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Cesar Rego

The University of Mississippi,
School of Business Administration,
University, MS 38677
Phone (662) 915 5519
Fax: (662) 915 7968
E-mail: crego@olemiss.edu; c_rego@hotmail.com

Education

HDR (Habilitation) in Computer Science, University of Versailles, France, December 2012.

Ph.D. in Computer Science, University of Versailles, France, March 1996. (Portuguese equivalence awarded by the University of Lisbon, 1996)

M.Sc. in Operations Research and Systems Engineering, Graduate School of the Institute of Technology of the University of Lisbon (IST-UTL), Portugal, 1993.

B.Sc. in Computer Science and Applied Mathematics, Portucalense University (UPT), Porto, Portugal, 1990.

Professional Experience

Academic Appointments

University of Mississippi, School of Business Administration (Oxford, Mississippi, United States)

Full Professor, July 1, 2011 to Present.

Associate Professor, May 15, 2000 to June 30, 2011. Granted tenure in 2002

Visiting Research Professor, October 15, 1999 to May 14, 2000

**Massachusetts Institute of Technology (MIT), Sloan School of Management
(Cambridge, Massachusetts, United States)**

Visiting Research Professor, August 15, 2007 to December 15, 2007

Portugalense University, Computer Science Department (Porto, Portugal)

Associate Professor, October 1, 1996 to September 30, 1999

Assistant Professor, April 1 1996 to September 30, 1996

Lecturer, October 1, 1992 to March 31, 1996

Research Assistant, December 1, 1990 to September 30, 1992

**Faculty of Sciences, Department of Statistics and Operations Research (Lisbon,
Portugal)**

Assistant Professor, October 1, 1998 to September 30, 1999. (Dual appointment with the Faculty of Sciences of the University of Lisbon and the Portugalense University under a special agreement between the two Universities. Two course teaching load at each institution.)

**Graduate School of the Technical University of Lisbon (IST), Department of Civil
Engineering (Lisbon, Portugal)**

Invited Professor, 1997-1998

Research Affiliations and Consultancy

Senior Research Consultant, OptTek Systems, Inc, 2004-2006.

Research Associate, Center for Research on Transportation (CRT), Montreal, Canada, 2004-2008.

Senior Researcher, Hearin Center for Enterprise Science, University of Mississippi, USA, 1999-2004.

Research Associate, Operations Research Center (CIO) of the University of Lisbon, Portugal, 1998-2000.

Research Associate, Centre for Urban and Regional Systems (CESUR), Technical School of the University of Lisbon, Portugal, 1997-1999.

Teaching Experience

University of Mississippi (Ole Miss) 2000-Present

Graduate Courses

Ph.D.: Advanced Topics in MIS, Advanced Operations Management, Decision Systems, Decision Support Systems.

MBA: Supply Chain Management

Undergraduate Courses: Management Information Systems, Distributed Business Information Systems, Operations and Supply Chain Management.

Portucalense University (UPT) 1993-1999

Graduate Courses: Advanced Computer Architectures, Parallel and Distributed Computing.

Undergraduate Courses: Operating Systems, Unix Network Programming, Computer Architectures.

Faculty of Sciences of the University of Lisbon (FCUL) 1998-1999

Graduate Courses: Advanced Heuristic Search Methods, Methods and Algorithms for Vehicle Routing and Scheduling.

Undergraduate Courses: Linear Programming, Networks Optimization, Operations Research, Operations Research Models and Applications.

Technical University of Lisbon (IST) 1997-1998

Graduate Course: Methods and Algorithms for Vehicle Routing and Scheduling.

Entrepreneurship Experience

Founder of Lusa Bakery and Café, 2010.

Academic Awards

Best research poster in the Sigma-Xi Poster Competition in Mathematics (with Frank Mathew), a University-wide competition, University of Mississippi, 2006.

Best research poster in the Sigma-Xi Poster Competition in Chemical Sciences (with Haitao Li), an University-wide competition, University of Mississippi, 2004.

Recipient of Researcher/Scholar of the Year in the School of Business, MIS/POM areas 2001.

Received the IFORS-Lisbon award for the best international paper published by members of APDIO, an investigation over a four-year period (1996-1999).

Award received from the Portuguese Operations Research Society (APDIO) for the M.Sc. thesis, 1993.

Grant Proposals

Air Force Research Laboratory (AFRL), “Greater Ad hoc Command and Control Flexibility via Metaheuristic Optimization Accelerated by Quantum Computers,” (with Steve Reinhardt, Richard Barr, Mark Lewis, Fred Glover, and Gary Kochenberger), Call, BAA AFRL-RIK-2015-0008, Focus Area 2. Duration: 12 months. Submission date: December 2017. Under evaluation.

European Research Council (ERC) Advanced Grant, “MOSET - Metaheuristic Optimization for Sustainable Energy and Transportation,” (with Fred Glover and Said Hanafi), Call ERC-2017-ADG. Duration: 60 months. Submission date: Under evaluation.

Portuguese Foundation for Science and Technology (FCT), “PAMACO - Parallel Adaptive Memory Algorithms for Complex Optimization,” (with Dorabela Gamboa, Joaquim Meireles, and Tabitha James) Grant PTDC/EGE-GES/121660/2010, International Panel Project Evaluation: **Excellent**, Starting Date: 01-01-2012, Duration: 36 months. Overall funding (FCT, COMPETE, QREN, EU) €95,000.00,

Portuguese Foundation for Science and Technology (FCT), “Effective Solutions for Hard Optimization Problems,” (with Dorabela Gamboa and Joaquim Meireles) Grant PTDC/EGE-GES/104482/2008, International Panel Project Evaluation: **Excellent**, Starting Date: 01-09-2009, Duration: 36 months. Overall funding (FCT, COMPETE, QREN, EU) €82,616.00.

Federal Highway Administration (FHWA) — U.S. Department of Transportation, “Relaxation Adaptive Memory Programming (RAMP) for Multi-Period Optimization of Pavement Management Systems” (with Tabitha. James, Fred Glover), (Focus Area: Systems and Methodologies for Improved Infrastructure Management), 2007. Not funded.

Federal Highway Administration (FHWA) — U.S. Department of Transportation, “Sampled Fictitious Play and Evolutionary Adaptive Memory Extensions for Coordinated Traffic Signal Control” (Focus Area: Heuristic-based Solutions for Traffic Management Systems), submitted, 2007. Not funded.

National Science Foundation (NSF), “New Data Structures and Software Library for Graph-Based Permutation Problems” (with Colin Osterman), 2007. Not Funded.

National Science Foundation (NSF), “Research on Quadratic Unconstrained Binary Optimization” (with Miguel Anjos, Endre Boros, Peter L. Hammer, Fred Glover, Gary Kochenberger, Gabriel Tavares, Tony Vannelli, Dominique de Werra), 2006. Not funded.

US Navy Office of Naval Research (ONR), “Guided Design Search for Manpower Planning,” (with Bahram Alidaee, Keith Womer, Karen Lewis), 2003. Funding \$103,690.00.

US Navy Office of Naval Research (ONR), “An Expanded QFD Model for Complex Planning with Application to Manpower Planning,” (with Bahram Alidaee, Keith Womer, Fred Glover, Gary Kochenberger), 2003. Funding \$164,909.00.

US Navy Office of Naval Research (ONR), “Solution of Satisfiability Problems by Unconstrained Quadratic Programming,” (with Bahram Alidaee, Fred Glover, Gary Kochenberger, Keith Womer), 2003. Funding \$164,909.00.

US Navy Office of Naval Research (ONR), “Innovations in Optimization Methodologies”, **Principal investigator** for the research titled “A Network Based Integer Programming Approach to the Sailor Assignment Problem”. 2001. Overall Funding: \$1,204,335.00,

US Navy Office of Naval Research (ONR) "Advanced Methods for Stochastic Routing and Scheduling Models in Real-World Applications". **Principal Investigator**. 2000. Funding: \$163,015.20.

US Navy Office of Naval Research (ONR) "Effective Solutions of Very-Large-Scale Optimization Problems for Personnel Planning and Management". 2000. Funding: \$161,000.00.

Portuguese Foundation for Science and Technology (Junta Nacional de Investigação Científica e Tecnológica – JNICT, presently FCT) "Intelligent Decision Support Systems for Transportation Management", Area Coordinator. Grant 3/3.1/CEG/2661/95, 1995. Funded.

Portuguese National Foundation for Research (JNICT) - Ph.D. Fellowship, 1993-1996.

Consulting

RAND Corporation. Development of a prototype for a Complex Pickup and Delivery Transportation application (a joint work with OptTek Inc.), 2003.

LISBON Subway Co. Developed a model of a Decision Support System (DSS) for the Crew Scheduling Management of the Lisbon Metro System, Portugal (a joint work with L. Cavique and I. Themido). 1998.

MATRA Cap System and the INRIA, France. Contract for the development of a decision support system (DSS) prototype for a tank truck dispatching problem. The problem occurs in a case study concerning the transportation of raw material throughout Europe, 1994.

SOPONATA Petrol Port, Portugal. Contract for a study on manpower planning: optimization of staff dimension and the associated timetabling problem", 1993.

ONIRAM Inc, Alfena, Portugal.. Contract for the Development of specialized Project Management Software for the Manufacturing of Industrial Machines.

SEMENTAO Inc., Portugal. Contract for the Development of an integrated software for Inventory Management, Invoice Processing, and Accounting.

AREI, Inc. Portugal. Contract for the Development of Inventory software for a Shoes Exporter

GESTAR Inc., Portugal. Contract for the Development of a Decision Support System for Manufacturing of Industrial Ventilation.

Unponsored Research Projects

Participation (with F. Glover and D. Gamboa) in the DIMACS TSP Challenge, providing results and software for solving very large scale Traveling Salesman Problems.

Supervision

Doctoral Dissertations

Chris Riley, School of Business Administration, University of Mississippi, USA. Completed, December, 2014.

Frank Mathew, School of Business Administration, University of Mississippi, USA. Completed, December 4, 2009.

Dorabela Gamboa, Technical University of Lisbon (IST), Lisbon, Portugal. Completed 2008.

Jose Ablanedo, School of Business Administration, University of Mississippi, USA. Completed, 2007.

Lutfu Sagbansua, School of Business Administration, University of Mississippi, USA. Completed, 2004.

Colin Osterman, School of Business Administration, University of Mississippi, USA. Completed, 2005.

Luis Cavique, Graduate School of the Institute of Technology of the University of Lisbon, Portugal. Completed, 2002.

Master Thesis

Nuno Peixoto, Portucalense University, Porto, Portugal. Completed, 2002.

Renato Duarte, Portucalense University, Porto, Portugal. Completed, 2002.

Dorabela Gamboa, Portucalense University, Porto, Portugal. Completed, 2001.

Pedro Leão, Portucalense University, Porto, Portugal. Completed, 1999.

Paula Teixeira, Portucalense University, Porto, Portugal. Completed, 1999.

Publications

Journal Papers

Ablanedo-Rosas J., Rego C. “Assessing Algorithmic Performance by Frontier Analysis: A DEA Approach”, *International Journal of Applied Metaheuristic Computing*, 9(1), 2018.

Glover F., Rego C. “New Assignment-Based Neighborhoods for Traveling Salesman and Routing Problems”, *Networks*, in press.

Lu Y., B. Cao B., Rego C., Glover F. “A Tabu Search based clustering algorithm and its parallel implementation on Spark”, *Applied Soft Computing*, accepted.

Christopher L. R., Rego C. “Intensification, Diversification, and Learning via Relaxation Adaptive Memory Programming: A Case Study on Resource Constrained Project Scheduling”, *Journal of Heuristics*, conditionally accepted.

Glover F., Rego C. “New Relationships for Multi-Neighborhood Search for the Minimum Linear Arrangement Problem”, *Journal of Discrete Algorithms*, 46, 16–24, 2017.

Rego C., Gamboa D., Glover F. “Doubly-Rooted Stem-and-Cycle Ejection Chain Algorithm for the Asymmetric Traveling Salesman Problem”, *Networks*, 68(1), 23–33, 2016.

Osterman C., Rego C. “A k-Level Data Structure for Large-Scale Traveling Salesman Problems”, *Annals of Operations Research*, 244 (2), 583–601, 2016.

Cao B., Glover F., Rego C. “A Tabu Search Algorithm for Cohesive Clustering Problems”, *Journal of Heuristics*, 21 (4), 457–477, 2015.

Nakagawa Y., James R.J.W., Rego C., Edirisinghe C. “Entropy-Based Optimization of Nonlinear Separable Decision Models”, *Management Science*, 60 (3), 695-707, 2014.

Hardin J., Holder, A., Beck, C., Furman, K., Hanna, A., Rader, D., Rego, C. “Recommendations for an Undergraduate Curriculum at the Interface of Operations Research and Computer Science,” *INFORMS Transactions on Education*, 12 (3), 117–123, 2012.

- Glover F., Lasdon L., Plummer J., Marti R., Laguna M., Rego C. "Pseudo-Cut Strategies for Global Optimization", *International Journal of Applied Metaheuristic Computing*, 2(4), 188–198, 2013.
- James T., Rego C. "Path Relinking with Multi-Start Tabu Search for the Quadratic Assignment Problem", *International Journal of Swarm Intelligence Research*, DOI: 10.4018/jsir.2011040104, 2(2), 52–70, 2011.
- Rego C., Mathew F. "A Filter and Fan Algorithm for the Capacitated Minimum Spanning Tree Problem," *Computers and Industrial Engineering*, DOI: 10.1016/j.cie.2010.10.003, 60(2), 187–194, 2011.
- Rego C., Glover F., Gamboa D., Osterman C. "Traveling Salesman Problem Heuristics: Leading Methods, Implementations and Latest Advances", *European Journal of Operational Research*, DOI:10.1016/j.ejor.2010.09.010, 211(3), 427–441, 2011.
- Rego C., Mathew F., Glover F. "RAMP for the Capacitated Minimum Spanning Tree", *Annals of Operations Research*, DOI: 10.1007/s10479-010-0800-4, 181(1), 661–681, 2010.
- Ablanedo-Rosas, J., Rego, C. "Surrogate Constraint Normalization for the Set Covering Problem", *European Journal of Operational Research*, DOI:10.1016/j.ejor.2010.02.008, 205(3), 540–551, 2010.
- Rego, C., Glover, F. "Ejection Chain and Filter-and-Fan Methods in Combinatorial Optimization", *Annals of Operations Research*, DOI 10.1007/s10479-009-0656-7, 175(1), 77–105, 2010.
- Rego, C., James, T., Glover, F. "An Ejection Chain Algorithm for the Quadratic Assignment Problem", *Networks*, DOI: 10.1002/net.20360, 56(3), 188–206, 2010.
- Rego, C., Li, H., Glover, F. "A Filter-and-Fan Approach to the 2D HP Model of the Protein Folding Problem", *Annals of Operations Research*, DOI 10.1007/s10479-009-0666-5, 188(1), 389–414, 2009.
- James, T., Rego, C., Glover, F. "Multi-Start Tabu Search and Diversification Strategies for the Quadratic Assignment Problem", *IEEE Transactions on Systems, Man and Cybernetics, Part A*, 29(3), 579–596, 2009.
- Rego, C., Duarte, R. "A Filter and Fan Approach to the Job Shop Scheduling Problem", *European Journal of Operational Research*, 194(3), 650–662, 2009.
- James, T., Rego, C., Glover, F. "A Cooperative Parallel Tabu Search Algorithm for the Quadratic Assignment Problem", *European Journal of Operational Research*, 195(3), 810–826, 2009.
- Hou J., Rego C. "A Classification of Online Bidders in a Private Value Auction: Evidence from eBay", *International Journal of Electronic Marketing and Retailing*, 1(4), 322–338, 2007.

- Glover F., Rego C. “Ejection Chain and Filter-and-Fan Methods in Combinatorial Optimization”, *4OR: A Quarterly Journal of Operations Research*, 4(4), 263-296, 2006. (This paper gives a preliminary version of an article published later in *Annals of Operations Research*, DOI 10.1007/s10479-009-0656-7, 175(1), 77–105, 2010.).
- Greistorfer, P., Rego, C. "A Simple Filter-and-Fan Approach for the Facility Location Problem", *Computers and Operations Research*, 33(9), 2590–2601, 2006.
- Gamboa, D., Rego, C., Glover, F. “Implementation Analysis of Efficient Heuristic Algorithms for the Traveling Salesman Problem”, *Computers and Operations Research*, 33(4), 1161–1179, 2006.
- Kochenberger, G., Glover, F., Alidaee, B., Rego, C. “An Unconstrained Quadratic Binary Programming Approach to the Vertex Coloring Problem”, *Annals of Operations Research*, 139(1), 229–241, 2005.
- James, T., Rego, C., Glover, F. “Sequential and Parallel Path-Relinking Algorithms for the Quadratic Assignment Problem”, *IEEE Intelligent Systems*, 20(4)58–65, 2005.
- Alidaee B., Glover F., Kochenberger G., Rego C. “A New Modeling and Solution Approach for the Number Partitioning Problem”, *Journal of Applied Mathematics and Decision Sciences*, 2, 113-121, 2005.
- Gamboa, D., Rego, C., Glover, F. “Data Structures and Ejection Chains for Solving Large Scale Traveling Salesman Problems”, *European Journal of Operational Research*, 160(1)154–171, 2005.
- Kochenberger, G., Glover, F., Alidaee B., Rego, C. “A Unified Modeling and Solution Framework for Combinatorial Optimization Problems”, *OR Spectrum*, 26:2, 237-250, 2004.
- Glover, F., Alidaee, B., Rego, C., Kochenberger, G. “One-Pass Heuristics for Large-Scale Unconstrained Binary Quadratic Problems”, *European Journal of Operational Research*, 137, 272–287, 2002.
- Cavique L., Rego, C., Themido “Neighborhood Structures and Tabu Search for the Maximum Clique Problem”, *Investigação Operacional*, 22, 1–18, 2002.
- Rego, C. Node Ejection Chains for the Vehicle Routing Problem: Sequential and Parallel Algorithms, *Parallel Computing*, 27, 201-222, 2001.
- Rego, C. “Technical Note on the Paper "An Empirical Study of a New Metaheuristic for the Traveling Salesman Problem", *European Journal of Operational Research*, 129 (2) 456–459, 2001.
- Cavique, L., Rego, C., Themido, I. “Subgraph Ejection Chains and Tabu Search for the Crew Scheduling Problem", *Journal of the Operational Research Society*, 50, 608-616, 1999.

Rego, C. “A Subpath Ejection Method for the Vehicle Routing Problem”, *Management Science*, 44:10, 1447–1459, 1998.

Rego, C. “Relaxed Tours and Path Ejections for the Traveling Salesman Problem”, *European Journal of Operational Research*, 106, 522–538, 1998.

Rego, C., Roucairol, C. “Using Tabu Search for Solving a Dynamic Multi-Terminal Truck Dispatching Problem”, *European Journal of Operational Research*, 83, 411–429, 1995.

Bjorndal, M.H., Caprara, A., Cowling, P.I., Della Croce, F., Lourenço, H., Malucelli, F., Orman, A.J., Pisinger, D., Rego, C., Salazar, J.J. “Some Thoughts on Combinatorial Optimisation”, *European Journal of Operational Research*, 83, 253–270, 1995.

Rego C. “Uma Heurística Tabu para a Determinação de Rotas de Veículos”, *Investigação Operacional*, 14, 207–232, 1994.

Refereed Book Chapters

Cao B., Rego C., Glover F. “Hotel classification using meta-analytics: a case study with cohesive clustering”, in *New Ideas in Business and Consumer Analytics*, P. Moscato (Eds.), Springer, 2017, forthcoming.

Rego C., Leão P. “A Scatter Search Tutorial for Graph-Based Permutation Problems”, in *Metaheuristic Optimization via Memory and Evolution: Tabu Search and Scatter Search*, C. Rego and B. Alidaee (Eds.), Kluwer Academic Publishers, 1–24, 2005.

Rego C. “RAMP: A New Metaheuristic Framework for Combinatorial Optimization”, in *Metaheuristic Optimization via Memory and Evolution: Tabu Search and Scatter Search*, C. Rego and B. Alidaee (Eds.), Kluwer Academic Publishers, 441–460, 2005.

Kochenberger G., Glover F., Alidaee B., Rego C. “Solving Combinatorial Optimization Problems via Reformulation and Adaptive Memory Metaheuristics”, in *Frontiers of Evolutionary Computation*, A. Menon (Eds.) Genetic Algorithms and Evolutionary Computation Series, A. Menon Editor, Kluwer Academic Publishers, Boston, MA, 11, 103–110, 2004.

Rego C., Glover “Local Search and Metaheuristics for the Traveling Salesman Problem”, in *The Traveling Salesman Problem and its Variations*, G. Gutin and A. Punnen (Eds.), Kluwer Academic Publishers, 309–368, 2002.

Cavique L., Rego C., Themido I. “A Scatter Search Algorithm for the Maximum Clique Problem”, in *Essays and Surveys in Metaheuristics*, Kluwer Academic Publishers, 227–244, 2001.

Cavique L., Rego C., Themido I. “New Heuristic Algorithms for the Crew Scheduling Problem”, in *Metaheuristics: Advances and Trends in Local Search Paradigms for Optimization*, Kluwer Academic Publishers, 37–47, 1999.

Rego C., Roucairol C. “Parallel Tabu Search Algorithm using Ejection Chains for the Vehicle Routing Problem”, in *Metaheuristics: Theory and Applications*, Kluwer Academic Publishers, 661–675, 1996.

Refereed Conference Proceedings

Riley C., Rego C., Li H. “A Simple Dual-RAMP Algorithm for Resource Constraint Project Scheduling”, in *Proceedings of the 48th ACM Southeast Conference*, doi: 10.1145/1900008.1900097, ACM New York, NY, USA, 2011.

Mathew F., Rego C. “Recent Advances in Heuristics for the Capacitated Minimum Spanning Tree Problem”, in *Proceedings of the Decision Sciences Institute (DSI)*, San Antonio TX, 31021–31026, 2006.

Osterman C., Rego C., Gamboa D. “The Satellite List: A Reversible Doubly-Linked List”, in *Proceedings of the 7th ICANNGA International Conference*, Ribeiro et al (Eds.), “Adaptive and Natural Computing Algorithms”, Springer-Verlag (Vienna), 542–546, 2005.

Gamboa, C. Osterman, Rego C., Glover F. “Ejection Chain Algorithms for the Traveling Salesman Problem”, in *Proceedings of the EURO for OR Researchers and Practitioners (ORP3 2005)*, 403–412, 2005.

Rego C., Gamboa, Glover F., Osterman C. “Experiments with the Doubly Rooted Stem-and-Cycle Reference Structure for the Asymmetric TSP”, in *Proceedings of the 6th Metaheuristics International Conference (MIC 2005)*, 383–389, 2005.

Osterman C., Rego C., Gamboa D. “On the Performance of Data Structures for the Traveling Salesman Problem”, in *Proceedings of the 10th International Conference on Concurrent Engineering: Research and Applications*, (Eds.) J. Cha, R. Jardim-Goncalves and A. Steiger-Garcia, Balkema Publishers (Netherlands), 365–371, 2003.

Alidaee B., Rego C., Kochenberger G. “Managerial Issues in Complex Planning Procedures: A Case Study of QFD”, in *Proceedings of the 10th International Conference on Concurrent Engineering: Research and Applications*, J. Cha, R. Jardim-Goncalves and A. Steiger-Garcia (Eds.), Balkema Publishers (Netherlands), 373–377, 2003.

Hou J., Rego C. “A Classification of Online Bidders in a Private Value Auction: Evidence from eBay”, in *Proceedings of the 6th International Conference on Electronic Commerce Research (ICECR-6)*, 139–148, 2003.

Book Reviews for Research Journals

Rego, C. “Scatter Search: Methodology and Implementations in C, by M. Laguna and R. Martí, Kluwer Academic Publishers, OR/CS Interface Series, 2003: Invited Review”, *Interfaces*, 36(6), 610–612, 2006.

Papers Submitted or under Revision

Yinhao L., Buyang C., Rego C., Glover F. “A Tabu Search Based Clustering Algorithm and its Parallel Implementation on Spark”, *Applied Soft Computing*, revised and resubmitted.

Contributed Sections in Scholarly Books and Refereed Papers

Rego, C. “Vehicle Routing”, contributed section in the book *Scatter Search: Methodology and Implementations in C*, M. Laguna and R. Martí (Eds), OR/CS Interfaces Series, Kluwer Academic Publishers, Boston, MA, 206-208, 2004.

Rego, C. “Maximum Clique”, contributed section in the book *Scatter Search: Methodology and Implementations in C*, M. Laguna and R. Martí (Eds), OR/CS Interfaces Series, Kluwer Academic Publishers, Boston, MA, 193-195, 2004.

Rego, C. “Classical Vehicle Routing”, contributed section in the paper “New Ideas and Applications of Scatter Search and Path Relinking,” by Fred Glover, Manuel Laguna, and Rafael Marti, in *New Optimization Techniques in Engineering*, G. Onwubolu (Ed.), Springer-Verlag, 2003.

Rego, C. “Scatter Search for the Maximum Clique Problem”, contributed section in the paper “Scatter Search and Path Relinking: Advances and Applications,” by Fred Glover, Manuel Laguna, and Rafael Marti, in *Handbook of Metaheuristics*, F. Glover and G. Kochenberger (Eds.), Kluwer Academic Publishers, Boston, 2003.

Research Monographs

Rego, C., Roucairol C. “Le Problème de Tournées de Véhicules: Étude et Résolution Approchée”, INRIA—Institut National de Recherche en Informatique et en Automatique, Research Report 2197, 1994.

Conferences

Invited Plenary Sessions at International Conferences

New Advances on Solving Large Scale Combinatorial Optimization Problems: New Approaches, Neighborhoods and Data Structures, ICKEDS'04 (International Conference on Knowledge Engineering and Decision Support), Porto, Portugal, July 19-23, 2004.

Advances in Metaheuristics for Classical and Real World Problems (Invited Lecture/Plenary Session with F. Glover and G. Kochenberger), MIC' 2001: 4th Metaheuristics International Conference, Porto, Portugal, July 2001.

Invited Tutorial Sessions at International Conferences

Advances and Prospects in Adaptive Memory Metaheuristics, European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006. (1 hour tutorial)

Adaptive Memory Programming: A Key to Breakthroughs for Solving Hard Problems, INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Francisco, California, November 13-16, 2005. (1 hour tutorial)

Adaptive Memory Programming (Tutorial), 7th International Conference on Adaptive and Natural Computing Algorithms (ICANNGA 2005), Coimbra, Portugal, March 21-23, 2005. (3 hours tutorial)

Recent Advances on Tabu Search and Links with Evolutionary Methods" (with Fred Glover), IEEE International Conference On Systems, Man, and Cybernetics, San Diego, California, USA, 1998. (1 hour tutorial)

Papers Presented

Tabu Search Algorithms for Clustering Problems: Parallelization and Lessons Learned, (with Buyang Cao, Fang Yu, and F. Glover), 21th triennial conference of IFORS (International Federation of Operational Research Societies), Quebec City, Canada, July 17-21, 2017.

Doubly-Rooted Stem-and-Cycle Ejection Chain Algorithm for the Asymmetric Traveling Salesman Problem, (with D. Gamboa and F. Glover) 11th Metaheuristics International Conference (MIC 2015), Agadir, Morocco, June 7-10 2015.

Dual RAMP for the Capacitated Facility Location Problem, (with T. Matos and D. Gamboa) 11th Metaheuristics International Conference (MIC 2015), Agadir, Morocco, June 7-10 2015.

A Dual RAMP Algorithm for the Capacitated Facility Location Problem, (with T. Matos and D. Gamboa) European Conference on Operational Research, EURO XXVII, Glasgow, Scotland, July 2-15, 2015.

- Lagrangian RAMP Algorithms for the P-Median Problem, (with J. Veloso and D. Gamboa) European Conference on Operational Research, EURO XXVII, Glasgow, Scotland, July 2-15, 2015.
- Algoritmo RAMP para o Problema de Localização de Hubs com Afetação Múltipla e sem Restrições de Capacidade, (with F. Maia, T. Matos and D. Gamboa), IO 2013, Instituto Politécnico de Bragança, Portugal, July 3-5, 2013.
- Algoritmos RAMP para o Problema de Localização de Instalações com Restrições de Capacidade e um Único Servidor (com Óscar Oliveira e, (with Ó. Oliveira and D. Gamboa), IO 2013, Instituto Politécnico de Bragança, Portugal, July 3-5, 2013.
- RAMP para o Problema de Localização de Instalações com Restrições de Capacidade, (with T. Matos, F. Maia and D. Gamboa), IO 2013, Instituto Politécnico de Bragança, Portugal, July 3-5, 2013
- A Parallel RAMP Algorithm for the Set Covering Problem (with Tabitha James), European Conference on Operational Research, EURO XXV, Vilnius, Lithuania, July 8-11, 2012.
- A RAMP Algorithm for Generalized Assignments, (with Lutfu Sagbansua), European Conference on Operational Research, EURO XXV, Vilnius, Lithuania, July 8-11, 2012.
- RAMP for the Capacitated Facility Location Problem (with Telmo Matos, Dorabela Gamboa), European Conference on Operational Research, EURO XXV, Vilnius, Lithuania, July 8-11, 2012.
- A PD-RAMP Algorithm for the UFLP (with Dorabela Gamboa, Telmo Matos, Fábio Maia), European Conference on Operational Research, EURO XXV, Vilnius, Lithuania, July 8-11, 2012.
- A Primal-dual RAMP Algorithm for Large-scale Set Covering Problems, (with J. Ablanedo), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Diego, California, October 11-14, 2009.
- A RAMP Approach to the Resource Constrained Project Scheduling Problem, (with C. Riley), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Diego, California, October 11-14, 2009.
- An Enhanced Ejection Chain Algorithm for Hard Asymmetric Traveling Salesman Problems, (with T. James and D. Gamboa), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Diego, California, October 11-14, 2009.
- New Advances on RAMP Algorithms for Facility Location, (with D. Gamboa), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Diego, California, October 11-14, 2009.

- A Path Relinking Algorithm with Ejection Chains for the Quadratic Assignment Problem, (with T. James and F. Glover) INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Seattle, November 4-7, 2007.
- RAMP: A Survey and Practical Uses, (with D. Gamboa) Optimization 2007, Porto, Portugal, July 22-25.
- Multi-Start Tabu Search and Diversification Strategies for the Quadratic Assignment Problem, (with T. James and F. Glover) INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Pittsburgh, Pennsylvania, November 5-8, 2006.
- A Relax-and-Cut RAMP Approach for the Linear Ordering Problem, (with D. Gamboa and F. Glover) ECCO XIX/CO2006 Joint Meeting, Porto, Portugal, May 11-13, 2006.
- A Primal-Dual RAMP Algorithm for Very Large Set Covering Problems, (with J. Ablanedo and F. Glover) European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.
- A RAMP approach for Large Scale Multidimensional Nonlinear Knapsack Problems, (with Y. Nakagawa and R.J.W. James), European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.
- A RAMP Approach for the Facility Location Problem, (with P. Greistorfer D. Gamboa), European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.
- A Relax-and-Cut Primal-Dual RAMP Algorithm for the Linear Ordering Problem, (with D. Gamboa and F. Glover), European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.
- An Ejection Chain Algorithm for the Quadratic Assignment Problem, (with T. James and F. Glover), European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.
- Parallel Search Strategies for the Quadratic Assignment Problem, (with T. James and F. Glover), European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.
- RAMP for Very Large Multi-Resource Generalized Assignment Problems, (L. Sagbansua and F. Glover), European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.
- New Advances on Solving the Protein Folding Problem in 3D HP Lattice Model, (with H. Li and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Francisco, California, November 13-16, 2005.

- A RAMP Approach for Large Scale Linear Ordering Problems (with D. Gamboa and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Francisco, California, November 13-16, 2005.
- RAMP for Resource Constrained Project Scheduling, (with H. Li and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Francisco, California, November 13-16, 2005.
- RAMP for Very Large Set Covering Problems, (with J. Ablanedo and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Francisco, California, November 13-16, 2005.
- RAMP for the Capacitated Minimum Spanning Tree, (with F. Mathew and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Francisco, California, November 13-16, 2005.
- A RAMP Algorithm for the Linear Ordering Problem, (with D. Gamboa and F. Glover), Congresso de Estatística e Investigação Operacional da Galiza e Norte de Portugal - VII Congresso Galego de Estatística e Investigación de Operacións, Guimarães, Portugal, 26-28 October, 2005.
- Ejection Chain Algorithms for the Traveling Salesman Problem, (with D. Gamboa, C. Osterman, and F. Glover), EURO Conference for Young OR researchers and Practitioners: OR Peripatetic Post-Graduate Program (ORP3 2005), September, Valencia, Spain, 2005.
- Experiments with the Doubly Rooted Stem-and-Cycle Reference Structure for the Asymmetric TSP, (with D. Gamboa, F. Glover, and C. Osterman) 6th Metaheuristics International Conference (MIC 2005), Vienna, Austria, August 22-26 2005.
- A Relaxation Adaptive Memory Programming (RAMP) approach for the Capacitated Minimum Spanning Tree (CMST) Problem, (with F. Mathew and F. Glover), 36th Annual Meeting of the Decision Sciences Institute, track - MS/OR: Techniques, Models, and Applications, San Francisco, November, 19-22, 2005.
- The Satellite List: A Reversible Doubly-Linked List (with C. Osterman and D. Gamboa), 7th International Conference on Adaptive and Natural Computing Algorithms (ICANNGA 2005), Coimbra, Portugal, March 21-23, 2005.
- Primal-Dual RAMP: A New Approach for Combinatorial Optimization, INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.
- New Advances on Solving the Protein Folding Problem, (with H. Li and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.

- A Filter-and-Fan Approach for Protein Folding, (with H. Li and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.
- An Ejection Chain Approach for Protein Folding, (with H. Li and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.
- Advances on the Implementation of TSP Algorithms, (with C. Osterman) INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.
- Advances on Filter-and-Fan Search for Job Shop Scheduling, (with R. Duarte and D. Gamboa) INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.
- Ejection Chain/Path Relinking Method for the Quadratic Assignment Problem, (with T. James and F. Glover) INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.
- Surrogate Constraints for Several Classes of Combinatorial Problems, ICKEDS'04 (International Conference on Knowledge Engineering and Decision Support), Porto, Portugal, July 19-23, 2004.
- Advances on Data Structures for Very-Large-Scale Traveling Salesman Problems, (with D. Gamboa and C. Osterman), ICKEDS'04 (International Conference on Knowledge Engineering and Decision Support), Porto, Portugal, July 19-23, 2004.
- Heuristic Approaches for the Job Shop Scheduling Problem, (with D. Gamboa and R. Duarte), ICKEDS'04 (International Conference on Knowledge Engineering and Decision Support), Porto, Portugal, July 19-23, 2004.
- An Enhanced Filter-and-Fan Algorithm for the Facility Location Problem, (with P. Greistorfer and B. Alidaee), CORS/INFORMS Joint International Conference (Canadian Operations Research Society/Institute for Operations Research and the Management Sciences), Banff, Canada, May 16-19, 2004.
- A Scatter Search Algorithm for the Quadratic Assignment Problem, (with T. James and F. Glover) CORS/INFORMS Joint International Conference (Canadian Operations Research Society/Institute for Operations Research and the Management Sciences), Banff, Canada, May 16-19, 2004.
- Adaptive Search Multi-Start Heuristics for the Set Covering Problem, (with S. Yuehua and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Atlanta, October 19-22, 2003.

An Adaptive Surrogate Constraint Algorithm for the Set Covering Problem, (with J. Zhang and F. Glover) INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Atlanta, October 19-22, 2003.

An Enhanced Tabu Search Algorithm for the Protein-Folding Problem, (with H. Li), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Atlanta, October 19-22, 2003.

Surrogate Constraints for the Multi-Resource Generalized Assignment Problem, (with L. Sagbansua and B. Alidaee), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Atlanta, USA, October 19-22, 2003.

The Satellite List and New Data Structures for Traveling Salesman Problems, (with C. Osterman), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Atlanta, USA, October 19-22, 2003.

The Unconstrained Quadratic Binary Programming Approach to Combinatorial Optimization, (with G. Kochenberger, F. Glover, B. Alidaee), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Atlanta, USA, October 19-22, 2003.

A Classification of Online Bidders in a Private Value Auction: Evidence from eBay, (with J. Hou), 6th International Conference on Electronic Commerce Research (ICECR-6), INFOMART, Dallas, USA, October 23-26, 2003.

A Filter-and-Fan Approach for the Uncapacitated Warehouse Location Problem, (with P. Greistorfer and B. Alidaee), 5th International Conference on Metaheuristics (MIC'03), August 25-28, Kyoto, Japan.

Managerial Issues in Complex Planning Procedures: A Case Study of QFD, (with K. Pearson, B. Alidaee and G. Kochenberger), 10th ISPE International Conference on Concurrent Engineering: Research and Applications (CE2003), July, 26-30, Madeira Island, Portugal.

On the Performance of Data Structures for the Traveling Salesman Problem (with C. Osterman and D. Gamboa), 10th ISPE International Conference on Concurrent Engineering: Research and Applications (CE2003), July, 26-30, Madeira Island, Portugal.

A Classification of Online Bidders in a Private Value Auction: Evidence from eBay, (with Jianwei Hou), The Sixth International Conference on Electronic Commerce Research , INFOMART, October 23-26, Dallas, USA.

An Effective Metaheuristic Approach for Production Scheduling, (with R. Duarte), 14th IRMA International Conference, Information Resources Management Association (IRMA2003), May 18-21, PA, USA.

- A Unified Modeling and Solution Approach Capturing 0-1 IP Problems as Binary Quadratic Programs, 33rd Annual Meeting of the Decision Sciences Institute, (with F. Glover, G. Kochenberger, and B. Alidaee), San Diego, California, Nov. 23-26, 2002.
- Improved Solution of Binary Quadratic Programs, OR'2002: International Conference on Operations Research, (with F. Glover, G. Kochenberger, and B. Alidaee), University of Klagenfurt, Austria, September 2-5, 2002.
- Advances in Ejection Chain Methods for the Traveling Salesman Problem (with F. Glover and A. Punnen), INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Jose, California, November, 2002.
- A Stem-and-Cycle Ejection Chain Algorithm for the Asymmetric TSP, (with D. Gamboa), 16th triennial conference of IFORS (International Federation of Operational Research Societies), 8 - 12 July, 2002.
- Scatter Search for General MIP Problems (with F. Glover and J. P. Pedroso), 16th triennial conference of IFORS (International Federation of Operational Research Societies), 8 - 12 July, 2002.
- Scatter Search for Unconstrained Binary Quadratic Programming, (with F. Glover, M. Amini, B. Alidaee, and G. Kochenberger) 16th triennial conference of IFORS (International Federation of Operational Research Societies), 8 - 12 July, 2002.
- Using Quality Function Deployment in NAVY Manpower Planning: A Supply Chain Management Approach, (with B. Alidaee and K. Person), MAS-5 (Military Personnel Research), hosted by Navy Personal Research Studies and Technology (NPRST) and the Office of Naval Research (ONR), June 3-5, 2002.
- Algorithmic Issues on the Implementation of Large-Scale Traveling Salesman Problems (with D. Gamboa and F. Glover). MIC' 2001: 4th Metaheuristics International Conference, Porto, Portugal, July 2001.
- Scatter Search for the Vehicle Routing Problem. SMC' 2001: IEEE Systems, Man and Cybernetics Meeting, Tucson, Arizona, October 2001.
- Filter & Fan Methods for Combinatorial Optimization. Invited Talk (Joint with F. Glover). INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Miami Beach 2001, November 2001.
- Advanced Methods for Stochastic Routing and Scheduling Models for Real-World Applications. Military Personnel Research Science Workshop, June 2001, University of Memphis, Tennessee.
- The DIMACS TSP Challenge: Preliminary Results, (with David S. Johnson, Fred Glover, and Lyle A. McGeoch), 17th International Symposium on Mathematical Programming (ISMP2000), Georgia Institute of Technology, USA.

Using Scatter Search for Solving Vehicle Routing Problems, 4th International Colloquium on Graphs and Optimization (GO IV), Leukerbad, Switzerland, August 21-24, 2000.

Scatter Search for the Vehicle Routing Problem, INFORMS Spring 2000 Meeting, Salt Lake City, Utah, USA.

Scatter Search for the Maximum Clique Problem, (with L. Cavique and I. Themido), MIC 99 (The Metaheuristics International Conference), Angra dos Reis, Brazil.

Recent Advances in Evolutionary Methods Based on Adaptive Memory Principles of Tabu Search", IO-98, Faro, Portugal.

A Combined Strategy of Ejection Chains / Path Relinking for the Vehicle Routing Problem (with Pedro Leão), IO-98 Faro, Portugal.

Parallel Processing of Compound Neighborhood Structures for the Traveling Salesman Problem (with Paula Teixeira), IO-98 Faro, Portugal.

Data Structures and Implementation Techniques of Ejection Chains (with Dorabela Gamboa), IO-98 Faro, Portugal.

Scatter Search/Path Relinking based Algorithms for the Max Clique Problem (with L. Cavique and I. Themido), IO-98, Faro, Portugal.

Tabu Search based on a Resource Smoothing Formulation for Optimizing Cover Time in Crew Scheduling", (with I. Themido, M. Gomes and L. Cavique), EURO VII, Belgium.

Subgraph Ejection Chains for the Crew Scheduling Problem, (with L. Cavique and I. Themido), INFORMS (Institute for Operations Research and the Management Sciences), Dallas, USA.

Tabu Search for the Complete Crew Scheduling Problem, (with L. Cavique, M. Gomes and I. Themido), INFORMS (Institute for Operations Research and the Management Sciences), Dallas, USA.

A Decomposition Algorithm for the Complete Crew Scheduling Problem, (with L. Cavique, M. Gomes and I. Themido), ISMP-97 (International Symposium on Mathematical Programming), Lausanne, Switzerland.

New Heuristic Algorithms for the Crew Scheduling Problem, (with L. Cavique and I. Themido), MIC 97 (The Metaheuristics International Conference), Sophia Antipolis, France.

A Tabu Search Heuristic for the Crew Scheduling Problem, (with L. Cavique and L. Themido), IFORS 96 (The International Federation of Operational Research Societies), 14th Triennial Conference, Vancouver, Canada.

A Subpath Ejection Chain Algorithm for the Traveling Salesman IFORS 96 (The International Federation of Operational Research Societies), 14th Triennial Conference, Vancouver, Canada.

Some Experiments on Parallel Local Search for Routing Problems, POC96 (Parallel Optimization Colloquium), Versailles, France.

Utilização de uma Estrutura de Referência em Métodos de Pesquisa Local para Problemas de Rotas de Veículos, Congresso de Investigação Operacional, Aveiro, Portugal.

Um Algoritmo em Duas Fases para a Gestão Dinâmica de uma Frota de Camiões Cisterna, Congresso de Investigação Operacional, Aveiro, Portugal.

Parallel Ejection Chains Applications for Routing Problems, INFORMS (Institute for Operations Research and the Management Sciences) International Conference, New Orleans, USA.

Parallel Tabu Search Algorithm using Ejection Chains for the Vehicle Routing Problem, MIC 95 (Metaheuristics International Conference), Breckenridge, Colorado, USA.

Une Méthode en Deux Phases pour l'Optimisation d'une Flotte de Camions Citerne, FRANCORO (Rencontres Francophones de Recherche Operationnelle), Mons, Belgium.

Utilisation d'une Structure de Référence dans une Méthode Tabu pour les Tournées de Véhicules, FRANCORO (Rencontres Francophones de Recherche Operationnelle), Mons, Belgium.

A Decomposition Algorithm for a Real-Life Vehicle Scheduling Problem, ESI (EURO Summer Institute) on Combinatorial Optimization, Jouy-en-Josas, France.

An Efficient Implementation of Ejection Chain Procedures for the Vehicle Routing Problem, CORS 94 (Canadian Operation Research Society) - Optimization Days, Montréal, Canada.

Tabu Search Heuristic integrating Embedded Neighborhood Structures for the Vehicle Routing Problem, ECCO VII (European Conference on Combinatorial Optimization), Milan, Italy.

Uma Heurística Tabu para a Determinação de Rotas de Veículos, presented at the 6th Conference, APDIO (Associação Portuguesa de Investigação Operacional), Braga Portugal.

Poster Presentations

Embedding Classical TSP Neighborhoods in a Single Ejection Chain Framework, (with D. Gamboa, F. Glover, and T. James), INFORMS (Institute for Operations Research and the Management Sciences), Interactive Section, Annual International Meeting, Austin, Texas, November 7-10, 2010 (**Poster Finalist**: ranked among the best 10).

Dual-RAMP Algorithm for Resource Constrained Project Scheduling, (C. Riley and H. Li), Interactive Section, Annual International Meeting, Austin, Texas, November 7-10, 2010.

RAMP Algorithms for Large Scale Set Covering Problems. Sigma-Xi Poster Competition in Mathematics & Computer Science (with J. Ablanedo), University of Mississippi.

RAMP for the Linear Ordering Problem, (with D. Gamboa and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences), Interactive Section, Annual International Meeting, Pittsburgh, Pennsylvania, November 5-8, 2006.

A Relaxation Adaptive Memory Programming (RAMP) approach to address the Capacitated Minimum Spanning Tree (CMST) problem. Sigma-Xi Poster Competition in Mathematics and Computer Science (with F. Mathew), University of Mississippi, 2006.

Experiments with the RAMP Approach on Solving the Capacitated Minimum Spanning Tree Problem (with F. Mathew and F. Glover), INFORMS (Institute for Operations Research and the Management Sciences), Interactive Section, Annual International Meeting, San Francisco, California, November 13-16, 2005.

A Computational Approach for Solving the HP Lattice Protein Folding Problem (with Haitao Li), 3rd Annual Mid-South College Computing Conference (MSCCC'05), University of Mississippi, Oxford, MS, April 1-2, 2005.

Tree Search Neighborhoods for the Protein Folding Problem in the HP Lattice Model (with Haitao Li and Fred Glover), Section in Chemistry and Chemical Engineering, Mississippi Academy of Sciences (MAS) Annual Meeting, Oxford Convention Center; Oxford, MS, February 16-18.

The Satellite List and k-Level Satellite Tree: New Data Structures Useful for Finding Hamiltonian Cycles, (with C. Osterman), Section in Mathematics, Computer Science, and Statistics, Mississippi Academy of Sciences (MAS) Annual Meeting, Oxford Convention Center; Oxford, MS, February 16-18.

New Advances on Solving the Protein Folding Problem, (with H. Li and F. Glover), Butcher Symposium on Genetics and Biotechnology, November 11, Broomfield, Colorado.

New Advances on Solving the Protein Folding Problem in a 2D HP Lattice Model: New Neighborhood Structures for Dynamic and Adaptive Search. Sigma-Xi Poster Competition in Chemical Sciences (with H. Li), University of Mississippi.

New Data Structures for Graph Optimization Problems. Sigma-Xi Poster Competition in Mathematics & Computer Science (with C. Osterman), University of Mississippi.

Invited Talks at Major Academic and Professional Organizations

MIT (Massachusetts Institute of Technology: “Towards the Design of Effective Solutions of Complex Engineering Systems,” Invited Lecture, sponsored by the Engineering Systems Division, December 10, 2007.

Texas A&M University: “Memory and Evolution: Recent Advances in Metaheuristics Optimization,” Department of Industrial and Systems Engineering, Seminar Sponsored by PARSONS, September 19, 2005.

Mayo Clinic: Recent Advances in Metaheuristics Optimization with Applications to Health Care, Invited Lecture, College of Medicine, Division of Health Care Policy & Research (HCPR), Rochester, Minnesota, 2005.

University of Colorado: Invited Lecture “Recent Advances on Metaheuristics and Applications,” Boulder, USA, 2004.

US Navy: Managerial Issues in Complex Planning Procedures (with B. Alidaee, F. Glover, G. Kochenberger and K. Womer), MAS-6 (Military Personnel Research), hosted by Navy Personal Research Studies and Technology (NPRST) and the Office of Naval Research (ONR), June 2003, USA.

University of Lisbon: Recent Contributions in Metaheuristics. Invited Talk: Communication addressed to the International Evaluation Panel scheduled for the Research Unit: "Operations Research Center", Home Institution: Faculty of Sciences - University of Lisbon, 1999.

University of Colorado: “Innovations and Applications of Heuristics in Optimization”, Invited Lecture, University of Colorado, Boulder, USA, 1998.

University of Paris: Graph Based Ejection Chains and Tabu Search for Scheduling-Related Problems: Techniques, Implementation and Results, Invited Lecture, Paris, 1998.

Invited Talks at Local Academic and Professional Organizations

A Computational Approach for Solving the HP Lattice Protein Folding Problem (with Haitao Li), 3rd Annual Mid-South College Computing Conference (MSCCC'05), University of Mississippi, Oxford, MS, April 1-2, 2005.

Tree Search Neighborhoods for the Protein Folding Problem in the HP Lattice Model (with Haitao Li and Fred Glover), Section in Chemistry and Chemical Engineering, Mississippi Academy of Sciences (MAS) Annual Meeting, Oxford Convention Center; Oxford, MS, February 16-18.

The Satellite List and k-Level Satellite Tree: New Data Structures Useful for Finding Hamiltonian Cycles, (with C. Osterman), Section in Mathematics, Computer Science, and

Statistics, Mississippi Academy of Sciences (MAS) Annual Meeting, Oxford Convention Center; Oxford, MS, February 16-18.

Programming Techniques, Data Structures and Algorithms for Solving Complex and Large Scale Optimization Problems, University of Mississippi, Seminar sponsored by the HCES, 2000.

Developing Decision Support Systems for Optimization Problems, DIUP-98's Technical Lectures in Computer Science, Portucalense University, Portugal, 1998.

Distributed Programming on Internet, DIUP-97's Technical Lectures in Computer Science, Portucalense University, Portugal, 1997.

A Decision Support System for Crew Scheduling: the case of the Metro of Lisbon, DIUP-97's Technical Sessions, Portucalense University, Portugal, 1997.

Une Méthode Tabou avec Structures de Voisinage Composé pour le Problème de Tournées de Véhicules, AFCET (Association Française pour la Cybernetique, Economique et Technique) - Journée Combinatoire, Paris, France.

Professional Membership

Member of INFORMS - The Institute for Operations Research and Management Sciences.

Member of the IEEE Computer Society.

Member of APDIO - Portuguese Operational Research Society.

Review Panels

Serve Oak Ridge Associated Universities (ORAU) as a Reviewer for Ralph E. Powe Junior Faculty Awards, 2015.

Serve the NASA Postdoctoral Program (NPP) in two Review Panels, November 2009, 2011.

Serve the NSF (National Science Foundation) in a Review Panel, 2001.

Serve the NSERC (National Sciences and Engineering Research Council of Canada) in a Review Panel, 2002.

Serve the FUP (Academic Association of Portuguese Universities) as a formal member of the External Evaluation Committee for the accreditation of Industrial Engineering Schools in 3 Portuguese Universities, 2002.

Institutional Service

Faculty Senate, University of Mississippi (2017-2018), scope: University.

Tenure and Promotion Review Committee, University of Mississippi (2017-present), scope: College.

Post-Tenure Review Committee, University of Mississippi (2017), scope: College.

Sabbatical Leave Review Committee, University of Mississippi (2010-present), scope: University

Tenure and Promotion Review Committee, University of Mississippi (2012-2015), scope: University

University Research Council, University of Mississippi (2012-present), scope: University

Strategic Planning Committee (2009-present), University of Mississippi, scope: College

Faculty Senate, University of Mississippi (2013-2014), scope: University

MBA Committee, University of Mississippi (2011-present), scope: College

OM Faculty Search Committee (2008-2009), scope: College

Dean Search Committee (2008-2009), scope: College

MIS Faculty Search Committee (2005-2006), scope: College

Area Coordinator, Portucalense University (1997-1998), scope: Department.

Edited Volumes and Special Issues

Adaptive Memory Programming: Methods and Algorithms for Hard Combinatorial Problems, *Annals of Operations Research*, Special Issue, Rego C. (Eds), 183(1), March 2011.

Metaheuristic Optimization via Memory and Evolution: Tabu Search and Scatter Search, Rego C., Alidaee B. (Eds), Kluwer Academic Publishers, Boston, ISBN 1-4020-8134-0, 2005.

Editorial Boards

Journal of Heuristics (JoH), Springer US, Associate Editor, 2002-2011.

Algorithmic Operations Research (AOR), Preeminent Academic Facets Inc., Editorial Advisory Board, 2006-2012.

Operational Research: An International Journal, Hellenic Operational Research Society (ORIJ), 2001-2007.

International Journal of Mathematics in Operational Research (IJMOR), Inderscience Publishers, Geneva (Switzerland), Editorial Board Member, 2009-present.

International Journal of Computational Intelligence Research (IJCIR), Research India Publications, 2005-Present.

Serve as Referee for Scientific Journals and Books

Journals

Computers and Operations Research; Computers and Industrial Engineering, Journal of Heuristics; European Journal of Operational Research; INFOR (Information Systems and Operations Research), International Journal of Applied Intelligence; Transportation Sciences, IEEE Transactions on Evolutionary Computation, IEEE Intelligent Systems, Lecture Notes in Computer Science – Springer, Annals of Operations Research, INFORMS Journal on Computing, Parallel Computing, Networks, Operations Research, among others.

Books

Meta-Heuristics: Theory and Applications, I.H. Osman and James Kelly (Eds.), Kluwer Academic Publishers, 1996.

Essays and Surveys on Metaheuristics, C. Ribeiro and P. Hansen (Eds.), Kluwer Academic Publishers, 1999.

Doctoral Dissertation Committees

Vijay P. Ramalingam, “xQx Based Modeling for General Integer Programming Problems”, University of Mississippi, December 2014.

Chris. Riley, “Relaxation Adaptive Memory Programming for the Resource Constrained Project Scheduling Problem”, University of Mississippi, December 2014.

Dorabela Gamboa, “Adaptive Memory Algorithms for the Solution of Large Scale Combinatorial Optimization Problem”, Institute of Technology of the Technical University of Lisbon, Portugal, December 2008.

Haitao Li, “Project Scheduling with Multi-Purpose Resources: Models, Algorithms and Applications”, University of Mississippi, May 2005.

Colin Osterman, "New Data Structures for Graph-based Combinatorial Problems",
University of Mississippi, USA, May 2005.

Ifa Ghamlouche, "Métaheuristiques pour le Problème de Synthèse de Réseau Multiproduits
avec Capacités", Université de Montréal, Faculté des Études Supérieures, February, 2004.

Lutfu Sagbansua, "Algorithms for Very Large Scale Multi-Resource Generalized Assignment
Problems," University of Mississippi, USA, November 2004.

Luis Cavique, "Meta-Heuristics Algorithms for Combinatorial Optimization", Graduate
School of the Institute of Technology of the Technical University of Lisbon, Portugal,
July, 2002.

Tabitha Lynn James, "Impact of Shared Memory and Distributed Memory Platforms on the
Design and Performance of Parallel Evolutionary Algorithms", University of Mississippi,
December, 2002.

Master Thesis Committees

Filipe Santiago Cal, "A Tabu Search Heuristic for Vehicle Routing Optimization in a Solid
Waste Management System", Technical University of Lisbon, 1999.

Marta Gomes, "Optimization of Resource Leveling Scheduling: The case of Lisbon Metro
System", Technical University of Lisbon, 1997.

International Education Committees

Board Member of the Education Committee of the INFORMS Computing Society (ICS),
2007-2010.

Conference Program Committees

Member of the Program Committee of the 10th Metaheuristics International Conference,
Singapore, August 5-8, 2013.

Member of the Program Committee of the 9th Metaheuristics International Conference,
Udine, Italy, July 25-28, 2011.

Member of the Program Committee of the 8th Metaheuristics International Conference,
Hamburg, Germany, July 13-16, 2009.

Member of the Program Committee of the 8th International Conference of Hybrid Intelligent
Systems (HIS 2008), Barcelona, Spain, September 10-12, 2008.

Member of the Program Committee of the 2nd International Conference on Knowledge Engineering and Decision Support (ICKEDS 2006), May 9-12, 2006.

Member of the review committee for EURO Conference for Young OR researchers and Practitioners: OR Peripatetic Post-Graduate Program (ORP3 2005).

Member of the Program Committee in the 6th International Conference on Metaheuristics (MIC'06), Vienna, Austria, August 22-26, 2005.

Member of the Program Committee in 1st International Conference on Advanced Data Mining and Applications (ADMA'05), Wuhan, China, July 22-24, 2005.

Member of the Program Committee of the 1st International Conference on Knowledge Engineering and Decision Support (ICKEDS 2004), 21-23 July, 2004.

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

Member of the Program Committee in the 4th International Conference on Metaheuristics (MIC'01), Porto, Portugal, 2001.

Member of the Program Committee in the Third International Conference on Metaheuristics (MIC'99), Angra dos Reis, Brazil, 1999.

Organization of Invited Sessions, Clusters, and Workshops

Conference Sessions and Clusters

Chair (with Buyang Cao) of the session "Hybrid Metaheuristics and Emerging Computational Technologies for Combinatorial Optimization," 21th triennial conference of IFORS (International Federation of Operational Research Societies), Quebec City, Canada, July 17-21, 2017.

Chair of the cluster "Adaptive Memory Programming", European Conference on Operational Research, EURO XXI, Iceland, July 2-5, 2006.

Chair of the session "Relaxation Adaptive Memory Programming (RAMP) for Combinatorial Optimization," for INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, San Francisco, California, November 13-16, 2005.

Chair (with D. Gamboa) of the session "New Advances in Algorithm Design and Search Strategies," for INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.

Chair of the session "Biocomputing: Recent Advances on Modeling, Algorithms and Applications," for INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Denver, Colorado, October 24-27, 2004.

Chair (with D. Gamboa) of the session "Optimization Models and Algorithms," for ICKEDS'04 (International Conference on Knowledge Engineering and Decision Support), Porto, Portugal, July 21-23, 2004.

Chair of the session "Advances on Metaheuristics for Combinatorial Optimization" for INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Atlanta, October 19-22, 2003.

Chair of the session "Metaheuristics for Combinatorial Optimization" for the 16th triennial conference of IFORS (International Federation of Operational Research Societies), July 8 - 12, 2002.

Chair of the session "Metaheuristics for ILP and MIP Problems" for the 16th triennial conference of IFORS (International Federation of Operational Research Societies), 8 - 12 July, 2002.

Co-Chair (with Fred Glover) a cluster on Combinatorial Optimization for the INFORMS International Conference, Miami Beach 2001, November 3 - 7, 2001.

Session chair on "Vehicle Routing and Crew Scheduling" in the Cluster on Combinatorial Optimization of INFORMS International Conference, October, 1997, in Dallas, USA, 1997.

Workshops and other Scientific Meetings

Organizer (with H. Greenberg, A. Sofer, S. Billups, B. Krishnamoorthy, W. Wilhelm), the Workshop "O.R. in Biology and Medicine: Bridging the Gap", INFORMS (Institute for Operations Research and the Management Sciences) Annual International Meeting, Pittsburgh, Pennsylvania, November 5-8, 2006.

Organizer (with G. Kochenberger, F. Glover, and B. Alidaee) a 3-day conference on Optimization, focusing on recent developments in Tabu Search and Scatter Search methods, University of Mississippi 2001. (The Conference was supported in part by the National Science Foundation, NSF.)

Organizer (with David Johnson, Lyle McGeogh, and Fred Glover) of the "8th DIMACS Implementation Challenge: The Traveling Salesman Problem", 2000.

Other Professional Activities

Board member of the European Chapter on Metaheuristics (EU/ME) of the Association of European Operational Research Societies (EURO), 2005-2013.

Member of the "OR and the New Biomedical Research Profession Discussion Group.", 2004-2007. The group was awarded by the National Science Foundation (NSF) to organize a workshop at INFORMS meeting of 2007).

Chair of the EU/ME Special Interest Group on "Tabu Search and Scatter Search", in The European Chapter on Metaheuristics of EURO (Association of European Operational Research Societies) Working Group, 2002-2005.

Organization committee of the DIUP-97 and DIUP-98 Technical Seminars in Computer Science at the Portucalense University, 1997-1998.