). September 2007. ISBN 0-7803-7589-0 Pages 305-309 Vol. 1 Lisboa (Portugal). Referencia IEEE: <http://ieeexplore.ieee.org/servlet/opac?punumber=4022243>
17. **[Core referenced]** J. Barceló, B. Bellalta, C. Macián, M.Oliver, A, Sfairopoulou. "Position information for VoIP Emergency Calls. Originating from a Wireless Metropolitan Access Network." 3rd International Conference on Web Information Systems and Technologies (WEBIST). Barcelona, Marzo 2007.
18. B. Bellalta, C. Cano, M. Oliver, M. Meo. "Modeling the IEEE 802.11e EDCA for MAC parameter optimization". Performance Modelling and Evaluation of Heterogeneous Networks (Het-Nets). ISBN 1-4244-0355-3. Páginas P29-1/P29-10. Bradford, UK. Sept 2006. Ref: <http://www.comp.brad.ac.uk/het-net/tutorials/P29.pdf>
19. **[Core referenced]** L. Ferreira, J.Perez-Romero, V.Tralli, P.Fazekas, M.Oliver, S.Lindskog, R.Agusti. "QoS provision in wireless networks: Mobility, Security, and Radio Resource Management. An overview." IEEE International Conference on Communications ICC. Workshop. ISBN 1-4244-0355-3 Istanbul, Turkey. June 2006.

Ref: <http://www.ieee-icc.org/2006/index/conference-program-w.html> Estimated impact of publication CiteSeer (2003): 0,29 (top 66,33%)

20. J. Barceló, M.Oliver, J.Infante, M.Oliver. "Adapting a Captive Portal to enable SMS-based Micropayment for Wireless Internet Access." 5th International Workshop on Internet Charging and QoS Technologies, ICQT 2006. ISBN 3-540-35456-5 St. Malo, France, June 27, 2006,
21. A. Sfaïropoulou, C. Macián, M. Oliver. "Architecture of a VoIP Traffic Exchange Point" Eunice 2006 Summer School, Stuttgart, Germany, September 2006. ISBN: 3-938965-02-9. Pages: 33-36.
22. J. Barceló, A. Sfaïropoulou, M. Oliver, J. Infante, C. Macián. "Barcelona Open Access Network Testbed". IEEE TridentCom. , March 2006. Barcelona (Spain)
23. B. Bellalta, M. Meo , M. Oliver, M. Guerrero. "A simple model of the IEEE 802.11 MAC protocol with heterogeneous traffic flows" IEEE Eurocon 2005 ISBN: 86-7466-218-8. Belgrade (Serbia).
24. A. Graell, B. Bellalta, M. Oliver "A novel ARQ Protocol for IEEE802.11a Based on Rate-Compatible Codes" IEEE VTC 2004 . Los Angeles (USA).
25. [Core referenced] M. Oliver, B. Bellalta, D. Rincón " Performance of the GPRS RLC/MAC protocols with VoIP traffic" Personal Indoor and Mobile Radio Communications (IEEE PIMRC). Sept. 2002. Lisboa (Portugal).
26. M. Oliver, B. Bellalta, D. Rincón. "Capacity and Traffic Analysis of VoIP Services over GPRS mobile networks". Telecom Network and Teletraffic Theory 2002. LONIIS . Sant Petersburg (Russia).
27. M. Oliver, J.L. Gorricho. "Tecnología para páginas dinámicas WML en entornos WAP". TELECOM 2000 International Conference. Santiago de Cuba. July 2000.
28. M. Oliver, A. Escudero, J. Borràs. "Performance of The CSMA/CA IEEE 802.11 Protocol for different Physical Layer Implementations". The Second International Symposium on Wireless Personal Multimedia Communications WPMC'99. Ámsterdam.
29. X. Hesselbach, M. Oliver, J. Borràs. "Model of an adaptive access node in a packet network: The ABR service in ATM". 5th Open European Summer School EUNICE 1999. ISBN: 84-7653-717-4X. Barcelona
30. M. Oliver, A. Escudero. "Study of different CSMA/CA IEEE 802.11-based implementations" 5th Open European Summer School EUNICE 1999. ISBN: 84-7653-717-4X. Barcelona.
31. **[Core referenced]** M. Oliver, J. Borràs. "Performance Evaluation of Variable Reservation Policies for Hand-off Prioritization in Mobile Networks", INFOCOM 1999. ISBN: 0-7803-5417-6. New York (USA).
32. M. Oliver. "Admission Control Strategy based on Variable Reservation for a Wireless Multi-Media Network". The First International Symposium on Wireless Personal Multimedia Communications WPMC 1998. Yokosuka (Japan)
33. **[Core referenced]** M. Oliver, C. Ferrer. "Overview and Capacity of the GPRS (General Packet Radio Service)", 9th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'98. ISBN: 0-7803-4872-9. Boston (MA)

34. M. Oliver, J. Paradells. "Variable Channel Reservation Mechanism for Wireless Networks with mixed types of mobility platforms". 48th Annual Vehicular Technology Conference VTC 1998. ISBN: 0-7803-4323-9. Ottawa (Ontario)
35. M. Oliver, J. Paradells, "Adaptive Reservation Mechanism for Wireless Networks". The 4th International Workshop on Mobile and Multimedia Communications MoMuC'97. ISBN: 89-950043-0-4. Seoul, Korea
36. M. Oliver, J. Paradells, "Characterization in terms of GoS for different mobility patterns in a Cellular Network", WIRELESS 1997. Calgary, Alberta (Canada).

### *Refereed National Conference Papers*

23 publications in Spanish conferences between 1994 and 2008.

### *Technical Reports*

Authored or co-authored more than 40 Internal Documents at UPC library before 2001.

Available at:

[http://biblioteca.upc.edu/search/apachesolr\\_search/Oliver%20Riera?filters=tid%3A1469500](http://biblioteca.upc.edu/search/apachesolr_search/Oliver%20Riera?filters=tid%3A1469500)

## **Research Projects**

### *International Projects*

1. "Entomatic" Novel automatic and stand-alone integrated pest management tool for remote count and bioacoustic identification of the Olive Fruit Fly (*Bactrocera oleae*) in the field 2014-17. European Commission, FP7 program. Principal Investigator: Boris Bellalta.
2. "Commons4EU" (CIP-ICT-PSP-2011-5), EU-ICT, 2011-2014, Principal Investigator UPF: Miquel Oliver, Overall budget: 2.4M€; UPF funding: 172K€
3. "OpenCities" (CIP-ICT-PSP-2010-4), EU-ICT, 2010-13, PI UPF: Miquel Oliver, Overall budget: 2.9M€; UPF funding: 308K€
4. "WINEMO" (ESF- IC0906 Cost Action), EU-COST, 2010-2014, PI UPF: Boris Bellalta.
5. "Sensor-Based Metering Network (SYNCSEN, SME-FP7-2007- 222322), EU-FP7, 2008-2010, PI UPF: Miquel Oliver, Overall budget: 1.5M€; UPF funding: 220K€
6. " Low-cost wireless metropolitan network for location and citizen services" (CityBee 2006, 32094), EU-FPVI IST, 2006-08, PI UPF: Miquel Oliver, Overall budget: 2.9M€; UPF funding: 380K€
7. "Innovative Cities for the Next Generation" (ICING, IST-2004-4 26665), EU-FPVI IST, 2006-2008, PI UPF: Miquel Oliver, Overall budget: 2.9M€; UPF funding: 280K€

### *National Projects*

1. Project: CISNETS (Plan Nacional-2013-2015), UPF PI Miquel Oliver, budget: 101K€.
2. Project: CONSOLIDER-INGENIO 2010 "COMONSENS" (CSD2008-00010), 2009-2013, IP Javier Fonollosa (UPC), Budget: 3.5M€, UPF budget: 243K€

3. Project: GESTION P2P DE TRAFICO MULTIMEDIA CON CALIDAD DE SERVICIO SOBRE REDES MALLADAS. (CICYT TEC2008-06055), 2009-2012, PI, Miquel Oliver, Funding: 120K€
- 4.

## Invited Lectures, Seminars and Short Courses

1. "Dynamic Open Data Platform to Drive Innovation in Cities". Open Data Dialog. Franhoufer Fokus. Conference. Berlin –Germany- December 2012.
2. "Reviewing European Digital Agendas". ACORN-REDECOM. Conference. Lima -Perú- 2011.
3. "Internet Governance". Caixa Forum. Barcelona 2011.
4. "Operador Neutral Wifi en Catalunya: modelo de viabilidad", Barcelona, Palacio de Congresos. Internet Global Conference 2005
5. "Servicios de Vídeo MPEG2, MPEG-4 y Multicast". Barcelona, Palacio de Congresos.
6. Internet Global Conference 2001.
7. "GPRS: La generación del 2,5 G (Wireless Wednesday)". Barcelona 2001
8. "Tecnología WAP en comunicaciones móviles multimedia" ETSEIB. UPC. 2000
9. "Comunicaciones de datos sobre GSM: GPRS", Universidad de Málaga. 1999

## Patents

1. Oliver Riera, Miquel , Zuidweg Adema, Johan , Cajigas Bringas, Guillermo, Touset Rios, Miguel Angel, Valverde Fuster, Juan Jose devices. Managing automatic log in to Internet target resources Entity: VODAFONE
  - EU Patent: EP2375688 (29.03.2011)
  - US extension: US2011287739
  - ES Patent: ES2375861 (24.03.2010)
2. M. Oliver Riera, L. F. Durand. "Co-location between mobile devices using cellular signalling" priority 10/07/2007
  - Patent filed: P-200702022 (Spain and EU)
3. M. Oliver Riera, J. Paradells Aspas. "Variable Resource Reservation Mechanism for GSM", priority 03/02/1999
  - Patent filed: P-9900267. (Spain and EU)

## Research Supervision

### *Doctoral Thesis Supervision (12)*

1. Albert Domingo. "User involvement in FTTH deployments as a key to success", Ph.D. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), Supervisor: Miquel Oliver, November 26th 2015.
2. Manuel Palacín, "The Internet Ecosystem: a traffic measurement analysis.", Ph.D. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), Supervisor: Miquel Oliver, October 23th 2015.

3. Ruizhi Liao, "MU-MIMO Based SDMA Protocols for WLANs", Ph.D. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), Directors: Miquel Oliver, Boris Bellalta, October 6th 2014.
4. Trang Cao Minh, "A new clean-slate autonomic holonic architecture for Wireless Sensor Networks" . Ph.D. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), Directors: Miquel Oliver, Boris Bellalta, September. 25th. 2014.
5. Michail Batikas, "SME's participation to Free Libre Open Source Software Communities", Ph.D. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), Directors: Miquel Oliver, Esteve Almirall (ESADE), July. 4th 2011.
6. Cristina Cano, "A Low Power Listening with Wake Up After Transmissions MAC Protocol for WSNs", Ph.D. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), Directors: Miquel Oliver, Boris Bellalta, Mar. 4th 2011.
7. Núria Garcia, "Radio resource management strategies based on Hopfield neural networks", Ph.D. Dissertation, Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, Directors: Ramon Agustí Comes, Jordi Pérez Romero i Miquel Oliver Riera, May 25th 2009.
8. Jaume Barceló, "Carrier sense multiple access with enhanced collision avoidance", Ph.D. Dissertation, Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, Director: Miquel Oliver February 2009.
9. Marc Sánchez Artigas, "A Hierarchical Framework For Peer-to-Peer Systems: Design and Optimizations", Ph.D. Dissertation, Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, Directors: Miquel Oliver, Pedro García (URV) January 2009.
10. Anna Sfairopoulou, "A cross-layer mechanism for Quality of Service improvements in Voice over IP over multi-rate Wireless LAN networks", Ph.D. Dissertation, Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, Directors: Miquel Oliver, Carlos Macián, Boris Bellalta July 2008.
11. Jorge Infante González, "Análisis de Modelos Alternativos de despliegue de Redes Públicas Abiertas basadas en Tecnologías Radio de Uso Libre del Espectro" Ph.D. Dissertation, Internet Interdisciplinary Institute (IN3), *Universitat Oberta de Catalunya*, Director: Miquel Oliver, May 2008.
12. Boris Bellalta Jiménez, "Analysis of the IEEE 802.11 random access MAC protocol in multiservice cellular wireless networks" Ph.D. Dissertation, Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, Director: Miquel Oliver, February 2007.

### ***Master thesis Supervision (10)***

1. Flow-level admission control in IEEE 802.11e Networks. Cristina Cano. M.Sc. Thesis. Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, June 2007. Tutors: Miquel Oliver and Boris Bellalta.

2. A Layered P2PSIP-based architecture for live video streaming with flexible application logic placement. Victor Pascual. . M.Sc. Thesis. Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, June del 2008. Tutors: Miquel Oliver and Carlos Macián.
3. Evaluation of the signaling loads in different IMS-P2PSIP scenarios. Xavier Milà. . M.Sc. Thesis. Department of Information and Communication Technologies, *Universitat Pompeu Fabra*, September 2007. Tutors: Miquel Oliver and Carlos Macián.
4. Análisis de Modelos Alternativos de despliegue de Redes Públicas Abiertas basadas en Tecnologías Radio de Uso Libre del Espectro. Jorge Infante González. Internet Interdisciplinary Institute IN3, Universitat Oberta de Catalunya, October 2003. Director: Miquel Oliver.
5. Security in Open Access Networks at Link Layer. Ana escudero Quesada. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), August del 2004.
6. Análisis of IEEE802.11 random access MAC protocols in multiservice cellular wireless networks. Boris Bellalta Jiménez. Dissertation, Department of Information and Communication Technologies, Universitat Pompeu Fabra (Spain), August del 2004.
7. Evaluating the QoS performance of wireless distribution systems in IEEE 802.11. Mohammad Mobaseri. Doctorado en Informática y Comunicación Digital. Departament de Tecnologia (Universitat Pompeu Fabra), Septiembre del 2004. Tutor: Miquel Oliver.
8. Securing and Enhancing Routing Protocols for Mobile Ad Hoc Networks. Manel Guerrero Zapata. Doctorado en Informática y Comunicación Digital. Departament de Tecnologia (Universitat Pompeu Fabra), Julio del 2005. Tutor: Miquel Oliver.
9. Public Metropolitan Wireless Access Networks. Jaume Barceló Vicens. Doctorado en Informática y Comunicación Digital. Departament de Tecnologia (Universitat Pompeu Fabra), Julio del 2006. Tutor: Miquel Oliver.
10. An Adaptive Application-Layer Multicast QoS Routing Algorithm for Live Video Streaming Applications over 4G Wireless Networks. Laura Wong. Doctorado en Informática y Comunicación Digital. Departament de Tecnologia (Universitat Pompeu Fabra), Noviembre del 2007. Tutores: Miquel Oliver y Juan Rendón.

## Languages

Catalan, Spanish and English

# External Research Evaluation Report

## Principal Investigator Evaluation

Principal Investigator: Oliver Miquel

Date: April 2015

Scientific trajectory during the last 5 years (publications, other scientific contributions, visibility in the field)

The level of publication is quite good. The h-index is rather good. The Field-Weighted Citation Impact is around 0,6 indicating that the impact of publications is somewhat below what could be expected (the Field-Weighted Citation Impact indicates how the citations received by publications compare with the world average. One corresponds to the world average). The impact in the field may be improved by targeting journal publications in with higher impacts.

Funding (national/international)

The level of funding is excellent and involves many European projects. The Principal Investigator is very active in this field.

Ongoing / Future projects

The future research plans address the understanding of the evolution of mobile networks and technologies. The goal is to focus principally on strategic evolution and not so much on pure technologic issues. This represents a very interesting topic of investigation.

Final evaluation and recommendations

The Principal Investigator has a very good professional trajectory with an excellent involvement in research projects. The impact in the field may be improved by targeting journal publications with higher impacts.

**Disclaimer:** The committee strongly believes that a sound and precise evaluation of Principal Investigators cannot be done on the basis of a 6 pages CV, which often includes imprecisions, incoherencies or mistakes and without any discussion with the Principal Investigators themselves. This evaluation only reflects what has been inferred from the CVs delivered to committee.

Overall assessment (Please tick)

Excellent

Very good

Good

Poor