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PERSONAL DATA

Home Address: Rua Olavo Bilac 288, Apt. 144, Bairro Cambui, CEP 13024-110, Campinas, SP, BRAZIL

Home Voice: +55 (19) 3294-6164

Birth: May 31, 1964, La Plata, Argentina

Marital Status: Married, one daughter

Citizenship: Argentinean and Italian

Languages: Spanish (mother language), English and Portuguese (second languages), good working knowledge of Italian and French.

EDUCATION

03/1997 — 04/2001	**Ph.D.** Thesis' title: *"Problemas de Otimização NP, Aproximabilidade e Computação Evolutiva: Da Prática à Teoria"* (English version: *"NP Optimization Problems, Approximability and Evolutionary Computation: From Practice to Theory"*). Defended at: Faculdade de Engenharia Elétrica e de Computação, Universidade Estadual de Campinas, BRAZIL, Ph.D. Thesis Advisor: Paulo Morelato França.
09/1988 — 10/1989	**Full-time Visiting Graduate Student**, California Institute of Technology, Pasadena, California, USA
03/1982 — 12/1987	**Licenciado en Física**, Departamento de Física, Universidad Nacional de La Plata, La Plata, ARGENTINA

RESEARCH INTERESTS

Design and Analysis of Algorithms, Graph Theory, massive datasets and large-scale combinatorial and non-linear optimization problems, Metaheuristics, Operations Research Modeling, Parallel and Scientific Computing.
Aproximability and non-approximability of optimization problems, relation with Parameterized Complexity.
Strenghs and limitations of quantum and evolutionary search algorithms.
Logic, Modal Logic and multi-agent modal logics of belief.
Bioinformatics and Systems Biology
Memetic Algorithms, Theory and Applications.

EXPERIENCE AND JOB HISTORY

05/2001 — present **Research Staff Member**, Laboratório de Genômica e Expressão, Departamento de Genética e Evolução, Instituto de Biologia, Universidade Estadual de Campinas.

03/1997 — present **Research Staff Member**, Department of Systems Engineering, Faculty of Computer and Electrical Engineering, State University of Campinas (UNICAMP), Campinas, SP, Brazil.

07/1996 — 02/1997 **Visiting Professor** (full-time)
and
Visiting Researcher (FAPESP),
at Faculty of Computer and Electrical Engineering, State University of Campinas (UNICAMP), Campinas, SP, Brazil. (Lectured the course *"Metaheuristics for combinatorial optimization problems"* valid for credits for MSc and PhD students).
`http://www.densis.fee.unicamp.br/~moscato/geometric.html`

06/1995 — 06/1996 **Visiting Professor** (part-time), Universidad del Centro de la Provincia de Buenos Aires, Tandil, Argentina. Lectured the course *"Parallel Computing"*.

11/1989 — 06/1996 **Research Staff** (full-time), Centro de Técnicas Analógicas y Digitales (CeTAD), Facultad de Ingeniería, Universidad Nacional de La Plata, La Plata, Argentina.

09/1988 — 10/1989 **Core Research Staff Member** (full-time), CALTECH Concurrent Computation Program, California Institute of Technology, Pasadena, California, USA.

02/1988 — 08/1988 **Trainee** (full-time, *ad-honorem*), Centro de Técnicas Analógicas y Digitales (CeTAD), Facultad de Ingeniería, Universidad Nacional de La Plata, La Plata, Argentina.

ACADEMIC AWARDS

03/1997 — 03/2001 **Ph.D. Fellowship**, Fundação de Amparo á Pesquisa, FAPESP.

1990 — 1995 **ICTP Fellowships** (Four times selected by the International Centre for Theoretical Physics, Trieste, Italy, to attend an equal number of Colleges and Workshops).

09/1988 — 06/1989 **CALTECH's Special Institute Fellowship**

09/1988 — 06/1989 **Rotary Fellowship** (used to partically cover the costs of studying at CALTECH).

PROFESSIONAL ACTIVITIES

Editorial Board Member of *The Journal of Mathematical Modelling and Algorithms* published by Kluwer. This journal was formerly known as the International Journal of Mathematical Algorithms and was published by *Gordon and Breach*.

Program Committee Member of the *5th Metaheuristics International Conference*, MIC'03, Kyoto, Japan, August 25-28, 2003.

Program Committee Member of the *First European Workshop on Evolutionary Computation and Bioinformatics*, EvoBIO 2003, University of Essex, April 14-16, 2003
`http://www.cs.vu.nl/~elena/evobio.html`

Program Committee Member of *"Second Spanish Congress of Metaheuristics, Evolutionary and Bio-inspired Algorithms, MAEB'03"*, Asturias, Spain, Feb. 5-7, 2003.

Program Committee Member of the *Third International Workshop On Memetic Algorithms (WOMA III)*, Granada, Spain, Sep. 2002.
http://dirac.chem.nott.ac.uk/~natk/Public/WOMAIII/WOMAIII.html

Program Committee Member of the *Congress on Evolutionary Computation*, one of the three meetings of the *IEEE World Conference in Computational Intelligence*, Hawaii, USA, May 12-15, 2002.

Program Committee Member of *First Spanish Congress of Evolutionary and Bio-inspired Algorithms (AEB'02)"*, Mérida (Badajoz), Spain, Feb. 8-10, 2002.
http://aeb02.unex.es/

Program Committee Member of the *4th Metaheuristics International Conference*, MIC'01, Porto, Portugal, July 16-20, 2001.
http://www.mic2001.com
http://www.fe.up.pt/~gauti/MIC2001/ns/conf21_r.html

Program Committee Member
http://bus.colorado.edu/Faculty/Laguna/cancun2000/orgcom.html
and **Chairman of Session on Combinatorial Optimization**
http://bus.colorado.edu/Faculty/Laguna/cancun2000/sessions/td5.html
at the: *7th INFORMS Computer Science Technical Section Conference on Computer Science and Operations Research*, Cancún, México, Jan. 2000.

Chairman of Session on Memetic Algorithms, at the: *6th INFORMS Computer Science Technical Section Conference on Computer Science and Operations Research: Recent Advances in the Interface* Monterey, California, USA, Jan. 7-9, 1998.
http://faculty.gsm.ucdavis.edu/~dlw/program/moscato.html

Referee of the journals: *Information Processing Letters, Concurrency, Practice and Experience, Discrete Applied Mathematics, Computers and Operations Research, Electronic Journal of Combinatorics, European Journal of Operational Research, International Journal of Neural Systems, Chaos, Solitons and Fractals, "Control & Automação", "Pesquisa Operacional", CLEI Electronic Journal, Annals of Operations Research, IEEE Transactions on Evolutionary Computation, IEEE Transactions on Robotics and Automation, Complex Systems*, and *Journal of Heuristics.* I was also referee of articles submitted to Argentinean and International Conferences like the *"ICALP 2002, 29th International Colloquium on Automata, Languages and Programming, 8-13 July, 2002, Málaga, Spain"*, *2nd International Conference on Unconventional Models of Computation, 13-16 December 2000, Brussels, Belgium, 4th Metaheuristics International Conference, Second Workshop on Memetic Algorithms, GECCO '01* and *Supercomputing '91.* I also served as referee for a Project proposal for the Grant Agency of the Czech Republic.

Journal proposal reviewer for the creation of *Journal of Heuristics*, 1993.

THESIS EXAMINATION BOARDS

Vinicius Jacques Garcia, "Algoritmos Meméticos Paralelos Aplicados a Problemas de Otimização Combinatória", M.Sc. Thesis, Faculdade de Engenharia Elétrica e de Computação, Universidade Estadual de Campinas, Campinas, SP, Brasil, 15 de Março de 2002.

Fengjie Wu, "A Framework for Memetic Algorithms," M.Sc. Thesis, Department of Computer Science, University of Auckland, Auckland, New Zealand, 2001.
http://www.cs.auckland.ac.nz/research/theses/2001/wu_fengjie_thesis2001.pdf

RESEARCH PROJECTS GRANTS

Techniques and advanced concepts of computing and intelligent systems for the treatment of Bioinformatics problems, bioinformatics awarded project from of the National Program in Biotechnology and Genetic Resources, CNPq. BRAZIL, Proc. 52.1100/01-1, R$ 175,900.00.
http://www.cnpq.br/resultadosjulgamento/resultado_bioinformatica.htm

Production Planning and Control in Manufacturing Systems, Proyeto Temático FAPESP, BRAZIL, Proc. 97/13930-1 (May '98 to May '01). Budget R$ 88,000.00 and US$ 93,712.04.

http://www.densis.fee.unicamp.br/~franca/tematico/interno/abstract.html

Visiting Researcher, invited by Prof. Paulo Morelato França to work and lecture at Universidad de Campinas, Brazil, under the auspices of FAPESP, Proc. 96/03553-3, Budget US$ 3,019.00.

BOOKS

"New Ideas in Optimization", co-ordinating editor of the section on Memetic Algorithms: D. Corne, M. Dorigo, and F. Glover, Eds., McGraw-Hill Ltd., Maidenhead, Berkshire, England, 1999.

RESEARCH PAPERS SUBMITTED TO PEER REVIEWED JOURNALS AND BOOKS

"On the parameterized complexity of problems related with feature identification for gene expression data mining techniques", C. Cotta and P. Moscato, submitted to **Bioinformatics**, April 2002.
Note: at http://www.research.att.com/~dsj/nsflist.html#Biology *the problem of "Exploiting DNA Arrays and Their Variants", which is the concern of this paper, has been selected as a key Challenge for Theoretical Computer Science, in a recent proposal for the National Science Foundation (USA), and it was part of a spin-off of a workshop that took place in Portland on May 19, 2000 organized by David S. Johnson, Christos Papadimitriou, Avi Wigderson, and Mihalis Yannakakis".*

"Enhancing a memetic algorithms' performance using a matching-based recombination algorithm: Results on the number partitioning problem", R.E. Berretta, C. Cotta, and P. Moscato submitted to a book, to be published by Kluwer and edited by J.P. Souza and M.G.C. Resende, 2001. .

"Evolutionary Algorithms for the Pure Flowshop Manufacturing Cell Problem", P. França, J.D. Gupta, A.S. Mendes, P. Moscato, and K.J. Veltink, submitted to **Computers and Industrial Engineering**, 2000.

"Results of a memetic algorithm for the minimum weighted $k-$cardinality tree subgraph problem", M.J. Blesa, P. Moscato, and F. Xhafa, submitted to a book, to be published by Kluwer and edited by J.P. Souza and M.G.C. Resende, 2001.

"A New Memetic Algorithm for the Asymmetric Traveling Salesman Problem", L.S. Buriol, P.M. França, and P. Moscato, submitted to **Journal of Heuristics**, 2000.

BOOK CHAPTERS

"A Gentle Introduction to Memetic Algorithms", P. Moscato and C. Cotta, in **Handbook of Metaheuristics**, F. Glover and G. Kochenberger (Eds.), Kluwer Academic Press, Boston, Massachusetts, USA, 2001.

"Memetic Algorithms", P. Moscato, in **Handbook of Applied Optimization**, Panos M. Pardalos and Mauricio G.C. Resende (Eds.), Oxford University Press, New York, NY, 2002. ISBN 0-19-512594-0

"Memetic Algorithms using Guided Local Search: A case study", D. Holstein and P. Moscato, in **New Ideas in Optimization**, Chapter 15, pp. 235-243, D. Corne, M. Dorigo, and F. Glover (Eds.), McGraw-Hill Ltd., Maidenhead, Berkshire, England, 1999, ISBN 0077095065.

"Memetic Algorithms: a short introduction", P. Moscato, in **New Ideas in Optimization**, Chapter 14, pp. 219-234, D. Corne, M. Dorigo, and F. Glover (Eds.), McGraw-Hill Ltd., Maidenhead, Berkshire, England, 1999, ISBN 0077095065.

"On worst-case and comparative analysis as design principles for efficient recombination operators: A graph coloring case study", P.E. Coll, G.A. Durán, and P. Moscato, in **New Ideas in Optimization**, Chapter 18, pp. 279–293, D. Corne, M. Dorigo, and F. Glover (Eds.), McGraw-Hill Ltd., Maidenhead, Berkshire, England, 1999, ISBN 0077095065.

"The number partitioning problem: An open challenge for Evolutionary Computation ?", R.E. Berretta and P. Moscato, in **New Ideas in Optimization**, Chapter 17, pp. 261–278, D. Corne, M. Dorigo, and F. Glover (Eds.), McGraw-Hill Ltd., Maidenhead, Berkshire, England, 1999, ISBN 0077095065.

"Algoritmos Genéticos", M. Laguna and P. Moscato, in **"Optimización Heurística y Redes Neuronales"**, Chapter 3, pp. 67–103, A. Diaz (Ed.), Editorial Paraninfo, Madrid, 1996, ISBN: 8428322694.

"Recocido Simulado", P. Moscato and A. Díaz, in **"Optimización Heurística y Redes Neuronales"**, . Chapter 2, pp. 37–66, A. Diaz (Ed.), Editorial Paraninfo, Madrid, 1996, ISBN: 8428322694.

RESEARCH PAPERS ACCEPTED TO APPEAR IN PEER REVIEWED JOURNALS AND BOOKS

"The k-FEATURE SET Problem is W[2]-complete", C. Cotta and P. Moscato, provisionally accepted in **Journal of Computer and System Sciences**, in second revision, 2002.

"A Mixed Evolutionary-Statistical Analysis of an algorithm's complexity" C. Cotta and P. Moscato, to appear in **Applied Mathematics Letters**, 2002.

"Fitness Landscapes for the Total Tardiness Single Machine Scheduling Problem", A.S. Mendes, P.M. França, and P. Moscato, to appear in **Neural Network World**, an International Journal on Neural and Mass-Parallel Computing and Information Systems, pp. 165–180, 2002, ISSN 1210-0552. `http://www.cs.cas.cz/nnw/`

RESEARCH PAPERS IN PEER REVIEWED JOURNALS AND BOOKS

"Comparing Meta-Heuristic Approaches for Parallel Machine Scheduling Problems", A.S. Mendes, F.M. Müller, P.M. França, and P. Moscato, to appear in **Production Planning & Control**, Vol 13, No. 2, pp. 143–154, 2002, ISSN 09537287.

"A Memetic Algorithm for the Total Tardiness Single Machine Scheduling Problem", P.M. França, A.S. Mendes, and P. Moscato, in **European Journal of Operational Research**, v.132, n.1, pp. 224–242, 2001. ISSN 03772217.

"On the performance of heuristics on finite and infinite fractal instances of the Euclidean Traveling Salesman Problem", P. Moscato and M.G. Norman, in **INFORMS Journal On Computing**, Linthicum, MD, USA, v.10, pp. 121–132, 1998. ISSN 08991499.

"Arbitrarily large planar ETSP instances with known optimal tours" in **Pesquisa Operacional**, A. Mariano, P. Moscato, and M.G. Norman, Rio de Janeiro, Brasil, v.15, n.1-2, pp. 91–98, 1995. ISSN 01017438.

"The Euclidean Traveling Salesman Problem and a Space-Filling Curve" M.G. Norman and P. Moscato, in **Chaos, Solitons and Fractals**, v.6, p.389-397, 1995. Kidlington, Oxford, England, ISSN 09600779.

"An Introduction to Population Approaches for Optimization and Hierarchical Objective Functions: A Discussion on the role of Tabu Search", P. Moscato, in **Annals of Operations Research**, v.41, n.1-4, p.85-121, 1993, Basel, Switzerland, ISSN 02545330.

"A 'Memetic' Approach for the Traveling Salesman Problem: Implementation of a Computational Ecology for Combinatorial Optimization on Message-Passing Systems", P. Moscato and M.G. Norman, in **Parallel Computing and Transputer Applications**, M. Valero, E. Oñate, M. Jane, J.L. Larriba, and B. Suarez, v.1. p.177-186, IOS Press, Amsterdam, 1992, ISBN 9051990960. (Note: This book contains papers from the International Conference on Parallel Computing and Transputer Applications, PACTA '92, 21-24 September, Barcelona, Spain. However it was also published as an independent book by IOS and CIMNE Barcelona).

"Stochastic vs. Deterministic Update in Simulated Annealing", P. Moscato and J.F. Fontanari, in **Physics Letters A**, v.146, n.4, p.204-208, 1990, The Netherlands, ISSN 03759601.

WEB PAGES OF RESEARCH INTEREST

I maintain several pages on the Internet with links to relevant material in the subjects of memetic algorithms, the traveling salesman problem, the hamiltonian problem in graphs, and the construction of fractal instances as a test-bed for algorithm evaluation.

"Memetic Algorithms' Home Page"
`http://www.densis.fee.unicamp.br/~moscato/memetic_home.html`

"TSPBIB"
`http://www.densis.fee.unicamp.br/~moscato/TSPBIB_home.html`

"The Hamiltonian Page" (with Prof. Gregory Gutin, Department of Computer Science, Royal Holloway, University of London)
`http://www.densis.fee.unicamp.br/~moscato/Hamiltonian.html`

"Fractal Instances of the TSP"
http://www.densis.fee.unicamp.br/~moscato/FRACTAL_TSP_home.html

These pages have been cited several hundreds of times in other Internet pages and in papers, and they are heavily used for research and teaching world-wide. They are visited hundreds of times per day.

WORKING PAPERS

"A Memetic Algorithm for Multiple Sequence Alignment", L.S. Buriol, C. Korostensky, and P. Moscato, first version, May 2000.

"Analysis of data from mtDNA distances: Kolmogorov and a salesman give an opinion", P. Moscato and L.S. Buriol, first version, August 2001.

"Minimum ultrametric trees from Kolmorogov-based distance matrices of mitochondrial DNA data", C. Cotta and P. Moscato, 2001. *Note: at* http://www.research.att.com/~dsj/nsflist.html#Biology *the problem of "Understanding Evolution", has been selected as a key Challenge for Theoretical Computer Science, in a recent proposal for the National Science Foundation (USA), and it was part of a spin-off of a workshop that took place in Portland on May 19, 2000 organized by D.S. Johnson, C.H. Papadimitriou, A. Wigderson, and M. Yannakakis".*

"Recombination Complexity (I): Vertex Cover, Clique, and Dominating Set", M.J. Dinneen and P. Moscato, first version Nov. 2000.

"New optimization and decision problems on graphs arising from the Theory of Memetic Algorithms", P. Moscato, 2000.

A PROLOG-based expert system to benefit from reencondings and reductions between NP optimization problems", P. Moscato and M.F. Nobrega da Costa, 2001.

"Hierarchical Learning in Neural Networks by using a specialized error function", L. Garrido, S. Gomez, P. Moscato, and J. Roca, 2001.

"A Space-filling Curve-Based Conjecture of Papadimitriou's Euclidean Matching Constant", M. Haouari and P. Moscato, 2001.

"Memetic Algorithms", P. Moscato, C. Cotta, and A.S. Mendes, Chapter 3, in **New Optimization Techniques in Engineering**, Godfrey C. Onwubolu and B. V. Babu, Eds., 2002.

"Memetic Algorithms for VLSI design problems: The Gate Matrix Layout problem", A. Linhares, A.S. Mendes, and P. Moscato, Chapter 18 in **New Optimization Techniques in Engineering**, Godfrey C. Onwubolu and B. V. Babu, Eds., 2002.

"Memetic Algorithms for Scheduling, Timetabling and related problems", C. Cotta, A.S. Mendes, and P. Moscato, Chapter 26 in **New Optimization Techniques in Engineering**, Godfrey C. Onwubolu and B.V. Babu, Eds., 2002.

"Learning, Hierarchies, and Hints", P. Moscato and N. Krasnogor.

"Population studies for VLSI problems", A.S. Mendes, P. França, P. Moscato, and V. Garcia, submitted to **"7^{th} Parallel Problem Solving from Nature Conference"**, Granada, Spain, Sep. 7-11, 2002.

"Inferring Phylogenetic Trees using Evolutionary Algorithms", C. Cotta and P. Moscato, submitted to **"7^{th} Parallel Problem Solving from Nature Conference"**, Granada, Spain, Sep. 7-11, 2002.

"A Parallel Memetic Algorithm Applied to the Total Tardiness Machine Scheduling Problem", V. Garcia, P. França, A.S. Mendes, and P. Moscato, submitted to **"7^{th} Parallel Problem Solving from Nature Conference"**, Granada, Spain, Sep. 7-11, 2002.

"Implementation of a Memetic Algorithm for the cardinality-constrained portfolio optimization probelm", J.M. Pasia (University of the Philipines) and P. Moscato.

RESEARCH PAPERS IN PEER REVIEWED CONFERENCE PROCEEDINGS

"A Memetic Algorithm for the Minimum Weighted k-Cardinality Tree Subgraph Problem", M.J. Blesa, P. Moscato, and F. Xhafa, in **Proceedings of the 4th Metaheuristic International Conference (MIC'2001)**, Jorge Pinho de Sousa (Ed.), Porto, Portugal, pp. 85–90, July 16-20, 2001.

"Forma Analysis and New Heuristic Ideas for the Number Partitioning Problem" R.E. Berretta, C. Cotta, and P. Moscato, in **Proceedings of the 4th Metaheuristic International Conference (MIC'2001)**, Jorge Pinho de Sousa (Ed.), Porto, Portugal, pp. 337–341, July 16-20, 2001.

"NP-Opt: An Optimization Framework for NP Problems" A.S. Mendes, P.M. França, and P. Moscato, in **Proceedings of POM2001**, the International Conference of the Production and Operations Management Society, Guarujá, SP, Brazil, pp. 82–89, August 2001.

"Algoritmo Memético para o problema do caixeiro viajante", L.S. Buriol, P.M. França, and P. Moscato, in **Anais do XXXI Simpósio Brasileiro de Pesquisa Operacional**, Juiz de Fora, MG, 1999, v.1., pp. 1015–1028, published by "Sociedade Brasileira de Pesquisa Operacional", Rio de Janeiro, 2000.

"Evolutionary Algorithms for the Pure Flowshop Manufacturing Cell Problem", P.M. França, J.N.D. Gupta, A.S. Mendes, P. Moscato, and Klass J. Veltink, **Anais da Segunda Oficina de Planejamento e Controle da Produção em Sistemas de Manufatura**, p.53–64, São Jose dos Campos, SP, Brazil, Projeto temático FAPESP, 97/13930-1, Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brasil, 2000.

"Fuzzy-Evolutionary Algorithms applied to Scheduling Problems" A.S. Mendes, P.M. França, and P. Moscato, in **Proceedings of POM2000, First World Conference on Production and Operations Management**, Sevilla, Spain, pp. 1–10, 2000.

"New heuristic results for the asymmetric traveling salesman problem", L.S. Buriol, P.M. França, and P. Moscato, in **Proceedings of the 4th International Conference on Operations Research Optimization**, La Habana, Cuba: Universidad de La Habana e Humboldt-Universität zu Berlin, 2000.

"Reduções entre problemas: Uma volta aos inicios ?", L.S. Buriol, P.M. Françca, and P. Moscato, **Anais da Segunda Oficina de Planejamento e Controle da Produção em Sistemas de Manufatura**, pp. 170–179, São Jose dos Campos, SP, Brazil, Projeto temático FAPESP, 97/13930-1, Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brasil, 2000.

"Algoritmo Memético para Resolução do Problema do Caixeiro Viajante Assimétrico", L.S. Buriol, P.M. França, and P. Moscato, in **Anais da Primeira Oficina de Planejamento e Controle da Produção em Sistemas de Manufatura**, pp. 37–41, Campinas, SP, Brazil, Projeto temático FAPESP, 97/13930-1, Universidade Estadual de Campinas, 2000. .

"Comparing Meta-Heuristic Approaches for Parallel Machine Scheduling Problems with Sequence-Dependent Setup Times", A.S. Mendes, F.M. Müller, P.M. França, and P. Moscato, in **Proceedings of CARS & FOF'99, 15th Conference on CAD/CAM Robotics & Factories of the Future**, pp. 1–6, Aguas de Lindoia, SP, Brasil.

"Memetic Algorithms Applied to the Single Machine and Parallel Machine Scheduling Problems", P.M. França, A.S. Mendes, F.M. Müller, and P. Moscato, in **Anais da Primeira Oficina de Planejamento e Controle da Produção em Sistemas de Manufatura**, pp. 31–36, Campinas, SP, Brazil, Projeto temático FAPESP, 97/13930-1, Universidade Estadual de Campinas, 2000.

*"Metaheuristic Approaches for the Pure Flowshop Manufacturing Cell Problem"*N, P.M. França, J.N.D. Gupta, A.S. Mendes, P. Moscato and K.J. Veltink, in **Proceedings of PMS2000 - 7th International Workshop on Project Management and Scheduling**, Osnabrück, Germany, pp.128–130, April, 2000.

"Memetic Algorithms to minimize tardiness on a Single Machine Scheduling with sequence-dependent setup times", P.M. França, A.S. Mendes, and P. Moscato, in **Proceedings of the 5th International Conference of the Decision Sciences Institute, Athens, Greece**, pp 1708–1710, 1999.

"Novos resultados para o problema de flowshop com famílias de tarefas e tempos de preparação", P.M. França, J.N.D. Gupta, A.S. Mendes, P. Moscato, and K.J. Veltink, in **Anais do XXXI Simpósio Brasileiro de Pesquisa Operacional**, Juiz de Fora, MG, 1999, v.1., pp. 394–401, published by "Sociedade Brasileira de Pesquisa Operacional", 1999.

"A discussion on some design principles for efficient crossover operators for graph coloring problems", G. Durán, P.E. Coll, and P. Moscato, in **Anais do XXVII Simpósio Brasileiro de Pesquisa Operacional**, Vitória, ES, pp. 798-802, published by "Sociedade Brasileira de Pesquisa Operacional", Rio de Janeiro, 1995.

"A new hybrid heuristic for large geometric Traveling Salesman Problems based on the Delaunay Triangulation", N. Krasnogor, P. Moscato, and M.G. Norman, in **Anais do XXVII Simposio Brasileiro de Pesquisa Operacional**, Vitória, ES, pp. 772-776, published by "Sociedade Brasileira de Pesquisa Operacional", Rio de Janeiro, 1995.

"Using L-Systems to generate arbitrarily large instances of the Euclidean Traveling Salesman Problem with known optimal tours", A. Mariano, P. Moscato, and M.G. Norman, in **Anais do XXVII Simposio Brasileiro de Pesquisa Operacional**, Vitória, ES, pp. 11–15, published by "Sociedade Brasileira de Pesquisa Operacional", Rio de Janeiro, 1995

"Semidynamic-Point Sets for Polynomial-Time Learning", P. Moscato and N. Krasnogor, in **Proceedings of CLAIO '94, Latin-Iberian-American Congress on Operations Research and Systems Engineering**, Santiago de Chile, Chile, July 1994.

"A 'Memetic' Approach for the Traveling Salesman Problem: Implementation of a Computational Ecology for Combinatorial Optimization on Message-Passing Systems", P. Moscato and M.G. Norman, in **Parallel Computing and Transputer Applications, Proccedings of PACTA '92**, Barcelona, Spain, Sep. 1992, v.1. p.177-186, IOS Press, Amsterdam, 1992, ISBN 9051990960.

"A Computational Ecology for the Quadratic Assignment Problem", J. Carrizo, F.G. Tinetti, and P. Moscato, in **Proceedings of JAIIO XXI, The 21st Meeting on Informatics and Operations Research**, Buenos Aires, Argentina, 1992.

"A Competitive and Cooperative Approach to Complex Combinatorial Search" in **Proceedings of JAIIO XX, The 20th Meeting on Informatics and Operations Research**, pp. 3.15–3.29, Buenos Aires, Argentina, 1991.

"Algoritmos meméticos para problemas de optimización combinatoria", D. Guerri, F.G. Tinetti, and P. Moscato, in **"Anales de la Cuarta Reunión de Trabajo en Procesamiento de la Información y Control, RPIC '91"**, pp. 319–326, Buenos Aires, Argentina, 18-22 Nov. 1991.

"Heurísticas para balance de carga computacional y el problema de asignación cuadrática", J. Carrizo, F.G. Tinetti, and P. Moscato, in **"Anales de la Cuarta Reunión de Trabajo en Procesamiento de la Información y Control, RPIC '91"**, pp. 287–293, Buenos Aires, Argentina, 18-22 Nov. 1991.

"The REM-Sleep Alterations in Chronic Alcoholism: Its relation with a Limit-Cycle Mutual Interaction Model for REM-NREM Transition", P. Moscato and A. Garay, in **"Anales de la Cuarta Reunión de Trabajo en Procesamiento de la Información y Control, RPIC '91"**, pp. 311–318, Buenos Aires, Argentina, 18-22 Nov. 1991.

"Un algoritmo detector de bordes basado en un mecanismo adaptativo de reconocimiento de patrones y lógica de umbral", R. Figueroa, F. Safar, and P. Moscato, in **"Anales de la Cuarta Reunión de Trabajo en Procesamiento de la Información y Control, RPIC '91"**, pp. 346–353, Buenos Aires, Argentina, 18-22 Nov. 1991.

INVITED NEWS ARTICLES IN RESEARCH JOURNALS

"Complexity Studies in Latin America: A Report on the First International Conference on Complex Systems in Computational Physics", P. Moscato, **Complexity**, New York, NY, USA, v.1, p.9-11, 1995. ISSN 10762787.

INVITED ARTICLES IN NEWSLETTERS

"Memetic Algorithms for molecular conformation and other optimization problems", P. Moscato, in **Newsletter of the Comission for Powder Diffraction of the International Union of Crystallography**, Daresbury, Waddington, UK, v.20, 1998.

UNPUBLISHED PAPERS AND TECHNICAL REPORTS

With only one exception, the text of these papers is available from:
`http://www.densis.fee.unicamp.br/~moscato/publications.html`

"Comments on: "Renormalization for Discrete Optimization", P. Moscato, Feb. 2000.

"Blending Heuristics with a Population-Based Approach: A Memetic Algorithm for the Traveling Salesman Problem", P. Moscato and F. Tinetti, CeTAD's Technical Report, Universidad Nacional de La Plata, La Plata, Argentina, Dec. 1992.

"'Sistemas de computación concurrente: Hacia la revolución informática de los años noventa", P. Moscato and A.A. Quijano, invited paper and talk given at CINTEBA '90, (April 1990).

"On Evolution, Search, Optimization, Genetic Algorithms and Martial Arts: Towards Memetic Algorithms", P. Moscato, CALTECH Concurrent Computation Program, C3P Report 826, California Instute of Technology, Pasadena, CA, USA, (1989).

"On Genetic Crossover Operators for Relative Order Preservation", P. Moscato, CALTECH Concurrent Computation Program, C3P Report 778, California Instute of Technology, Pasadena, CA, USA, (1989).

"t-expansion and the Mathieu equation", P. Moscato and C. Riveros, CALTECH Concurrent Computation Program, C3P Report 782, California Instute of Technology, Pasadena, CA, USA, (1989).

"t-expansion at low orders: Ground State Calculations of Lattice Systems", P. Moscato, CALTECH Concurrent Computation Program, C3P Report 684,. California Instute of Technology, Pasadena, CA, USA, (1988).

DEGREE THESIS DIRECTED

Only the thesis directed as main advisor have been listed. The language of them is Spanish, and most of them can be reached from:
`http://www.densis.fee.unicamp.br/~moscato/resume.html`

Pablo Reda,
"Metaheurísticas basadas en algoritmos meméticos para grandes instancias geométricas del problema del viajante de comercio",
Degree Thesis (Ingeniería de Sistemas) - Universidad Nacional Del Centro de La Provincia de Buenos Aires, 1999.

Natalio Krasnogor,
"Heurísticas rápidas para el TSP 2-dim euclídeo basadas en la triangulación de Delaunay y sus subgrafos", Degree Thesis (Licenciatura En Informática) - Universidadad Nacional de La Plata, 1998.

Diana Holstein,
"Una Metaheurística Co-evolutiva para el Problema del Viajante de Comercio", Degree Thesis (Licenciatura En Informática) - Universidadad Nacional de La Plata, 1998.

Roberto Figueroa,
"Reconocimiento off-line de caracteres alfanuméricos", Degree Thesis (Licenciatura En Informática) - Universidadad Nacional de La Plata, 1993.

Fernando G. Tinetti,
"Metaheurísticas para problemas de optimización combinatoria", Degree Thesis (Licenciatura En Informática) - Universidadad Nacional de La Plata, 1992.

CONFERENCE & UNIVERSITY TALKS

"Memetic Algorithms", invited lecture, **Departament de Llenguatges i Sistemes Informàtics, Universitat Politècnica de Catalunya**, Barcelona, España, Jul. 6, 2000.

"Memetic Algorithms", invited lecture, **Departamento de Lenguajes y Ciencias de la Computación, Universidad de Málaga**, España, Jun. 21, 2000.

"Memetic Algorithms", invited lecture given at the **Departament of Computer Science, University of Victoria**, British Columbia, Canada, Abril do 2000.

"Memetic Algorithms: a report on recent progress", *7th INFORMS Computer Science Technical Section Conference on Computer Science and Operations Research*, Cancún, México, Jan. 5-7, 2000.

"Memetic Algorithms in 60 minutes ?", invited talk given at **Instituto Nacional de Pesquisas Espaciais**, Ministerio da Ciência e Tecnologia, São José dos Campos, SP, Brazil, Nov. 11, 1999.

"A Memetic Algorithm with Guided Local Search: A TSP case study", talk given at joint work with D. Holstein (UNLP, Argentina), **XXX Simpósio Brasileiro de Pesquisa Operacional**, 1998, Curitiba, Paraná.

"Local Search Techniques for Scheduling and Timetabling Problems", based on joint work with A. Schaerf (Università di Udine, Italia). **XXX Simpósio Brasileiro de Pesquisa Operacional**, 1998, Curitiba, Paraná.

"Course on Memetic Algorithms", two-day course at **Semana Académica do Curso de Informática**, Universidade Federal de Santa Maria, Santa Maria, RS, Brazil, 23-27. Nov. 1998.
`http://www.inf.ufsm.br/dainfo/pages_eventos/saci/saciprog.html`

"The MemePool Project", invited lecture at **Departamento de Informática, Universidade Federal de Santa Maria**, Santa Maria, RS, Brazil, Nov. 1998.

"Complex Systems for Complex Problems", talk given at the **Department of Computer Science and Statistics, ICMC-USP**, São Carlos, SP, Brazil, Nov. 11, 1998.

"Algoritmos genéticos e algoritmos numéricos", talk given at the **Department of Computer Science and Statistics, ICMC-USP**, São Carlos, SP, Brazil, Oct. 19, 1998. (part of the course *"SCE-5790 Seminários de Ciências de Computação e Estatística"*).

"Memetic Algorithms: Past, Present and Future", talk given at **6th INFORMS Computer Science Technical Section Conference on Computer Science and Operations Research: Recent Advances in the Interface** Monterey, California, USA, Jan. 7-9, 1998.
`http://faculty.gsm.ucdavis.edu/ dlw/program/moscato.html`

"Analysis of Genetic and Memetic Algorithms: Towards Tight Results" talk given at **6th INFORMS Computer Science Technical Section Conference on Computer Science and Operations Research: Recent Advances in the Interface** Monterey, California, USA, Jan. 7-9, 1998.
`http://faculty.gsm.ucdavis.edu/ dlw/program/moscato.html`

"Um sistema especialista em PROLOG para beneficiar-se das recodificações e reduções entre problemas de otimização NP", (translation: An expert system in PROLOG to benefit from the transformations and reductions between NP optimization problems), talk given at: **"XXIX Simpósio Brasileiro de Pesquisa Operacional"**, Salvador, Bahia, Brazil, 22-24 Oct., 1997.

"Genetic and Memetic Algorithms and their applications", invited course given at **"I Congreso Internacional Sur Andino de Ingenieria de Sistemas e Informática"**, Juliaca, Perú, 14-17 Oct., 1997.

"Memetic Algorithms and Combinatorial Optimization", invited lecture, **Center for Advanced Computing Research, California Institute of Technology**, Jan. 23, 1996.

Third Latinoamerican Summer School on Operations Research, Bariloche, Argentina, January 8-13, 1996 (talk given).

"A new hybrid heuristic for large geometric Traveling Salesman Problems based on the Delaunay Triangulation", **"XXVII Simposio Brasileiro de Pesquisa Operacional"**, Vitoria, Brasil, 6-8 Nov. 1995.

"Using L-Systems to generate arbitrarily large instances of the Euclidean Traveling Salesman Problem with known optimal tours", **"XXVII Simposio Brasileiro de Pesquisa Operacional"**, Vitoria, Brasil, 6-8 Nov. 1995.

"Teaching one 'artificial neuron' can be 'hard' and other lessons learned from computational complexity", June 7, 1995, one hour seminar given at: **Antonio Borsellino College on Neurophysics: The processing and use of sensory information in biological systems**, at the **International Centre of Theoretical Physics**, Trieste, Italia, May 15-June 9, 1995.

"Second Lationamerican Summer School on Operations Research", Mendes, Rio de Janeiro, January 15-22, 1995 (talk given on joint work with A. Mariano and M.G. Norman on the generation of instances for the TSP).

"First Latinoamerican Summer School on Operations Research", Punta de Tralca, Chile, January 11-15, 1994 (talk given on joint work with M.G. Norman).

"Complex Systems for Complex Problems", **US West Advanced Technologies Center**, Boulder, Colorado, May 1994. (co-sponsored by the **School of Business and Administration of the University of Colorado at Boulder**)

"Complex Systems for Complex Problems", invited lecture at **Santa Fe Institute, Santa Fe**, New Mexico, May 1994.

"Complex Systems for Complex Problems", invited lecture at **Department of Computer Science, California Insitute of Technology**, Pasadena, California, April 1994.

"Blending Heuristics with Computational Ecologies: The Memetic Approach and the Traveling Salesman Problem" **The Technical University of Denmark** (Lyngby), with joint auspice of the **Computational Neural Network Center (CONNECT)**, Oct. 1, 1992.

"A 'Memetic' Approach for the Traveling Salesman Problem: Implementation of a Computational Ecology for Combinatorial Optimization on Message-Passing Systems", **International Conference on Parallel Computing and Transputer Applications, PACTA '92**, 21-24 September, Barcelona, Spain.

"Blending Heuristics with Computational Ecologies: The Memetic Approach for the Traveling Salesman Problem" **Départment de Mathématiques, Ecole Polytechnique Federale de Lausanne**, Switzerland, Sep. 2, 1992.

"Population Approaches for Optimization, Genetic and Memetic Algorithms: The role of Hierarchical Cost Functions" **Edinburgh Parallel Computing Centre, Department of Computer Science, Edinburgh**, Scotland, Jan. 9, 1992.)

Department of Mathematics of the University of Padova, Dec. 1991.

Workshop in Non-Linear Systems and Earthquake Prediction, Nov. 1991.

Group of Prof. Radicella at the International Centre for Theoretical Physics, Trieste, Italy, Nov. 1991.

"Computational Physics and Physical Computation", invited lecture, **20th Informatics and Operations Research Meeting**, Buenos Aires, Aug. 1991.

"A Competitive and Cooperative Approach to Complex Combinatorial Search" **JAIIO XX, The 20th Meeting on Informatics and Operations Research**, Buenos Aires, Argentina, Aug. 1991.

"Memetic Algorithms for Combinatorial Optimization", invited lecture given at **Department of Mathematics, Ecole Polytechnique Federale de Lausanne**, Lausanne, Switzerland, Nov. 13, 1990.

"Memetic Algorithms for Combinatorial Optimization", **Group of Geophysical Tomography** directed by Albert Tarantola in Paris, Nov. 1990.

"Memetic Algorithms for Combinatorial Optimization", **Keilis-Borok's group at the International Centre for Theoretical Physics**, Trieste, Oct. 1990.

CRAAG, IBM Argentina, Buenos Aires, Argentina.

"Neural networks and cellular automata", **IFLYSIB**, La Plata, Argentina, 1990.

"Numerical Simulation of a Neural Net applied to the solution of the Traveling Salesman Problem" at the **Congress of the Argentinean Physics Association**, Bariloche, Argentina, Sep. 1987.

OTHER CONFERENCES ATTENDED

Workshop on "Algoritmica para Combinatoria", Department of Computer Science, Univeristy of Campinas, Campinas, Brasil, 15-17 Nov., 1995.

"XV Encontro Nacional de Engenharia de Producao, ENEGEP '95", First International Congress of Industrial Engineering, São Carlos, Brasil, Sep. 4-7, 1995.

"Adversarios y Computación" a 15 hours course given by Juan Garay, (IBM) and Hugo Krawczyk about on-line problems and algorithms, at **"Segunda Escuela de Ciencias Informáticas"** organized by **Departamento de Computación, Facultad de Ciencias Exactas, Universidad Nacional de Buenos Aires**, Buenos Aires, Argentina, 10-16 August, 1995.

"First International Workshop on Parallel Processing and Applications to Physics, Chemistry and Material Science", Trieste, International Centre for Theoretical Physcis, Italy, Sep. 5-23, 1994.

"Parallel Computing and PVM" course given by Dr. Michael G. Norman (University of Edinburgh) at Universidad Nacional de La Plata, Feb. 1994.

"First International Conference on Complex Systems in Computational Physics", Buenos Aires, Argentina, October 18-22, 1993 (poster entitled *"Complex Systems for Complex Problems"* presented in collaboration with Michael G. Norman).

"Congreso Iberoamericano de Ciencia y Tecnologia", Buenos Aires, Argentina, Nov. 1992.

"Mathematical Foundations of Artificial Neural Networks", a course valid for 3 credits according the European norms, organized by **L'Institut Universitaire Kurt Bösch à Sion** and **Le Groupe de Recherche Operationelle de l'Ecole Polytechnique Federale de Lausanne**, Sion, Switzerland, 14-19 September, 1992.

"Graphs and Optimization" (workshop participation by invitation only) Grimentz, Switzerland, 23-28 August, 1992.

"Workshop on Non-Linear Dynamics and Earthquake Prediction", **International Centre for Theoretical Physics**, Trieste, Italy, (Nov. 25 to Dec. 13, 1991).

"4th Workshop in Information Processing and Control" at **Comisión Nacional de Energía Atómica**, Buenos Aires, Argentina (seminar and papers accepted for the proceedings).

"College on Neurophysics, **International Centre for Theoretical Physiscs**, Trieste, Italy, Oct. 1990.

"Third International Conference on Genetic Algorithms", George Mason University, Fairfax, VA, USA, June 1989.

"ELAF '87 (Latinoamerican School of Physics)", where I assisted the mini-workshop *"Spin Glasses and brain models"*, led by Prof. M.A. Virasoro, **Department of Physics, Universidad Nacional de La Plata**, La Plata, Argentina.

"Colloque Franco-Latinoamericain de Physique", Buenos Aires, Argentina, Sep. 1986.

ARTISTIC AND OTHER TYPE OF CULTURAL PRODUCTION

"Parallel Computing", invited exhibition at **Coca-Cola in Argentina: 50th anniversary exposition**. The invitation was open to all previous Coca-Cola award winners. In collaboration with my co-workers in Argentina, Edinburgh (Scotland), and Münich (Germany), we presented for two weeks an stand with the results of our research. It included 16 posters and about 20 photographs, with work in combinatorial optimization, character recognition, image analysis (edge detection and image compression), etc. Our stand had a PC and a Silicon Graphics for demos. Some informative talks open to the public were given by me and my co-workers complementing the exhibition.

"Comunicación", (Communication), Short film in Super 8mm, Script writer and Director, 1986. This film was first-prize winner of the **Coca-Cola in Arts and Sciences** award, Dec. 1987, selected from a set of more than 100 movies finished during the past 10 years.

"Avisos Clasificados", (Classified ads), Short film in Super 8mm, Script writer and Director (in collaboration with F. Glenza and D. Mallol), 1984.

SELECTED PAPERS THAT CITE MY WORK

At `http://www.densis.fee.unicamp.br/~moscato/citing.html` I maintain a list of papers that cite my work. I select here, in reverse chronological order, some of them, mainly collected through library-available databases like the *Web of Science*.

The URL `http://www.densis.fee.unicamp.br/~moscato/memetic_home.html` also contains other references that cite my papers.

At `http://www.researchindex.com/cs`, a query of documents citing *"memetic"*, that in general refer to work in *"memetic algorithms"*, currently retrieves 181 on-line documents. I remark that the search engine has some bugs, since it erroneously predicts *"self-citations"* which are not the case.

A list of **selected papers that cite my work, excluding self-citations**, includes:

D.S. Johnson, G. Gutin, L.A. McGeoch, A. Yeo, W. Zhang, and A. Zverovich. *Experimental Analysis of Heuristics for the ATSP*, To appear in **The Traveling Salesman Problem and its Variations**, G. Gutin and A. Punnen, Editors, Kluwer Academic Publishers, 2001.

R.L. Rardin and R. Uzsoy, *Experimental evaluation of heuristic optimization algorithms: A tutorial*, **Journal of Heuristics**, 7: (3) 261-304 May 2001.

M. Fellows, *Parameterized Complexity: The Main Ideas and Connections to Practical Computing*, in "CATS'02 - Computing: the Australasian Theory Symposium", **Electronic Notes in Theoretical Computer Science**, Vol. 61, Feb. 2002, ISBN: 0444510850.
http://www.elsevier.nl/locate/entcs/volume61.html

G. Vivo-Truyols, J.R. Torres-Lapasio and M.C. Garcia-Alvarez-Coque, *A hybrid genetic algorithm with local search: I. Discrete variables: optimisation of complementary mobile phases*, **Chemometrics and Intelligent Laboratory Systems**, Vol. 59, Num. (1-2), pp. 89-106 Nov. 28, 2001.

M.R. Fellows, *Parameterized complexity: The main ideas and some research frontiers*, **Lecture Notes in Computer Science**, Vol. 2223, pp. 291–307, 2001.

I. Ljubic and G.R. Raidl, *An evolutionary algorithm with stochastic hill-climbing for the edge-biconnectivity augmentation problem*, **Lecture Notes in Computer Science** Vol. 2037, pp. 20–29, 2001.

J. Levenhagen, A. Bortfeldt and H. Gehring, *Path tracing in genetic algorithms applied to the multiconstrained knapsack problem*, **Lecture Notes in Computer Science** Vol. 2037, pp. 40-49, 2001.

G.R. Raidl and I. Ljubic, *Evolutionary local search for the edge-biconnectivity augmentation problem*, **Information Processing Letters**, Vol 82, Num. (1), pp. 39-45, 2002.

A. Franz and K.H. Hoffmann, *Optimal annealing schedules for a modified Tsallis statistics*, **Journal of Computational Physics** Vol. 176, Num. 1, pp. 196–204, 2002.

Fco. Javier Pérez Sánchez, *"Selección de conjuntos de características mínimos y su aplicación a los algoritmos evolutivos"*, Trabajo de Grado, **Departamento de Lenguajes y Ciencias de la Computación, Universidad de Málaga**, Spain, Feb. 2002.

J.D. Knowles, *Local-Search and Hybrid Evolutionary Algorithms for Pareto Optimization*, Ph.D. Thesis, **Department of Computer Science, University of Reading, UK**, 2002.
http://iridia.ulb.ac.be/~jknowles/thesis.html

A.M. Rodrigues and J. Soeiro Ferreira, *Solving the Rural Postman Problem by Memetic Algorithms*, in **Proceedings of the 4th Metaheuristic International Conference (MIC'2001)**, Jorge Pinho de Sousa (Ed.), Porto, Portugal, pp. 679–683, July 16-20, 2001.

J. Digilakis and K. Margaritis, *A parallel memetic algorithm for solving optimization problems*, In **Proceedings of 4th Meta-heuristics International Conference**, vol. I, pp. 121-125, July 16-20, 2001 Porto, PORTUGAL

J. Digalakis and K. Margaritis, *A Parallel Memetic Algorithm for the maintenance scheduling problem*, In **Proceedings of 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2001) and the 7th International Conference on Information Systems Analysis and Synthesis (ISAS 2001)**, vol VII, pp. 343-347, July 22-25, 2001, Orlando-Florida, USA.

J. Digilakis and K. Margaritis, *A Parallel Hybrid Evolutionary Algorithm for electrical generator scheduling problem*, In **Proceedings of 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2001) and the 7th International Conference on Information Systems Analysis and Synthesis (ISAS 2001)**, vol. XVI, pp. 397-402, July 22-25, 2001, Orlando-Florida.

A. Roli and C. Blum, *Critical Parallelization of Local Search for* MAX–SAT, in **AI*IA2001: Advances in Artificial Intelligence**, F Esposito (Ed.), **Lecture Notes in Artificial Intelligence**, Vol 1792, pp. 147–158, Springer, 2001, ISBN 3–540–42601–9.

M. Josep Blesa and Fatos Xhafa, *A C++ Implementation of a Skeleton for Tabu Search Method* in **Technical Report LSI-00-47-R, Dept. Llenguatges i Sistemes Informàtics, Universitat Politècnica de Catalunya**, 2000.
www.citeseer.nj.nec.com/373046.html

J. Digalakis and K. Margaritis, *A parallel memetic algorithm for solving optimization problems*, 2001.
www.citeseer.nj.nec.com/457318.html

J. Digalakis and K. Margaritis, *A Performance Comparison of Parallel Genetic and Memetic Algorithms using MPI*, 2001.
www.citeseer.nj.nec.com/316236.html

J. Beasley, *Population heuristics*, in **Handbook of Applied Optimization**, Panos M. Pardalos and Mauricio G.C. Resende (Eds.), Oxford University Press, New York, NY, 2002. ISBN 0-19-512594-0.

E.D Taillard, L.M. Gambardella, M. Gendreau, and J.Y. Potvin, *Adaptive memory programming: A unified view of metaheuristics*, **European Journal of Operational Research**, 135: (1) 1-16, Nov. 16, 2001.

M. Ericsson, M.G.C. Resende, P.M. Pardalos, *A Genetic Algorithm for the Weight Setting Problem in OSPF Routing*, 2001, http://www.optimization-online.org/DB_FILE/2001/10/381.pdf.

T.F. Noronha, M.M da Silva, and D.J. Aloise, *A Grouping Memetic Algorithm for the Bin Packing Problem 1-D*, **XXXIII Simpósio Brasileiro de Pesquisa Operacional (SBPO)**, 6-9 Nov. 2001, Campos do Jordão, São Paulo, Brazil.

C. Walshaw, *A Multilevel Approach to the Graph Colouring Problem*, in **Tech. Rep. 01/IM/69, Comp. Math. Sci., Univ. Greenwich**, ISBN 1-899991-70-0.

L. Di Gaspero and A. Schaerf, *Tabu Search Techniques for Examination Timetabling*, in **Lecture Notes in Computer Science**, vol. 2079, p. 104, 2001.

S.Z. Li, *Toward global solution to MAP image estimation: Using common structure of local solutions*, in "Energy Minimization Methods in Computer Vision and Pattern Recognition", **Lecture Notes in Computer Science**, Vol. 1223: 361-374, 1997.

Y.G. Xu, G.R. Li, and Z.P. Wu, *A novel hybrid genetic algorithm using local optimizer based on heuristic pattern move*, **Applied Artificial Intelligence**, 15: (7) 601-631 Aug. 2001.

J.D. Knowles, R.A. Watson, and D.W. Corne, *Reducing Local Optima in Single-Objective Problems by Multi-objectivization*, in **Proceedings of the First International Conference on Evolutionary Multi-Criterion Optimization (EMO 2001)**, E. Zitzler, K. Deb, L. Thiele, C.A. Coello Coello, and D. Corne (Eds.), **Lecture Notes in Computer Science**, Vol. 1993, pp. 269–283, Springer-Verlag, Berlin, 2001.

E. Burke, P. Cowling, P. De Causmaecker and G.V. Berghe, *A memetic approach to the nurse rostering problem*, **Applied Intelligence**, 15: (3) 199-214 2001.

F. Wu, *A Framework for Memetic Algorithms*, **MSc. Thesis, Department of Computer Science, University of Auckland**, Auckland, New Zealand, 2001.

C. Walshaw, *A Multilevel Approach to Combinatorial Optimization Problems*, in **Tech. Rep. 01/IM/73, Comp. Math. Sci., Univ. Greenwich**, ISBN 1-899991-74-3.

P.A. Sánchez, J.L. Torres, and J.A. Hernández, *An Object-Genetic Model for Network Analysis in GIS: The Optimal and Shortest Path and Node Locating*, in **Proceedings of the 2001 Annual Conference of the International Association for Mathematical Geology, IAMG**, Cancún, Mexico, September 6-12, 2001.
http://www.kgs.ukans.edu/Conferences/IAMG/Sessions/F/torres.html

B.M. Srdjevic and D.M. Srdjevic, *An Evolutionary Based Scheduling of Chemical Reactions*, submitted to **International Journal of Industrial Engeneering**, 2001.
http://polj.ns.ac.yu/english/people/download/ga-sc.pdf

F. Müller, *Joint work to build a framework to solve combinatorial optimization problems*, in **POMS 2001**, Orlando, Florida, USA.
http://www.poms.org/2001/cd/papers/pdf/muller.pdf

J.B. Valhondo and J. Pereira Gude, *"Programación de actividades mediande Evolución Diferencial"*, in **XXVI Congreso Nacional de Estadística e Investigación Operativa**, Úbeda, 6-9 Noviembre, 2001.

L. Nunes de Castro Silva, *"Engenharia Imunológica: Desenvolvimento e Aplicação de Ferramentas Computacionais Inspiradas em Sistemas Imunológicos Artificiais"*, in **PhD. Thesis**, Departamento de Engenharia de Computação e Automação Industrial (DCA) Faculdade de Engenharia Elétrica e de Computação (FEEC) Universidade Estadual de Campinas (UNICAMP), 2001.

M. Arenas Fernández, *Programación de un Algoritmo de Resolución para el Problema de Planificación de Producción a nivel de Familias para un SPJP"*, in **Projeto Final de Carrera**, Universitat Politècnica de Valencia, 2001. http://bdpfc.inf.upv.es/theses/available/etd-10252001-094635/unrestricted/

L. dos Santos Coelho, *Nova abordagem de algoritmo memético aplicado a problemas de otimização não-linear"*, in **V Simpósio Brasileiro de Automação Inteligente**, Canela, RS, Brazil, 7-9 Nov., 2001.

J.A Pacheco, J.F. Alegre, and C.R. Delgado, *"Uso de Búsqueda Tabú y Algoritmos Meméticos en el diseño de calendarios de transporte de componentes de automóbiles"*, in **IX Jornadas de ASEPUMA** Las Palmas, 19-20 Jul. 2001.
http://150.214.55.100/asepuma/laspalmas2001/laspalmas/Invo09.pdf

J.A Pacheco and C.R. Delgado, *"Resultados de diferentes experiencias con búsqueda local aplicadas a problemas de ruta"*, in **"Revista Electrónica de Comunicaciones y Trabajos de ASEPUMA"**, Vol. 2, Num. 1 - Primer Semestre 2000.
http://www.uv.es/asepuma/recta/ordinarios/dos/sumario.html

J.A. Pacheco and A. Aragón, *"Análisis de algoritmos evolutivos para redes neuronales"*, in **IX Jornadas de ASEPUMA** Las Palmas, 19-20 Jul., 2001
http://150.214.55.100/asepuma/laspalmas2001/laspalmas/Invo02.pdf

A. Franz, K.H. Hoffmann, and P. Salamon, *Best possible strategy for finding ground states*, in **Physical Review Letters**, Vol. 86, Number 23, pp. 5219-5222, 2001.

F. Glover, M. Laguna, and R. Marti, *Fundamentals of scatter search and path relinking*, **Control and Cybernetics**, 29: (3) 653-684 2000.

J.D. Knowles, M.J. Oates, and D.W. Corne, *Advanced multi-objective evolutionary algorithms applied to two problems in telecommunications*, **BT Technol. Journal**, 18: (4) 51-65 Oct. 2000.

P. Merz, *Memetic Algorithms for Combinatorial Optimization Problems: Fitness Landscapes and Effective Search Strategies*, in **Ph.D. Thesis, Department of Electrical Engineering and Computer Science, University of Siegen**, Germany, 2000.

N. Krasnogor and J. Smith, *MAFRA: A Java memetic algorithms framework*, in **Workshop on Memetic Algorithms**, William Hart, Natalio Krasnogor and Jim Smith (Eds), pp. 125–131, 2000.

A. Fachat, *A Comparison of Random Walks with Different Acceptance Probabilities*, in **Dissertation, Fakultät für Naturwissenschaften der Technischen Universität Chemnintz**, 2000.
archiv.tu-chemnitz.de/pub/2001/0023/data/phd-web.ps

M. Ellerbrake aus Remscheid, *"Eine schnelle näherungsweise Lösung des Euklidischen Travelling Salesman Problems mittels raumfüllender Kurven"*, in **Diplomarbeit, Institut für Angewandte Mathematik, Universität Bonn**, July 2000.
wissrech.iam.uni-bonn.de/lehre/diplom/diplom_ellerbrake.ps.gz

J.D. Knowles, D.W. Corne, and M.J. Oates, *On the Assessment of Multiobjective Approaches to the Adaptive Distributed Database Management Problem*, **Proceedings of the Sixth International Conference on Parallel Problem Solving from Nature (PPSN VI)**, pp. 869-878, Springer, Berlin, 2000.

N. Krasnogor and J. Smith, *A Memetic Algorithm With Self-Adaptive Local Search: TSP as a case study*, in **Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2000)**", Darrell Whitley, David Goldberg, Erick Cantu-Paz, Lee Spector, Ian Parmee, and Hans-Georg Beyer (Eds.) Morgan Kaufmann, 2000.

J.P. Newall, *Hybrid Methods for Automated Timetabling*, **PhD Thesis, Department of Computer Science, University of Nottingham**, UK, 2000.

T. Stützle, A. Grün, S. Linke, and Marco Rüttger, *A Comparison of Nature Inspired Heuristics on the Traveling Salesman Problem*, **Proceedings of the Sixth International Conference on Parallel Problem Solving from Nature (PPSN VI)**, Springer, Berlin, 2000.

E.K. Burke and A. Smith, *A Memetic Algorithm to Schedule Planned Grid Maintenance*, 2000.
www.citeseer.nj.nec.com/50006.html

J. Knowles and D. Corne, *M-PAES: A Memetic Algorithm for Multiobjective Optimization*, in **Proc. of the 2000 Congress on Evolutionary Computation**, pp. 325–332, IEEE Service Center, Piscataway, NJ, 2000.

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