

Maria J. Blesa Aguilera

Curriculum Vitae as of June 17, 2009

Personal information

First name: Maria José
Family name: Blesa Aguilera
Title: Dr. Inf.-Eng.
Birth date and place: 12th July 1975, in Barcelona (Spain)
Nationality: Spanish
Gender: Female
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Current position: Attached lecturer, Permanent non-civil service staff
Affiliation: ALBCOM research group
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Academic information

February 2006 PhD in Computer Science with European Doctor mention,
Universitat Politècnica de Catalunya.
June 2002 Diploma d'Estudis Avançats (DEA),
Universitat Politècnica de Catalunya.
February 2000 Informatics Engineering,
Universitat Politècnica de Catalunya.

Official evaluations and prizes

August 2008 Special Prize from the Universitat Politècnica de Catalunya for PhD thesis defended during the course 2005-2006 in the area of Information Technologies and Communications.
October 2007 Positive report from the Spanish National Agency of Quality Evaluation and Accreditation (ANECA) for the category of *Profesor Contratado Doctor*.
June 2007 Positive evaluation of the research activity of the 6-year period 2001-2006 by the Agency of Quality of the University System of Catalonia (AQU).
December 2006 Positive report from the Agency of Quality of the University System of Catalonia for the category of *Lector*.
April 2003 Positive report from the Spanish National Agency of Quality Evaluation and Accreditation for the category of *Profesor Colaborador*.

Grants obtained

- October 2005: Granted by the Universitat Politècnica de Catalunya to study a second level course on german language (Grundkurse 2A und 2B).
- October 2004: Granted by the DELIS European project (6th Framework Programme, contract no. 001907) for the registration to the School on Algorithmic Aspects of Game Theory in Large Scale Networks, in Santorini (Greece).
- From March 2001 to September 2004: Granted by the Catalan Research Council, Generalitat de Catalunya (grant number 2001FI-00659) for the development of the PhD Thesis in Computer Science.
- July 2002 and February 2003: Granted by the Universitat Politècnica de Catalunya to study a first level course on german language (Grundkurse 1A und 1B).
- June 2002: Granted by the ALCOM-FT European project to attend the School and Workshop on Models and Algorithms for the Web, in Udine (Italy).
- March 2002: Granted under the SOCRATES program by the Universitat Politècnica de Catalunya, for visiting the IRIDIA institue at the Université Libre de Bruxelles during the 2002/2003 course.
- September 2001: Granted by the ALCOM-FT European project to attend the School on Algorithm Engineering, in Roma (Italy).
- September 2001: Granted by the ALCOM-FT European project to attend the 2nd Max-Planck Advanced Course on the Foundations of Computer Science, in Saarbrücken (Germany).
- Course 1993-1994 and courses 1995-2000: Granted by the Spanish Ministry of Education, Science and Technology. Support to the degree on Computer Science Engineering at the Facultat d'Informàtica de Barcelona, Universitat Politècnica de Catalunya.

Professional information

Since October 2007	Attached lecturer (permanent non-civil service staff) at the Universitat Politècnica de Catalunya.
Sep. 2006 – Oct. 2007	Collaborating lecturer on a fixed-term contract at the Universitat Politècnica de Catalunya.
Sep. 2004 – Ago. 2006	Assistant (trainee research staff) at the Universitat Politècnica de Catalunya.
June 2001 – July 2001	Teacher of Java programming language at Sony.
May 2001 – July 2001	Teacher of C and Java programming languages at Hewlett Packard.
May 2000 – April 2001	Granted by the ALCOM-FT Project (EU FET IST-1999-14186).
Mar. 2000 – Apr. 2000	Faculty assistant at the Facultat d'Informàtica de Barcelona, Universitat Politècnica de Catalunya. Support to the practical classes of the first course on programming. The course was known in the center as <i>Iniciació a la Programació</i> (IP).
Oct. 1999 – Feb. 2000	Granted by the Departament de Llenguatges i Sistemes Informàtics, Universitat Politècnica de Catalunya. Support to the course of <i>Calculation Abstract Models</i> at the Facultat d'Informàtica de Barcelona, Universitat Politècnica de Catalunya. The course was known in the center as <i>Models Abstractes de Càlcul</i> (MAC).
Set. 1999 – Jan. 2000	Teacher of an occupational training course of Java programming language for a center of the Generalitat de Catalunya.
July 1999 – Jan. 2000	Granted by the European Center of Parallelism of Barcelona (CEPBA), associated with the Universitat Politècnica de Catalunya and IBM.
Oct. 1998 – July 1999	Granted by the Departament de Matemàtica Aplicada II, Universitat Politècnica de Catalunya. Support to the course of <i>Virtual Reality and Geometry</i> for the Facultat d'Informàtica de Barcelona. Webmaster of the homepage for the <i>11th International Conference on Formal Power Series and Algebraic Combinatorics</i> (FPSAC'99).
Oct. 1997 – Sep. 1998	Granted by the new technologies company INDRA SSI, in agreement with the Universitat Politècnica de Catalunya. Worked as programmer to develop an application for the Department of Public Works of the Generalitat de Catalunya.
Jan. 1996 – Oct. 1997	Granted by FUJITSU to provide computer support at the Department of Education of the Generalitat de Catalunya.

Participation/Collaboration in research projects

- FORMALISM *Métodos formales y algoritmos para el diseño de sistemas.* Spanish Ministry of Education and Science under CICYT project no. TIN2007-66523. From 1/2007 to 12/2012.
- FRONTS *Foundations of Adaptive Networked Societies of Tiny Artefacts.* EU FP7-ICT-2007-1 (FET Proactive Initiative: Pervasive Adaptation) ref.no. 215270. From 1/2008 to 12/2010.
- WISEBED *Wireless Sensor Network Testbeds.* FP7-ICT-2007-2 ICT-2007.1.6 (New Paradigms and Experimental Facilities. Small/medium-scale focused research projects -STREPs-). From 04/2008 to 03/2010.
- AEOLUS *Algorithmic Principles for Building Efficient Overlay Computers.* FET pro-actives Integrated Project ref.no. IST-15964. From 09/2005 to 09/2009.
- AI-ES-DE *Self-organization in sensor networks and overlay networks.* Spanish Ministry of Education and Science under the Acciones Integradas program, project no. MEC HA2006-0127. From 01/2007 to 12/2008.
- ASCE *Auto-organización en sistemas de comunicación emergentes.* Spanish Ministry of Education and Science under CICYT project no. TIN-2005-09198. From 12/2005 to 12/2008.
- ALBCOM-SGR *Grup de Recerca Reconegut: Algorismes, Bioinformàtica, Complexitat i Mètodes Formals.* CIRIT 2005SGR 00516. From 11/2005 to 11/2008.
- DELIS *Dynamically Evolving, Large Scale Information Systems.* Funded under 6th FWP (Sixth Framework Programme) FET pro-actives Integrate Project ref.no. 001907 From 01/2004 to 12/2007.
- TRACER *Técnicas de Optimización Avanzadas para Problemas Complejos.* Spanish project CICYT TIC2002-04498-C05-03. From 12/2002 to 12/2005.
- FLAGS *Foundational Aspects of Global Computing Systems,* Funded by the European Commission under the Future and Emerging Technologies (FET), part of the Information Society Technologies (IST) programme of the Fifth Framework, as project number IST-2001-33116. From 01/2002 to 12/2004.
- ALCOM-FT *Algorithms and Complexity – Future Technologies.* Funded by the European Commission under the Future and Emerging Technologies (FET), part of the Information Society Technologies (IST) programme of the Fifth Framework, as project number IST-1999-14186. From 06/2000 to 06/2003.
- MALLBA *Geographically Distributed Environments: Combinatorial Optimization Library for Heuristic Methods.* Spanish project CICYT TIC99-0754-C03-02. From 01/2000 to 12/2002.

Book chapters and edited books

- [1] M. Blesa, and C. Blum. *Optimization Techniques for Solving Complex Problems*, chapter 23: *Solving the KCT Problem: Large-scale Neighborhood Search and Solution Merging*, pp.401–415. John Wiley & Sons Inc., 2009. ISBN 978-0-470-29332-4
- [2] M. Blesa, C. Blum, C. Cotta, A.J. Fernández, J.E. Gallardo, A. Roli, and M. Sampels, editors. *Hybrid Metaheuristics: Fifth International Workshop, HM 2008, Málaga, Spain, 2008*, volume 5296 of *Lecture Notes in Computer Science*. Springer-Verlag GmbH, 2008. ISBN 978-3-540-88438-5
- [3] Maria J. Blesa, Christian Blum, Andrea Roli, and Michael Sampels, editors. *Hybrid Metaheuristics: An Emerging Approach for Optimization*. Series: Studies in Computational Intelligence , Vol. 114, 290 p. Springer-Verlag GmbH, 2008. ISBN 978-3-540-78294-0
- [4] T. Bartz-Beielstein, M. Blesa, C. Blum, B. Naujoks, A. Roli, G. Rudolph, and M. Sampels, editors. *Hybrid Metaheuristics: Forth International Workshop, HM 2007, Dortmund, Germany, 2007*, volume 4771 of *Lecture Notes in Computer Science*. Springer-Verlag GmbH, 2007. ISBN 978-3-540-75513-5
- [5] M. Blesa, and C. Blum. *Approximation Algorithms and Metaheuristics*, chapter 64: On Solving the Maximum Disjoint Paths Problem with Ant Colony Optimization. Chapman & Hall/CRC, Computer & Information Science Series, 2007. ISBN 1-58488-550-5
- [6] F. Almeida, M. Blesa, C. Blum, J.M. Moreno, M. Pérez, A. Roli, and M. Sampels, editors. *Hybrid Metaheuristics: Third International Workshop, HM 2006, Gran Canaria, Spain, October 13-15, 2006*, volume 4030 of *Lecture Notes in Computer Science*. Springer-Verlag GmbH, 2006. ISBN 978-3-540-46384-9
- [7] Maria J. Blesa, Christian Blum, Andrea Roli, and Michael Sampels, editors. *Hybrid Metaheuristics: Second International Workshop, HM 2005, Barcelona, Spain, August 29-30, 2005*, volume 3636 of *Lecture Notes in Computer Science*. Springer-Verlag GmbH, 2005. ISBN 978-3-540-28535-9
- [8] M. Blesa, J. Petit, and F. Xhafa. *Ciencia y Tecnología*, volume 2, chapter Computación en Internet: Librería MALLBA para problemas de optimización, pages 15–18. Tibidabo Edicions, 2001. ISBN 84-8033-145-3.

Invited journal publications

- [9] M. Blesa. Stability in Communication Networks under adversarial models. *Bulletin of the European Association on Theoretical Computer Science*, 89:219–221, June 2006.
- [10] M. Blesa and C. Georgiou. A review on disc 2005, the 19th international symposium on distributed computing. *Bulletin of the European Association on Theoretical Computer Science*, 88:84–103, February 2006.
- [11] C. Blum and M. Blesa. Optimització mitjançant colònies de formigues artificials. *Bulletin of the Catalan Association of Artificial Intelligence (ACIA Newsletters)*, 33:25–26, 2005. Review on the conference of M. Dorigo at the CosmoCaixa Museum in Barcelona. In Catalan.

Journal publications

- [12] C. Blum, M. López-Ibáñez, and M. Blesa. Beam Search for the Longest Common Subsequence Problem. *Computers & Operations Research*, 36(12):3178–3186, December 2009.
- [13] M. Blesa, D. Calzada, A. Fernández, L. López, A.L. Martínez, A. Santos, M. Serna, and C. Thraves. Adversarial Queueing Model for Continuous Network Dynamics. *Theory of Computing Systems*, 44(3):304–331, April 2009.
- [14] C. Blum, M. Yábar-Vallès, and M. Blesa. An ant colony optimization algorithm for DNA sequencing by hybridization. *Computers & Operations Research*, 35(11):3620–3635, November 2008.
- [15] M. Blesa, C. Blum. Finding edge-disjoint paths in networks: An ant colony optimization algorithm. *Journal of Mathematical Modelling and Algorithms*, 6(3):361–391, September 2007.
- [16] M. Blesa, J. Petit, and F. Xhafa. Generic parallel implementations for Tabu Search. *International Journal of Computer Systems Science and Engineering*, 21(6):413–432, November 2006.
- [17] E. Alba, F. Almeida, M. Blesa, C. Cotta, M. Díaz, I. Dorta, J. Gabarró, C. León, G. Luque, J. Petit, C. RodrÁguez, A. Rojas, and F. Xhafa. Efficient parallel lan/wan algorithms for optimization. the mallba project. *Parallel Computing*, 32(5-6):415–440, June 2006.
- [18] C. Blum and M. Blesa. New metaheuristic approaches for the edge-weighted k-cardinality tree problem. *Computers & Operations Research*, 32(6):1355–1377, June 2005.
- [19] C. Àlvarez, M. Blesa, J. Díaz, A. Fernández, and M. Serna. Adversarial models for priority-based networks. *Networks*, 45(1):23–35, January 2005.
- [20] C. Àlvarez, M. Blesa, and M. Serna. A characterization of universal stability in the adversarial queueing model. *SIAM Journal on Computing*, 34(1):41–66, October 2004.
- [21] C. Àlvarez, M. Blesa, J. Díaz, A. Fernández, and M. Serna. The complexity of deciding stability under FFS in the adversarial model. *Information Processing Letters*, 90(5):261–266, June 2004.

Conference publications

- [22] C. Blum and M. Blesa. Probabilistic Beam Search for the Longest Common Subsequence Problem. In *Engineering Stochastic Local Search Algorithms. Designing, Implementing and Analyzing Effective Heuristics (SLS'07)*, volume 4638 of *Lecture Notes in Computer Science*, pages 150–161, Brussels, Belgium, September 2007. Springer-Verlag GmbH.

2007

- [23] M. Blesa and C. Blum. A nature-inspired algorithm for the disjoint paths problem. In *9th International Workshop on Nature Inspired Distributed Computing (NIDISC'06)*, page 8 pp. (published 1 page as no. 239), Rhodes Island, Greece, April 2006. IEEE Computer Society Press. In conjunction with The 20th IEEE/ACM International Parallel and Distributed Processing (IPDPS). CD-ROM INSPEC Accession Number:8969613.

2006

- [24] M. Blesa. Deciding stability in packet-switched FIFO networks under the Adversarial Queuing model in polynomial time. In *19th International Symposium on Distributed Computing (DISC'05)*, volume 3724 of *Lecture Notes in Computer Science*, pages 429–441, Kraków, Poland, September 2005. Springer-Verlag GmbH.
- [25] M. Blesa, D. Calzada, A. Fernández, L. López, A.L. Martínez, A. Santos, and M. Serna. Adversarial queuing model for continuous network dynamics. In *30th International Symposium on Mathematical Foundations of Computer Science (MFCS'05)*, volume 3618 of *Lecture Notes in Computer Science*, pages 144–155, Gdansk, Poland, August 2005. Springer-Verlag GmbH.
- [26] C. Blum, M. Blesa, and A. Roli. Combining ILS with an effective constructive heuristic for the application to error correcting code design. In *6th Metaheuristics International Conference (MIC'05)*, pages 114–119, Wien, Austria, 2005.
- [27] A. Roli, M. Blesa, and C. Blum. Random walk and parallelism in local search. In *6th Metaheuristics International Conference (MIC'05)*, pages 811–816, Wien, Austria, 2005.
- [28] C. Blum and M. Blesa. Combining Ant Colony Optimization with Dynamic Programming for solving the k -cardinality tree problem. In *8th International Work-Conference on Artificial Neural Networks, Computational Intelligence and Bioinspired Systems (IWANN'05)*, volume 3512 of *Lecture Notes in Computer Science*, pages 25–33, Barcelona, Spain, June 2005. Springer-Verlag GmbH.

- [29] M. Blesa. On the use of topology extensions for provoking instability in communication network. In *Information Society*, subconference on *Theoretical Computer Science (IS04-TCS)*, pages 197–199, Ljubljana, Slovenia, October 2004. Slovenian ACM Chapter.
- [30] M. Blesa and C. Blum. Ant colony optimization for the maximum edge-disjoint paths problem. In R. et al., editor, *1st European Workshop on Evolutionary Computation in Communications, Networks, and Connected Systems (EvoCOMNET'04)*, in *Applications of Evolutionary Computing (EvoWorkshops'04)*, volume 3005 of *Lecture Notes in Computer Science*, pages 160–169, Coimbra, Portugal, April 2004. Springer-Verlag.
- [31] M. Blesa and F. Xhafa. Using parallelism in experimenting and fine tuning of parameters for metaheuristics. In M. Bubak, G. Albada, P. Sloat, and J. Dongarra, editors, *4th International Conference on Computational Science (ICCS'04)*, volume 3036 of *Lecture Notes in Computer Science*, pages 429–432, Kraków, Poland, June 6-9 2004. Springer-Verlag. Extended version in *XV Jornadas de Paralelismo*, pages 66–71, Almería, Spain, September 2004.
- [32] C. Álvarez, M. Blesa, and M. Serna. The impact of failure management on the stability of communication networks. In *10th International Conference on Parallel and Distributed Systems (ICPADS'04)*, pages 153–160, Newport Beach, California, USA, July 2004. IEEE Computer Society Press.

- [33] C. Álvarez, M. Blesa, J. Diaz, A. Fernández, and M. Serna. Adversarial models for priority-based networks. In B. Rován and P. Vojtas, editors, *28th International Symposium on Mathematical Foundations of Computer Science (MFCS'03)*, volume 2747 of *Lecture Notes in Computer Science*, pages 142–151, Bratislava, Slovakia, August 2003. Springer-Verlag.

- [34] E. Alba, F. Almeida, M. Blesa, J. Cabeza, C. Cotta, M. Diaz, I. Dorta, J. Gabarró, C. León, J. Luna, L. Moreno, C. Pablos, J. Petit, A. Rojas, and F. Xhafa. MALLBA: A library of skeletons for combinatorial optimisation. In B. Monien and R. Feldmann, editors, *Euro-Par 2002. Parallel Processing : 8th International Euro-Par Conference*, volume 2400 of *Lecture Notes in Computer Science*, pages 927–932, Paderborn, Germany, August 2002. Springer-Verlag Heidelberg.
- [35] C. Àlvarez, M. Blesa, and M. Serna. Universal stability of undirected graphs in the adversarial queueing model. In *14th ACM Symposium on Parallel Algorithms and Architectures (SPAA'02)*, pages 183–197, Winnipeg, Canada, August 2002. ACM Press New York, NY, USA.

- [36] E. Alba, F. Almeida, M. Blesa, C. Cotta, M. Diaz, I. Dorta, J. Gabarró, J. González, C. León, L. Moreno, J. Petit, J. Roda, A. Rojas, and F. Xhafa. Mallba: Towards a combinatorial optimization library for geographically distributed systems. In *XII Jornadas de Paralelismo*, pages 105–110, Valencia, Spain, 2001. Editorial Universitat Politècnica de València. ISBN 84-9705-043-6.
- [37] M. Blesa, L. Hernández, and F. Xhafa. Parallel Skeletons for Tabu Search Method. In *8th International Conference on Parallel and Distributed Systems (ICPADS'01)*, pages 23–28, Kyongju City, Korea, 2001. IEEE Computer Society Press.
- [38] M. Blesa, L. Hernández, and F. Xhafa. Tabu search for 0-1 multidimensional knapsack revisited: choosing internal heuristics and fine tuning of parameters. 12th Young Operational Research Conference, March 2001. Nottingham, UK.
- [39] M. Blesa, L. Hernández, and F. Xhafa. Parallel Skeletons for Tabu Search Method Based on Search Strategies and Neighborhood Partition. In M. P. J. Dongarra and J. Wasniewski, editors, *4th International Conference on Parallel Processing and Applied Mathematics (PPAM'01)*, volume 2328 of *Lecture Notes in Computer Science*, pages 185–193, Naleczow, Poland, September 2002. Springer-Verlag.
- [40] M. Blesa, P. Moscato, and F. Xhafa. A Memetic Algorithm for the Minimum Weighted k -Cardinality Tree Subgraph Problem. In *4th Metaheuristics International Conference (MIC'01)*, volume 1, pages 85–90, Porto, Portugal, 2001.
- [41] M. Blesa and F. Xhafa. A Skeleton for the Tabu Search Metaheuristic with Applications to Problems in Software Engineering. In *Software Engineering using Metaheuristic INnovative ALgorithms. Proceedings of the 23rd International Conference on Software Engineering (ICSE-SEMINAL'01)*, pages 23–31, Toronto, Canada, 2001. IEEE Computer Society Press. ACM SIGSOFT, Software Engineering Notes, 26(6):62–66. November, 2001.

- [42] M. Blesa and F. Xhafa. A C++ Implementation of Tabu Search for k -Cardinality Tree Problem based on Generic Programming and Component Reuse. In c/o tranSIT GmbH, editor, *Net.ObjectDays 2000 Tagungsband*, pages 648–652, Erfurt, Germany, 2000. Net.ObjectDays-Forum.

Committees in International Conferences

Program Chair

- HM 2009 *6th Intl. Workshop on Hybrid Metaheuristics*. Udine, Italy, October 16-17, 2009. www.diegm.uniud.it/hm2009/.
- HM 2008 *5th Intl. Workshop on Hybrid Metaheuristics*. Málaga, Spain, October 8-9, 2008. hm2008.lcc.uma.es.
- HM 2007 *4th Workshop on Hybrid Metaheuristics*. Dortmund, Germany, October 2007. ls11-www.cs.uni-dortmund.de/hm2007.
- HM 2006 *3rd Workshop on Hybrid Metaheuristics*. Gran Canaria, Spain, October 13-15 2006. www.lsi.upc.edu/~hm2006.
- HM 2005 *2nd Workshop on Hybrid Metaheuristics*. Barcelona, Spain, August 29–31 2005. www.lsi.upc.edu/~hm2005.

Organizing committee

- TGC 2008 *4th Intl. Symposium on Trustworthy Global Computing*. Barcelona, Spain, November 3-4, 2008. albcom.lsi.upc.edu/tgc2008
- DELIS
FW+RM *DELIS Final Workshop and Review meeting*. Barcelona, Spain, February 26-29, 2008. albcom.lsi.upc.edu/DELIS-CompNet-final/
- DELIS-
CompNet *Workshop on Theoretical Aspects and Models of Large, Complex and Open Information Networks*. Barcelona, Spain, October 18-20 2006.

lca.ceid.upatras.gr/DELIS-CompNet
- RANDOM 2006 *10th International Workshop on Randomization and Computation*. Barcelona, Spain, August 28-31 2006.

albcom.lsi.upc.edu/approx-random-2006
- APPROX 2006 *9th Intl. Workshop on Approximation Algorithms for Combinatorial Optimization Problems*. Barcelona, Spain, August 28-31 2006.

albcom.lsi.upc.edu/approx-random-2006
- WEA 2006 *5th International Workshop on Experimental Algorithms*. Menorca, Spain, May 24-27 2006. www.lsi.upc.edu/~wea.
- HM 2005 *2nd Workshop on Hybrid Metaheuristics*. Barcelona, Spain, August 29–31 2005. www.lsi.upc.edu/~hm2005.

Program committee

- GECCO 2009 *Genetic and Evolutionary Computation Conference*, track *Combinatorial Optimization and Metaheuristics*. Montreal, Canada, July 8-12, 2009.
- EvoCOP 2009 *9th European Conference on Evolutionary Computation in Combinatorial Optimisation*. Tübingen, Germany, April 15-17, 2009.
- CEC 2009 *IEEE Congress on Evolutionary Computation*, track *Agent Based Memetic Algorithms*. Trondheim, Norway, May 18-21, 2009.
- EvoCOP 2008 *8th European Conference on Evolutionary Computation in Combinatorial Optimisation*. Napoli, Italy, March 26-28, 2008.
- ISDA 2008 *8th International Conference on Intelligent Systems Design and Applications*. Kaohsiung, Taiwan, November 26-28, 2008. IEEE Computer Society Press. <http://bit.kuas.edu.tw/~isda08/>.
- ISDA 2007 *7th International Conference on Intelligent Systems Design and Applications*. Rio de Janeiro, Brazil, October 1-3 2007. IEEE Computer Society Press. www.isda07.eng.uerj.br.
- ISDA 2006 *6th International Conference on Intelligent Systems Design and Applications*. Jinan, Shandong, China, October 16-18 2006. IEEE Computer Society Press. isda2006.ujn.edu.cn.
- GECCO 2006 *Genetic and Evolutionary Computation Conference*, (track on *Ant Colony Optimization and Swarm Intelligence*). Seattle, USA, July 8-12 2006. ACM Press. www.sigevo.org/gecco-2006.
- GECCO 2005 *Genetic and Evolutionary Computation Conference*. Washington, USA, June 25-29 2005. ACM Press. www.isgec.org/gecco-2005.
- HM 2004 *1st Workshop on Hybrid Metaheuristics at the 16th European Conference on Artificial Intelligence (ECAI'04)*. Valencia, Spain, August 22-24 2004. iridia.ulb.ac.be/~hm2004.

Additional referee activities

Conferences

- *3rd International Symposium on Bio- and Medical Informatics and Cybernetics* (BMIC 2009). Orlando (FL), USA, July 10-13, 2009.
- *21st International Joint Conference on Artificial Intelligence* (IJCAI 2009). Pasadena (CA), USA, July 11-17, 2009.
- *5th IASTED International Conference on Advances in Computer Science and Technology* (IASTED ACST 2008). Langkawi, Malaysia. April 2-4, 2008.
- *11th International Workshop on Nature Inspired Distributed Computing* (NIDISC 2008). Miami, Florida, USA. April 14-18, 2008.
- *14th International Colloquium on Structural Information and Communication Complexity* (SIROCCO 2007). Castiglioncello, Italy. June 6-8, 2007.
- *4th IASTED International Conference on Advances in Computer Science and Technology* (IASTED ACST 2007). Phuket, Thailand. April 2-4, 2007.
- *V Congreso Español sobre Metaheurísticas, Algoritmos Evolutivos y Bioinspirados* (MAEB 2007). Puerto de la Cruz, Tenerife, Spain. February 14-16, 2007.
- *International Conference on Distributed Computing in Sensor Systems* (DCOSS'06). San Francisco, USA, June 18-20, 2006.
- *IASTED International Conference on Networks and Communication Systems* (IASTED NCS 2006). Chiang Mai, Thailand. March 29-31, 2006.
- *6th Conference on Algorithms and Complexity* (CIAC 2006). Rome, Italy. May 29-31, 2006.
- *17th IASTED International Conference on Parallel and Distributed Computing and Systems* (IASTED-PDCS 2005). Phoenix, USA. November 14-16, 2005.
- *IASTED International Conference on Human Computer Interaction* (IASTED-HCI 2005). Phoenix, USA. November 14-16, 2005.
- *13th Annual European Symposium on Algorithms* (ESA 2005). Eivissa, Spain. October 3-6, 2005.
- *2nd International Workshop on Hybrid Metaheuristics* (HM 2005). Barcelona, Spain. August 29-31, 2005.
- *6th Metaheuristics International Conference* (MIC'05). Wien, Austria. August 22-26, 2005.
- *32nd International Colloquium on Automata, Languages and Programming* (ICALP'05). Lisboa, Portugal. July 11-15, 2005.
- *Genetic and Evolutionary Computation Conference* (GECCO'05). Washington, USA, June 25-29 2005.
- *4th International Workshop on Efficient and Experimental Algorithms* (WEA'05). Santorini Island, Greece. May 10-13, 2005.

Journals

- *Memetic Computing*, Springer.
- *ACM Transactions on Algorithms*, Association for Computing Machinery.
- *Swarm Intelligence*, Springer.
- *International Journal of Pattern Recognition and Artificial Intelligence*, World Scientific.
- *Journal of Scheduling*, Wiley.
- *Computer Networks*, Elsevier.
- *Constraints Journal*, Springer.
- *Journal of Mathematical Modelling and Algorithms*, Kluwer.
- *Information Processing Letters*, Elsevier.
- *Computers & Operations Research*, Elsevier.

Books

- *Metaheuristics: Progress in Complex Systems Optimization*. Springer Operations Research: Computer Science Interfaces Book Series, K.F. Doerner, M. Gendreau, P. Greistorfer, W.J. Gutjahr, R.F. Hartl, M. Reimann (Eds.). 2007 Springer. ISBN 978-0-387-71919-1.
- *Ant Colony Optimization*, by Marco Dorigo and Thomas Stützle. 2004 MIT Press. ISBN 978-0-262-04219-2
- *Metaheuristic Optimization via Memory and Evolution: Tabu Search and Scatter Search*. Operations Research/Computer Science Interfaces, Rego, C. and Alidaee, B (Eds.). 2005 Springer. ISBN: 1-4020-8134-0

Research visits abroad

2002–2004 To the *Institut de Recherches Interdisciplinaires et de Développements en Intelligence Artificielle* (IRIDIA, iridia.ulb.ac.be/) at the Université Libre de Bruxelles, in Brussels (Belgium), which is directed by Dr. Marco Dorigo and Prof. Hugues Bersini. The visits took place in irregular intervals of time during the years from 2002 to 2004. The whole duration of the visit was about nine months. The six months in the 2002–2003 course were granted by the Universitat Politècnica de Catalunya, under the SOCRATES program. The research done at IRIDIA focused on the application of *Ant Colony Optimization* (ACO) to problems arising in the context of communication networks. Fruit of the collaboration with Dr. Christian Blum are the articles [18] and [30]. This research goes on at the moment.

Invited talks

- Nov.30th, 2006 *Stability of Communication Networks in the Presence of Adversarial Traffic and Failures: Models and Management*, at the Workshop on Adversarial Modeling and Analysis of Communication Networks, Bertinoro (Italy). www.lri.fr/~adiro/bertinoro/waman.html
- June 6th, 2003 *Decision and optimization problems in networks: Stability and Disjoint Paths*, at the IRIDIA institute of the Université Libre de Bruxelles, Brussels (Belgium). iridia.ulb.ac.be/seminars/index.php?x=00017
- Feb.23th, 2003 *The PhD programmes of the Hardware (AC) and Software (LSI) Departments at the Univesitat Poliècnica de Catalunya (UPC)*, at the TRYST annual technical festival at the Indian Institute of Technology (IIT) Delhi, New Delhi (India). Assistance as PhD student representant that together with Dr. Juan Jesús Pérez, research vice-rector of the UPC, promoted the PhD programmes offered by the UPC and some of its main research projects. www.iitd.ac.in/~tryst/

Master Thesis' advising tasks

- Co-advisor of *Genetic Algorithms in sequential environments and local networks*. Master Thesis of the ERASMUS student Yannick Moy at the Facultat d'Informàtica de Barcelona (Universitat Politècnica de Catalunya) and the École Polytechnique of Paris. Also advised by Dr. Joaquim Gabarró. In english. Presented in July 2000. Qualification: Excellent.
www.lsi.upc.edu/~mallba/public/essays/index-BA.html
- Co-advisor of *Paral·lelització d'un esquelet per al mètode heurístic Tabu Search*. Master Thesis of the student Lluís Hernández at the Facultat d'Informàtica de Barcelona (Universitat Politècnica de Catalunya). Also advised by Dr. Fatos Xhafa. In catalan. Presented in February 2001. Qualification: Excellent.
www.lsi.upc.edu/~mallba/public/essays/index-BA.html
- Co-advisor of *Mallba library: from C++ and MPI to Java*. Master Thesis of the student Ysaac Hernández at the Facultat d'Informàtica de Barcelona (Universitat Politècnica de Catalunya). Also advised by Dr. Joaquim Gabarró. In english. Presented in July 2002.
www.lsi.upc.edu/~mallba/public/essays/index-BA.html
- Co-advisor of *Parallel implementations for Memetic Algorithms on Wide Area Network environments*. Master Thesis of the student José M. Arbós at the Facultat d'Informàtica de Barcelona (Universitat Politècnica de Catalunya). Also advised by Dr. Fatos Xhafa. In spanish. Presented in July 2003. Qualification: Excellent.
- Co-advisor of *Heuristics and metaheuristics for the DNA sequencing*. Master Thesis of the student Mateu Yabar Vallès at the Facultat d'Informàtica de Barcelona (Universitat Politècnica de Catalunya). Also advised by Dr. Christian Blum. In english. Presented in June 2006. Qualification: Excellent, with honors.
- Advisor of *New algorithmic approaches to the maximum outerplanar subgraph problem*. Master Thesis of the ERASMUS student Dovydas Jančiauskas from the Vilniaus Gedimino Technikos Universitetas (Lithuania) at the Facultat d'Informàtica de Barcelona (Universitat Politècnica de Catalunya). In english. To be presented in June 2009.
- Co-advisor of *Using a wireless sensor network simulator for the analysis of algorithms*. Master Thesis of the student Mauro Viader at the Facultat d'Informàtica de Barcelona (Universitat Politècnica de Catalunya). Also advised by Dr. Carme Álvarez. In english. To be presented in December 2009.

Attendance to conferences

- June 2009 *Dagstuhl Workshop DYNAMO*. Dagstuhl, Germany.
- Nov. 2006 *Workshop on Adversarial Modeling and Analysis of Communication Networks (WAMAN 2006)*. Bertinoro, Italy.
- Aug. 2006 *10th International Workshop on Randomization and Computation (RANDOM 2006)*, and *9th Intl. Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2006)*. Barcelona, Spain.
- May 2006 *5th International Workshop on Experimental Algorithms (WEA 2006)*. Menorca Island, Spain.
- Sept. 2005 *19th International Symposium on Distributed Computing (DISC 2005)*, *Workshop Locality Preserving Distributed Computing Methods (LOCALITY 2005)*, and *Workshop Dynamic Communication Networks: Foundations and Algorithms (DYNAMO, COST Action 295)*. Kraków, Poland. Presentation of the article [24].
- Aug. 2005 *2nd International Workshop on Hybrid Metaheuristics (HM 2005)*. Barcelona, Spain.
- Aug. 2005 *6th Metaheuristics International Conference (MIC 2005)*. Vienna, Austria.
- June 2005 *8th International Work-Conference on Artificial Neural Networks, Computational Intelligence and Bioinspired Systems (IWANN'05)*. Vilanova i la Geltrú, Spain.
- Sept. 2004 *4th International Workshop on Ant Colony Optimization and Swarm Intelligence (ANTS'04)*. Brussels, Belgium.
- Sept. 2004 *XV Jornadas de Paralelismo*. Almeria, Spain. Presentation of the article [31].
- Aug. 2004 *1st International Workshop on Hybrid Metaheuristics (HM 2004)*, in *16th European Conference on Artificial Intelligence (ECAI'04)*. Valencia, Spain.
- April 2004 *1st European Workshop on Evolutionary Computation in Communications, Networks, and Connected Systems (EvoCOMNET'04)*, in *Applications of Evolutionary Computing*. Coimbra, Portugal. Presentation of the article [30].
- Aug. 2002 *14th ACM Symposium on Parallel Algorithms and Architectures (SPAA'02)*. Winnipeg, Canada. Presentation of the article [35].
- July 2001 *4th Metaheuristics International Conference (MIC'01)*. Porto, Portugal. Presentation of the article [40].
- June 2001 *8th International Conference on Parallel and Distributed Systems (ICPADS'01)*. Kyongju, Korea. Presentation of the article [37].
- May 2001 *IEEE International Workshop on Software Engineering using Metaheuristics Innovative Algorithms*, part of the *International Conference on Software Engineering (ICSE'01)*. Toronto, Canada. Presentation of the article [41].
- Oct. 2000 *Young Researchers Workshop*, in the *2nd International Symposium on Generative and Component-Based Software Engineering*. Erfurt, Germany. Presentation of the article [42].

Attendance to schools

- DYNAMO *Dynamo Training School.* Lisbon, Portugal. 28th June-1st July, 2006. dynamoschool.dei.uc.pt.
- AAGTLSN *Algorithmic Aspects of Game Theory in Large Scale Networks.* Santorini (Greece). October 11–15, 2004. www.cti.gr/AAGTLSN/.
- ISSM *International Summer School on Metaheuristics.* Tenerife (Spain). March 3–7, 2003. www.metaheuristics.net/.
- MAW *School and Workshop on Models and Algorithms for the Web.* International Center for Mechanical Sciences (CISM), Udine (Italy). Granted by the ALCOM-FT European project. June 17–22, 2002. www.dis.uniroma1.it/~maw02/.
- ADFOCS *2nd Max-Planck Advanced Course on the Foundations of Computer Science.* Max-Planck Institut für Informatik, Saarbrücken (Germany). Granted by the ALCOM-FT European project. September 4–8, 2001. www.mpi-sb.mpg.de/~adfocs/.
- SAE *School on Algorithm Engineering.* Istituto di Analisi dei Sistemi ed Informatica (IASI-CNR), Roma (Italy). Granted by the ALCOM-FT European project. September 10–12, 2001. www.info.uniroma2.it/~italiano/School/.

Languages

- Spanish (native)
- Catalan (native)
- English (good level)
- German (basic-intermediate)