

SHORT CURRICULUM VITAE



Josep Solé Pareta

Full Professor
Broadband Communications research group
Universitat Politècnica de Catalunya (UPC)
Computer Architecture Department
Jordi Girona, 1-3, Mòdul D6 (Campus Nord)
08034 Barcelona
Catalunya, Spain
Phone: +34 93 401 6982
Cell-phone: +34 690087283
e_mail: josep.sole@upc.edu
Home page: <http://personals.ac.upc.edu/pareta/>

Educational Background

Ph.D. in Computer Science from the UPC, 1991.
M.Sc. degree in Telecom Engineering from the UPC, 1984.

Employment History

Full Professor with the Computer Architecture Department of the UPC, 09/2005- to date.
Associate Professor with the Computer Architecture Department of the UPC, 05/1991-08/2005.
Assistant Professor with the Computer Architecture Department of the UPC, 10/1984-04/1991.

Fields of Interest

His main research topics of interests are Traffic Monitoring and Analysis, High Speed and Optical Networking and Nanonetworking Communications, with emphasis in traffic engineering, traffic characterization, MAC protocols and QoS provisioning. Consistent with these research topics, he has been:

- Cofounder member of two specific research centers, namely the Advanced Broadband Communications Center ([CCABA](http://ccaba.upc.edu)) and of the NaNoNetworking Center in Catalunya ([N3Cat](http://n3cat.upc.edu)), and
- Cofounder and Member of the investor team of Talaia Networks S.L., a UPC Spin-off incorporated in June 2013 and [acquired by UVIK](http://talaia-networks.com) in 2018.

Professional Activities and Honors (Selected)

- LOCAL ORGANIZER of the 22th IFIP Networking conference (Networking 2023), UPC premises, Barcelona, June 12-15, 2023 (<https://networking.ifip.org/2023/>)
- LOCAL ORGANIZER of the 9th ACM International Conference on Nanoscale Computing and Communication (NanoCom 2022), UPC premises, Barcelona, October 5-7, 2022 (<https://nanocom.acm.org/nanocom2023/index.php>)
- LOCAL ORGANIZER of the 19th International Conference on Transparent Optical Networks (ICTON 2017), Girona, Catalonia (Spain), July 2-6, 2017 (<https://icton2017.udg.edu/>).
- AREA EDITOR of the Computer Networks Journal (Elsevier, ISSN: 1389-1286), 2003- 2016.
- LOCAL CHAIRMAN of the 7th International Workshop on Traffic Monitoring and Analysis (TMA 2015), Barcelona, April 23-24, 2015 (<http://tma-2015.cba.upc.edu/tma>).
- LOCAL ORGANIZER of the 5th PhD School on Traffic Monitoring and Analysis (TMA PhD School 2015), Barcelona, April 21-22, 2015 (<http://tma-2015.cba.upc.edu/phd-school>) Co-located with TMA 2015.
- COORDINATOR of the Master of Science in Information and Communication Technologies taught by Telecom-BCN (UPC), 2005- 2012.
- PATENT. Reference number: C A2548960 C. Title: “System and Method for the Automatic setup of switched circuits based on traffic prediction in a Telecommunications Network”. Authors: A. Manzalini, A. D’Alessandro, S. Spadaro, J. Solé-Pareta, O. Pisa. Publication date: July 10, 2012. Exploitation rights: Telecom Italia.

- LOCAL CHAIRMAN of the 4th NaNoNetworking Summit (N3Summit 2012) held in Barcelona (at the UPC) on June 21 –22, 2012 (<http://telecombcn.upc.edu/en/mason-share/notif/2019.html>).
- LOCAL CHAIRMAN of the 3rd NaNoNetworking Summit (N3Summit 2011) held in Barcelona (at the UPC) on June 22 –23, 2011.
- LOCAL CHAIRMAN of the 2nd NaNoNetworking Day (N3Summit 2010) held in Barcelona (at the UPC) on June 23, 2010.
- LOCAL CHAIRMAN of the 1st NaNoNetworking Day (N3Summit 2009) held in Barcelona (at the UPC) on June 22, 2009.
- CHAIRMAN of the IFIP TC6-WG10, Photonic Networks working group, 2005- 2011.
- INVITED SPEAKER (jointly with Dr. Franco Callegati) of the 2009 BONE Summer School on Core Networks, "From Interoperable OBS-GMPLS Networks to Optical MPLS", Kraków, September 28-30, 2009.
- INVITED SPEAKER of the New Generation Optical Networks Seminar organized by the ISCTE-Instituto Universitário de Lisboa, "Reaching Optical MPLS from an OBS network interoperable with GMPLS", Lisbon, Portugal, April 14, 2009.
- GUEST EDITOR for the Computer Networks Journal (Elsevier, ISSN: 1389-1286), Special Issue on "Challenges and opportunities in advanced optical networking", Vol. 52, No. 10, October 2008.
- Co-CHAIRMAN of the 12th International Conference on Optical Networking Design and Modeling (ONDM 2008 <http://www.craax.upc.edu/conferences/ondm2008/>), Vilanova i la Geltrú (Spain), March 12-14, 2008.
- KEYNOTE SPEAKER of the 10th Conference on Optical Network Design and Modeling (ONDM 2006), "QoS Provisioning in Connection Oriented Optical Packet/Burst Switching Networks", Copenhagen, 22-24 May, 2006.
- LOCAL CHAIRMAN of the 25th Conference on Computer Communications (EEE INFOCOM 2006), Barcelona, April 23-29, 2006 (<http://infocom2006.ieee-infocom.org/>).
- GENERAL CHAIRMAN of the 7th International Conference on Transparent Optical Networks (ICTON 2005), Barcelona, July 3-7, 2005 (<http://icton.ccaba.upc.edu/icton/>).
- GENERAL CHAIRMAN of the 5th. Workshop on Quality of Future Internet Services (QofIS'04), Barcelona, September 29-30 and October 1, 2004 (<http://qofis.ccaba.upc.edu/>).
- GUEST EDITOR for the Computer Communications Journal (Elsevier, ISSN: 0140-3664), Special Issue on "Quality of Future Internet Services", Vol. 27, No. 4, March 2004.
- GUEST EDITOR for the Computer Communications Journal (Elsevier, ISSN: 0140-3664), Special Issue on "Quality of Future Internet Services", Vol. 26, No. 4, March 2003.
- SPANISH DELEGATE for the QofIS Action (COST263: "Quality of Future Internet Services"), 1999-2004.
- ASSOCIATE DEAN of the UPC College of Computing, 1992-1993.

Participation in Spanish and European Research Projects (Selected)

- TRAINER "Towards fully AI-empowered NETwork", Ref. (PID2020-118011GB-C21), 2020-2023.
- [HEDY](#) (Erasmus+) "Live in the AI era" (KA220-HED 0C8D3623), 2021-2023.
- ALLIANCE, "Diseñando una infraestructura de red 5G definida mediante conocimiento hacia la próxima sociedad digital" (TEC2017-90034-C2-1-R), 2018 -2020.
- VISORSURF (FET-Open), "Visorsurf - A Hardware Platform for Software-driven Functional Metasurfaces" (H2020-736876), 2017-2020.
- [EPIC](#) (Erasmus+) "Improving Employability through Internationalisation and Collaboration" (KA203-034287). 2017-20120.
- [COLIBRI](#) (Erasmus+) "Collaboration and Innovation for Better, Personalized and IT-Supported" (KA203-2014-0042014-2017). 2014-2017.
- SUNSET, "Sustainable Network Infrastructure Enabling the Future Digital Society" (TEC2014-59583-C2-2-R), 2015-2017.
- CIRCLE (FET-Open), "Coordinating European Research on Molecular Communications" (H2020-665564), 2015-2017.
- LIGHTNESS (Strep), "Low latency and high throughput dynamic network infrastructures for high performance datacentre interconnects" (IST FP7-318606), 2012-2015.
- EULER (Strep), "Experimental UpdateLess Evolutive Routing" (IST FP7-258307), 2010-2013.

- STRONGEST (IP), “Scalable, Tunable and Resilient Optical Networks Guaranteeing Extremely-high Speed Transport” (IST FP7-247674), 2010-2012.
- BONE (Network of Excellence): “Building the Future Optical Network in Europe: The e-Photon/ONe Network” (IST FP7-216863), 2007-2010.
- DICONET (Strep Project): “Dynamic Impairment Constraint Networking for Transparent Mesh Optical Networks” (IST FP7-216338), 2007-2010.
- TDON (COST Action): "Towards Digital Optical Networks" (COST 291), 2004-2008
- NOBEL-2 (Integrated Project): Next generation Optical network for Broadband European Leadership (IST FP6-027305), 2005-2008.
- NOBEL (Integrated Project): Next generation Optical network for Broadband European Leadership (IST FP6-506760), 2003-2005.
- e_Photon/One+ (Network of Excellence): Optical Networks: Towards Bandwidth Manageability and Efficiency (IST FP6-027497), 2006-2008.
- e_Photon/One (Network of Excellence): Optical Networks: Towards Bandwidth Manageability and Efficiency (IST FP6-001933), 2003-2006.
- LONG: “Laboratories over Next Generation Networks” (IST-1999-20393), 2001-2002.
- LION: “Layers Interworking in Optical Networks” (IST-1999-11387), 2000-2003.
- DAVID: “Data and Voice Integration over DWDM” (IST-1999-11742), 2000-2003.
- AIPhoNet (COST Action): “Advanced Infrastructure for Photonic Networks” (COST 266), 2000-2004.
- E-NET: “Emerging Networking Technologies” (IST-2001-37814), 2000-2001.
- QofIS (COST Action): “Quality of Future Internet Services” (COST 263), 1999-2004.
- SONATA: “Switchless Optical Network for Advanced Transport Architecture” (ACTS, AC-351), 1998-1999.
- IMMP: “Integrated Multimedia Project” (ACTS, AC-023), 1995-1999.
- MICC: “Mobile Integrated Communications in Construction” (ACTS, AC-088), 1996-1998.
- InfoWin: “Information Window” (ACTS, P-565), 1996-1998.

Most Related Publications (selected)

- Angulo, C.; Careglio, D.; Domènech, M.; Hernando, J.; **Solé-Pareta, J.**; Vallés, N, “Artificial intelligence in governance: experts and non-experts perspectives”, Safety and Security Sciences Review, Vol. 4 no. 1 p. 49-63, Publication date: 10/2022.
- Castell, I.; Sáenz, R.; **Solé-Pareta, J.**; Barlet, P., “Demystifying content-blockers: Measuring their impact on performance and quality of experience”, IEEE Transactions on Network and Service Management, Vol. 19, no. 3, p. 3562-3573, publication date: 09/2022. DOI: 10.1109/TNSM.2022.3179267.
- Callegati, F.; Careglio, D.; Bonani, L.; Pickavet, M.; **Solé-Pareta, J.**, “Why optical packet switching failed and can elastic optical networks take its place?”, Optical Switching and Networking, Vol. 44, article 100664, p. 1-8, publication date: 05/2022. DOI: 10.1016/j.osn.2021.100664.
- Castell, I.; **Solé-Pareta, J.**; Barlet, P., “TrackSign: guided Web tracking discovery”, Proceedings of the Annual IEEE International Conference on Computer Communications (Infocom 2021), p. 1-1, publication date: 11/05/2021. DOI: 10.1109/INFOCOM42981.2021.9488842
- Careglio, D.; Spadaro, S.; Albert Cabellos-Aparicio; Lazaro, J.A.; Barlet, P.; Gene, J. M.; Perello, J.; Agraz, F.; Suarez-varela, J.; Pages, A.; Paillisse, J.; Almasan, P.; Domingo, J.; **Solé-Pareta, J.**, “Results and achievements of the ALLIANCE Project: New network solutions for 5G and beyond”, Applied sciences (Basel), Vol. 11 no. 19, p. 9130:1-9130:26, publication date: 30/09/2021. DOI: 10.3390/app11199130.
- Castell, I.; **Solé-Pareta, J.**; Barlet, P., “Network measurements for web tracking analysis and detection: A tutorial” IEEE Instrumentation and Measurement Magazine, Vol. 23, no. 9, p. 50-57, publication date: 12/2020. DOI: 10.1109/MIM.2020.9289071.
- Comellas, J.; Perello, J.; **Solé-Pareta, J.**; Junyent, G., “Spatial partitioning for proactive spectrum fragmentation avoidance in flex-grid/SDM dynamic optical core networks”, Photonic Network Communications, Vol. 40, p. 59-67, publication date: 10/2020. DOI: 10.1007/s11107-020-00903-x.

- Molnár, M.; Le, D.; Perello, J.; **Solé-Pareta, J.**; McArdle, C., “Multicast routing from a set of data centers in elastic optical networks”, *Optical Switching and Networking*, Vol. 34, p. 35-46, publication date: 11/2019. DOI: 10.1016/j.osn.2019.04.002
- Felicetti L., Assaf S.S., Femminell M., Alarcon, E., **Solé-Pareta, J.**, “The Molecular Communications Markup Language (MolComML)” *Journal on Nano Communication Networks* (Elsevier), 2018.
- Assaf, S.S., Salehi, S., Cid-Fuentes, R.G., **Solé-Pareta, J.**, Alarcón, E., “Influence of neighboring absorbing receivers upon the inter-symbol interference in a diffusion-based molecular communication system”, *Journal on Nano Communication Networks* (Elsevier), 2017.
- Salehi, S., Moayedian, N.S., Assaf, S.S., (...), **Solé-Pareta, J.**, Alarcón, E., “Releasing rate optimization in a single and multiple transmitter local drug delivery system with limited resources”, *Journal on Nano Communication Networks* (Elsevier), 2017.
- Abadal, S., Liaskos, C., Tsioliaridou, A., (...), **Solé-Pareta, J.**, Alarcon, E., Cabellos-Aparicio, A., “Computing and Communications for the Software-Defined Metamaterial Paradigm: A Context Analysis”, *IEEE Access*, 2017.
- Tomasz Bujlow, Member, IEEE, Valentín Carela-Español, **Josep Solé-Pareta**, and Pere Barlet-Ros, “A Survey on Web Tracking: Mechanisms, Implications, and Defenses”. *Proceedings of the IEEE*, 2017.
- Sergi Abadal, Ignacio Llatser, Albert Mestres, **Josep Solé-Pareta**, Eduard Alarcón and Albert Cabellos-Aparicio, “Fundamentals of Graphene-Enabled Wireless On-Chip Networking”. Book Chapter of the book “Modeling, Methodologies and Tools for Molecular and Nano-scale Communications”, Editors: J. Suzuki, T. Nakano and M.J. Moore, published by Springer in 2017 (1st. edition). ISBN: 978-3-319-50688-3.
- Sergi Abadal, Raúl Martínez, Eduard Alarcón, **Josep Solé-Pareta**, Albert Cabellos-Aparicio. “Characterization and modeling of multicast communication in cache-coherent manycore processor”. *Computers & Electrical Engineering Journal*, January 2016. ISSN: 0045-7906 (<http://dx.doi.org/10.1016/j.compeleceng.2015.12.018>).
- Valentín Carela-Español, Pere Barlet-Ros, Oriol Mula-Valls and **Josep Solé-Pareta**. “An Autonomic Traffic Classification System for Network Operation and Management”. *Journal of Network and Systems Management*, Vol. 23, Issue 3, pp 401-419, July 2015, ISSN: 1064-7570 (DOI: 10.1007/s10922-013-9293-1).
- Ignacio Llatser, Albert Cabellos-Aparicio, Eduard Alarcón, Josep Miquel Jomet, Albert Mestres, Heekwan Lee, and **Josep Solé-Pareta**. “Scalability of the Channel Capacity in Graphene-Enabled Wireless Communications to the Nanoscale” *IEEE Transactions on Communications*, Vol. 63, No. 1, pp. 324-333, January 2015, ISSN: 0090-6778 (DOI: 10.1109/TCOMM.2014.2379271).
- Sócrates-Dantas, J., Careglio, D., Perelló, J., Silveira, R. M., Ruggiero, W. V., **Solé-Pareta, J.** “Challenges and requirements of a control plane for elastic optical networks”. *Computer Networks Journal* (Elsevier), vol. 72, no. 10, pp. 156-171, October 2014, ISSN: 1389-1286 (DOI: 10.1016/j.comnet.2014.07.007).
- Ioannis Tomkos, Siamak Azodolmolky, **Josep Solé-Pareta**, Davide Careglio, and Eleni Palkopoulou. “A Tutorial on the Flexible Optical Networking Paradigm: State of the Art, Trends, and Research Challenges”, *Proceedings of the IEEE*, Vol. 102, No. 9, pp. 1317-1337, September 2014, ISSN: 0018-9219 (DOI: 10.1109/JPROC.2014.2324652).
- Ignasi Paredes-Oliva, Pere Barlet-Ros, and **Josep Solé-Pareta**. “Scan detection under sampling: A new perspective”. *IEEE Computer*, Special Issue on Cybersecurity, 46(4):38-44, April 2013, ISSN: 0018-9162 (DOI: 10.1109/MC.2013.70).
- Oscar Pedrola, Davide Careglio, Mirosław Klinkowski, **Josep Solé-Pareta**, and Keren Bergman, “Cost Feasibility Analysis of Translucent Optical Networks With Shared Wavelength Converters”. *IEEE/OSA Journal of Optical Communications and Networks*, vol. 5, no. 2, pp. 104-115, February 2013, ISSN: 1943-0620 (DOI: 10.1364/JOCN.5.000104).
- O. Pedrola, D. Careglio, M. Klinkowski, L. Velasco, K. Bergman, **J. Solé-Pareta**, “Metaheuristic hybridizations for the regenerator placement and dimensioning problem in sub-wavelength switching optical networks, *European Journal of Operational Research*, vol. 224, no. 3, pp. 614-624, February 2013, ISSN: 0377-2217 (DOI: 10.1016/j.ejor.2012.08.011).
- S. Ricciardi, D. Careglio, G. Santos-Boada, **J. Solé-Pareta**, U. Fiore, F. Palmieri, "Towards an energy-aware Internet: modeling a crosslayer optimization approach", *Telecommunication Systems Journal*, special issue on Green Telecommunications, Vol. 52, Issue 2, pp. 1247-1268, February 2013, ISSN: 1018-4864 (DOI: 10.1007/s11235-011-9645-7).

- Sergio Ricciardi, Francesco Palmieri, Ugo Fiore, Davide Careglio, Germán Santos-Boada, **Josep Solé-Pareta**, "Green Datacenter Infrastructures in the Cloud Computing Era" and "Towards Energy-Oriented Telecommunication Networks", Chapters 10 and 19 (pp. 267-293 and 491-512) respectively, of the "Handbook on Green Information and Communication Systems", Ed. Elsevier, 2012 (1st edition), ISBN 9780124158443.
- S. Ricciardi, F. Palmieri, U. Fiore, D. Careglio, G. Santos-Boada, **J. Solé-Pareta**, "An energy-aware dynamic RWA framework for next-generation wavelength-routed networks", *Computer Networks Journal* (Elsevier), vol. 56, no. 10, pp. 2420-2442, July 2012, ISSN: 1389-1286 (<http://dx.doi.org/10.1016/j.ejor.2012.08.01>).
- **J. Solé-Pareta**, S. Subramaniam, D. Careglio, S. Spadaro, "Cross-layer approaches for planning and operation impairment-aware optical networks", *Proceedings of the IEEE, Special Issue on The Evolution of Optical Networks*, vol. 100, no. 5, pp. 1118-1129, May 2012, ISSN: 0018-9219 (DOI:10.1016/j.cor.2011.10.026).
- O. Pedrola, D. Careglio, M. Klinkowski, **J. Solé-Pareta**, "Regenerator placement strategies for translucent OBS networks", *OSA/IEEE Journal of Lightwave Technology*, vol. 29, no. 22, pp. 3408-3420, November 2011, ISSN: 0733-8724 (DOI:10.1109/jlt.2011.2168806).
- M. Klinkowski, P. Pedroso, D. Careglio, M. Pioro, **J. Solé-Pareta**, "Joint routing and wavelength allocation subject to absolute QoS constraints in OBS networks", *OSA/IEEE Journal of Lightwave Technology*, vol. 29, no. 22, pp. 3433-3444, November 2011, ISSN: 0733-8724 (DOI:10.1109/jlt.2011.2169392).
- O. Pedrola, D. Careglio, M. Klinkowski, **J. Solé-Pareta**, "Offline routing and regenerator placement and dimensioning for translucent OBS networks", *OSA/IEEE Journal of Optical Communications and Networking*, vol. 3, no. 9, pp. 651-666, September 2011, ISSN: 1943-0620 (DOI:10.1364/jocn.3.000651).
- Pere Barlet-Ros, Gianluca Iannaccone, Josep Sanjuà-Suxart, and **Josep Solé-Pareta**, "Predictive resource management of multiple monitoring applications", *IEEE/ACM Transactions on Networking*, 19(3), June 2011, ISSN: 1063-6692.
- V. Carela-Español, P. Barlet-Ros, A. Cabellos-Aparicio, and **J. Solé-Pareta**, "Analysis of the impact of sampling on NetFlow traffic classification", *Computer Networks Journal* (Elsevier), 55(5), April 2011, ISSN: 1389-1286.
- S. Azodolmolky, M. Klinkowski, Y. Pointurier, M. Angelou, D. Careglio, **J. Solé-Pareta**, I. Tomkos, "A novel offline physical layer impairments aware RWA algorithm with dedicated path protection consideration", *OSA/IEEE Journal of Lightwave Technology*, vol. 28, no. 20, pp. 3029-3040, October 2010, ISSN: 0733-8724.
- M. Zannin, K. Enns, S. Taccheo, D. Careglio, **J. Solé-Pareta**, J. Aracil, "On the benefits of optical gain clamped amplification in optical burst switching networks", *OSA/IEEE Journal of Lightwave Technology*, vol. 27, no. 23, pp. 5475-5482, 2009, ISSN: 0733-8724.
- Azodolmolky S, Klonidis D, Tomkos I, Ye Yb, Saradhi Cv, Salvadori E, Gunkel M, Manousakis K, Vlachos K, Varvarigos Em, Nejabati R, Simeonidou D, Eiselt M, Comellas J, **Sole-Pareta J**, Simonneau C, et al, (2009). "A Dynamic Impairment-Aware Networking Solution for Transparent Mesh Optical Networks". *IEEE Communications Magazine*, 47 (5): 38-47. ISSN: 0163-6804.
- Pavon-Marino P, Azodolmolky S, Aparicio-Pardo R, Garcia-Manrubia B, Pointurier Y, Angelou M, **Sole-Pareta J**, Garcia-Haro J, Tomkos I. Offline impairment aware RWA algorithms for cross-layer planning of optical networks. *OSA/IEEE Journal of Lightwave Technology* 2009;27:1763-1775, ISSN: 0733-8724.
- M. Klinkowski, D. Careglio, **J. Solé-Pareta**, M. Marciniak, "Performance overview of the offset time emulated OBS network architecture", *OSA/IEEE Journal of Lightwave Technology*, vol. 27, no. 14, pp. 2751-2764, July 2009, ISSN: 0733-8724.
- S. Azodolmolky, M. Klinkowski, E. Marin, D. Careglio, **J. Solé-Pareta**, I. Tomkos, "A survey on physical layer impairments aware routing and wavelength assignment algorithms in optical networks", *Computer Networks Journal*, vol. 53, no. 7, pp. 926-944, May 2009, ISSN: 1389-1286.
- M. Klinkowski, D. Careglio, **J. Solé-Pareta**, "Reactive and proactive routing in labelled OBS networks", *IET Communications*, vol. 3, no. 3, pp. 454-464, March 2009, ISSN: 1751-8628.
- Miroslaw Klinkowski, M. Pioro, Davide Careglio, Marian Marciniak, **Josep Solé-Pareta**, "Non-linear optimization for multi-path source routing in OBS networks", *IEEE Communications Letters*, Vol. 11 No. 12, December 2007, ISSN: 1089-7798.

- S. Sánchez-López, X. Masip-Bruin, **J. Solé-Pareta**, J. Domingo-Pascual, “Fast Set-up of End-to-end Paths for Bandwidth Constrained Applications in an IP/MPLS-ATM Integrated Environment”, *Computer Networks Journal* (Elsevier), Vol. 51, No. 2, February 2007, ISSN: 1389-1286.
- D. Careglio, **J. Solé-Pareta**, S. Spadaro, “Service Category-to-Wavelength Selection Technique for QoS Support in Connection-Oriented Optical Packet Switching”, *Computer Networks Journal* (Elsevier), Vol. 51, No. 1, January 2007, ISSN: 1389-1286.
- S. Spadaro, Alessandro D’Alessandro, Antonio Manzalini, **J. Solé-Pareta**, “TRIDENT: An Automatic Approach to Traffic Engineering in IP/MPLS over ASON/GMPLS Networks”, *Computer Networks Journal* (Elsevier), Vol. 51, No. 1, January 2007, ISSN: 1389-1286.
- E. Marín-Tordera, X. Masip-Bruin, S. Sánchez-López, **J. Solé-Pareta**, J. Domingo-Pascual, “The Prediction-Based Routing in Optical Transport Networks”, *Computer Communications Journal* (Elsevier), Vol. 29, Issue 7, April 2006, ISSN: 0140-3664.
- F. Callegati, D. Careglio, W. Cerroni, G. Muretto, C. Raffaelli, **J. Solé-Pareta**, P. Zaffoni, “Keeping the packet sequence in optical packet-switched networks”, *Optical Switching and Networking Journal*, Vol. 2, No. 3, November 2005, ISSN: 1573-4277.
- E. Marín-Tordera, X. Masip-Bruin, S. Sánchez-López, **J. Solé-Pareta**, J. Domingo-Pascual, “A Hierarchical Routing Approach for Optical Transport Networks”, *Computer Networks Journal* (Elsevier), Vol. 50, Issue 2, February 2005, ISSN: 1389-1286.
- C. Develder, A. Stavdas, A. Bianco, D. Careglio, H. Lønsethagen, J. Fernández-Palacios, R. Van Caenegem, S. Sygletos, F. Neri, **J. Solé-Pareta**, M. Pickavet, N. Le Sauze, P. Demeester, “Benchmarking and viability assessment of Optical Packet Switching for metro networks”, *IEEE/OSA Journal of Lightware Technology, Special Issue on Metro and Access Networks*, November 2004, ISSN: 0733-8724.
- Andrea Bianco, Davide Careglio, Jorge M. Finochietto, Giulio Galante, Emilio Leonardi, Fabio Neri, **Josep Solé-Pareta**, and Salvatore Spadaro, “Multi-Class Scheduling Algorithms for the DAVID Metro Network”, *IEEE Journal on Selected Areas in Communications (JSAC), Special Issue on Advances in Metropolitan Optical Networks (Architectures and Control)*, Vol. 22, No. 9, November 2004, ISSN: 0733-8716.
- S. Spadaro, **J. Solé-Pareta**, “Positioning of the RPR standard in Contemporary Operator Environments”, *IEEE Network Magazine, Special Issue on Protection, Restoration and Disaster Recovery*, April 2004, ISSN: 0890-8044.
- Sergi Sánchez-López, **Josep Solé-Pareta**, Jaume Comellas, John Soldatos, Georgios Kylafas, “PNNI Based Control Plane for Automatic Switched Optical Networks”, *IEEE/OSA Journal of Lightware Technology, Special Issue on Optical Networks*, November 2003, ISSN: 0733-8724.
- L. Dittmann (editor), C. Develder, D. Chiaroni, F. Neri, F. Callegati, W. Koerber, A. Stavdas, M. Renaud, A. Rafel, **J. Solé-Pareta**, W. Cerroni, N. Leligou, Lars Dembeck, B. Mortensen, M. Pickavet, N. Le Sauze, M. Mahony, B. Berde, G. Eilenberger, “The European IST Project DAVID: a Viable Approach towards Optical Packet Switching”, *IEEE Journal on Selected Areas in Communications (JSAC)*, July 2003, ISSN: 0733-8716.

Advised PhD Thesis

- Simon Assaf, Dept. Arquitectura de Computadors (UPC). “Synthetic Biology Guidelines for Diffusion Based Molecular Communication”. In progress (dissertation pending scheduled by February 2019) Co-aviced with Eduard Alarcón.
- Jakub Mikians, Dantas, Dept. Arquitectura de Computadors (UPC). “Macro- and Microscopic Analysis of the Internet Economy from Network Measurements”. January 2016, “Excellent”. Co-aviced with Pere Barlet Ros and Nikolaos Laoutaris.
- Joana Sócrates Dantas, Dept. Arquitectura de Computadors (UPC). “Priority Realloc: A threefold mechanism for route and resources allocation in EONs”. July 2015, “cum laude”. Co-aviced with Davide Careglio (UPC) and Regina Melo Silveira (Universidade de São Paulo).
- Valentín Carela Español, Dept. Arquitectura de Computadors (UPC). “Network Traffic Classification: From theory to practice”. October 2014, “cum laude”. Co-aviced with Pere Barlet Ros.
- Ignasi Paredes Oliva, Dept. Arquitectura de Computadors (UPC). “Addressing Practical Challenges for Anomaly Detection in Backbone Networks”. July 2013, “cum laude”. Co-aviced with Pere Barlet Ros.
- Òscar Pedrola Escribà Dept. Arquitectura de Computadors (UPC). “Cross-layer Modeling and Optimization of Next-generation Internet Networks”. November 2012, “cum laude”. Co-aviced with Dr. Davide Careglio

- Josep Sanjuà Cuixart, Dept. Arquitectura de Computadors (UPC). “Efficient Algorithms for Passive Network Measurement”. March 2012, “cum laude”. Co-adviced with Pere Barlet Ros.
- Pedro Miguel Pedroso Mendoça, Dept. Arquitectura de Computadors (UPC). “GMPLS-OBS Interoperability, and Routing Scalability in Internet”. December 2011, “cum laude”. Co-adviced with Davide Careglio.
- Siamak Azodolmolky, Dept. Arquitectura de Computadors (UPC). “Impairment Aware Lightpath Routing and Network Planning in Transparent Optical Networks”. February 2011, “cum laude”. Co-adviced with Iannis Tomkos (Athens Institute of Technology).
- Pere Barlet-Ros, Dept. Arquitectura de Computadors (UPC). “Load Shedding in Network Monitoring Applications”. December 2008, “cum laude”. Co-adviced with Gianluca Iannaccone (Intel Research Berkeley).
- Mirosław Klinkowsky, Dept. Arquitectura de Computadors (UPC). “Offset-Time Emulated Architecture for Optical Burst Switching: Modeling and Performance Evaluation. February 2008, “cum laude”. Co-adviced with Davide Careglio.
- Davide Careglio, Dept. Arquitectura de Computadors (UPC). “QoS Provisioning in Optical Networks for Metropolitan and Wide Area Environments”. February 2005, “cum laude”.
- Salvatore Spadaro, Dept. Teoria del Senyal i Comunicacions (UPC). “Traffic Engineering in IP over Optical Networks for Metropolitan and Wide Area Environments”. February 2005, “cum laude”.
- Xavier Masip Bruín, Dept. Arquitectura de Computadors (UPC). “Mechanisms to Reduce the Routing Information Inaccuracy Effects: Application to MPLS and WDM Networks”. October 2003, “cum laude”. Co-adviced with Jordi Domingo-Pascual.
- Sergi Sánchez López, Dept. Arquitectura de Computadors (UPC). “Interconnection of IP/MPLS Networks through ATM and Optical Backbones using PNNI Protocols”. October 2003, “excellent”. Co-adviced with Jordi Domingo-Pascual.
- Ramon Fabregat Gesa, Dept. Electrònica Informàtica i Automàtica de la Universitat de Girona (UdG). “Congestion Probability Routing in Virtual Path ATM Networks”, September 1998, “cum laude”.
- Joan Vila i Sallent, Dept. d'Arquitectura de Computadors (UPC). “A Network Architecture for Supporting Parallel Computing over ATM”. November 1997, “cum laude”.

Detailed CV

- For more, and more detailed information about my Scientific production, please visit the Website for the scientific production of UPC researchers at <http://futur.upc.edu/178279?locale=en>