

CURRICULUM VITAE

JOAQUIM JOÃO JÚDICE

I- PERSONAL INFORMATION

Name: Joaquim João Alarcão Júdice

Born Place and Date: Lisboa, October 3, 1951

Civil Status: Married, two sons and one daughter

Nationality: Portuguese

Work Address: Departamento de Matemática, Universidade de Coimbra, Coimbra, Portugal (M)
Instituto de Telecomunicações, Pólo de Coimbra, Coimbra, Portugal (IT)

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Academic Degrees:

-Aggregation, Universidade de Coimbra, Portugal, October 1996.

-PhD in Mathematics and Operations Research, Brunel University, England, February 1982.

-Graduation in Mathematics, Universidade de Coimbra, Portugal, December 1974.

Education :

-Full Professor, Departamento de Matemática, Universidade de Coimbra, June 1998 -

-Associate Professor, Departamento de Matemática, Universidade de Coimbra, September 1988 - June 1998.

-Assistant Professor , Departamento de Matemática, Universidade de Coimbra, November 1982 - September 1988.

-Lecturer, Departamento de Matemática, Universidade de Coimbra, October 1981 - November 1982.

-Lecturer, Departamento de Matemática, Universidade do Minho, October 1978 - October 1981.

-Lecturer, Instituto Superior de Engenharia de Coimbra, October 1975 - September 1978.

-Junior Lecturer, Departamento de Matemática, Universidade de Coimbra, December 1974 - July 1975.

II- PROFESSIONAL ACTIVITIES

A— ASSOCIATE EDITOR OF SCIENTIFIC JOURNALS

-Investigação Operacional (1988, --) – Editor-in-Chief (1988-2004)

-International Abstracts of Operations Research (1991- 2004)

-TOP-Journal of the Spanish Statistical and Operations Research Society (1993, —)

-Investigacion Operativa (1991 - 1999)

-Computational Optimization and Applications (1992,—)

-Optimization and Engineering (2000,—)

-Advanced Modeling and Optimization (1999,—)

-Advances in Operations Research (2008,----)

-Journal of Advanced Researches on Applied Mathematics (2008,----)

-Journal of Advanced Researches on Optimization (2008,----)

-Mathematical Problems in Engineering (2009,-----)

B— REFEREE OF SCIENTIFIC JOURNALS

-Mathematical Reviews

-Linear Algebra and its Applications

-Mathematical Programming

-European Journal of Operational Research

-Journal of Optimization Theory and Applications

-SIAM Journal on Scientific Computing

-SIAM Journal on Numerical Analysis

-SIAM Journal on Control and Optimization

-SIAM Journal on Optimization

-SIAM Journal on Matrix Analysis and Applications

-Transportation Science

-Annals of Operations Research

-Computers and Operations Research

-Networks

-Optimization

- Optimization and Methods and Software
- RAIRO- Recherche Opérationelle
- Journal of Global Optimization
- Optimization and Engineering
- International Journal of Computer Mathematics
- Discrete Applied Mathematics
- Investigacion Operativa
- Computational Optimization and Applications
- Journal of Computational and Applied Mathematics
- Optimization Letters
- Operations Research Letters
- International Transactions in Operational Research
- TOP- Journal of the Spanish Statistical and Operations Research Society
- Investigação Operacional
- Applied Numerical Mathematics
- Applied Mathematics Letters
- Pacific Journal of Optimization
- Tamkang Journal of Mathematics
- Actas da 1ª Conferência em Estatística e Optimização
- Proceedings of the IMACS Symposium on Iterative Methods in Linear Algebra
- Proceedings of 1st Biennial Soviet-Italian Conference on Methods and Applications of Mathematical Programming
- Proceedings of the International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2008)

C— REFEREE OF SCIENTIFIC PROJECTS

- PRAXIS XXI; JNICT
- International Science Foundation
- POCTI2000 e POCTI2001 – Fundação para a Ciência e Tecnologia
- Academic Research Programme of Department of National Defence, Canada

D— ORGANIZATION OF CONFERENCES

- 1º Ciclo de Conferências em Análise Numérica e Optimização, April and May, 1986
- 3º Congresso da APDIO, Universidade de Coimbra, December 1987
- Workshop on Large-Scale Optimization, Universidade de Coimbra, July 1991
- Optimization 95, Universidade do Minho, Braga, July 1995
- XV Olimpíadas de Matemática, 1996-97
- Escola de Verão de Matemática da SPM, Universidade de Aveiro, September 1997
- XVI Olimpíadas de Matemática, 1997-98
- 7º Encontro Nacional da SPM, February 1998
- Optimization 98, Universidade de Coimbra, July 1998
- Matemática Aplicada às Telecomunicações: Que Problemas?, Coimbra, September 1998
- Escola de Verão de Matemática da SPM, Universidade Nova de Lisboa, September 1999
- ConfTel - Conferência Internacional de Telecomunicações, Figueira da Foz, April 2001
- Optimization 2001, Universidade de Aveiro, July 2001
- Advanced School and Workshop on Mathematical Techniques and Problems in Telecommunications, Instituto Politécnico de Tomar, September 2003
- 11º Congresso da APDIO - IO 2004, Universidade do Porto, April 2004
- Optimization2004, Universidade de Lisboa, July 2004
- Iberian Conference in Optimization, CIM, Coimbra, November 2006
- Workshop IO: Que Desafios para 2010-2020, Coimbra, October 2010
- Workshop IO nas Empresas: Sistemas Decisonais da Teoria à Prática, October 2010
- Workshop em Optimização de Transportes, November 2010

E— MEMBER OF CONFERENCE PROGRAM COMMITTEES

- Conferences in Portugal – 23
- Conferences abroad - 31

F— MEMBER OF ACADEMIC COMMITTEES

- Masters – 32
- PhD - 50
- Equivalence to PhD- 5

- Committees for Polytechnic Institutes - 8
- Tenures – 22
- Committees for Associate Professor - 21
- Aggregations - 23
- Committees for Full Professor - 10

G— MEMBER OF SCIENTIFIC SOCIETIES

- Associação Portuguesa para o Desenvolvimento da Investigação Operacional (APDIO)
- Institute for Operations Research and Management Sciences (INFORMS)
- Sociedade Portuguesa de Matemática (SPM)
- Society for Industrial and Applied Mathematics (SIAM)
- American Mathematical Society (AMS)
- Mathematical Programming Society (MPS)

H— MEMBER OF ACADEMIC AND RESEARCH INSTITUTIONS

- Vice-President of Associação Portuguesa de Investigação Operacional (APDIO) (1989 - 1992)
- Member of Board of Directors of Sociedade Portuguesa de Matemática (SPM) (1996 - 1997)
- Scientific Council of Instituto Superior Bissaya Barreto (1995 - 2000)
- Scientific Council of Instituto de Telecomunicações
- Scientific Council of Centro Internacional de Matemática (CIM) (2000 - 2004)
- Scientific Council of Exact Sciences of Fundação para a Ciência e Tecnologia (2003 -)
- President of Centro Internacional de Matemática (2004 - 2008)
- National Representative of IFIP Technical Committee on System Modelling and Optimization (2006 -)
- President of Associação Portuguesa de Investigação Operacional (APDIO) (2010 -)

I— MANAGEMENT

- Member of Board of Directors of Departamento de Matemática da Faculdade de Ciências e Tecnologia da Universidade de Coimbra, 1983 / 84, 1984 / 85, 1987 / 88.
- Vice-President of Faculdade de Ciências e Tecnologia da Universidade de Coimbra, 2000-2001.
- Vice-President of Departamento de Matemática da Faculdade de Ciências e Tecnologia da Universidade de Coimbra, 2003-2004.
- President of Departamento de Matemática da Faculdade de Ciências e Tecnologia da Universidade de Coimbra, 2005-2006.

III- LECTURES–

BsC:

- Programação Matemática
- Programação Não Linear
- Álgebra Linear Numérica
- Optimização Discreta
- Optimização em Redes
- Programação Linear
- Análise Numérica
- Matemática Numérica I
- Cálculo I
- Análise Matemática I
- Análise Matemática II
- Análise Infinitesimal I
- Matemática I

Master:

- Programação Complementar
- Análise Matricial e Optimização
- Complementaridade Linear
- Fundamentos de Optimização
- Programação Linear

IV- RESEARCH

A— MAIN AREAS OF INTEREST

- Complementarity Problems: Interior-Point, Pivotal, Enumerative and Sequential Complementarity Algorithms for Linear and Nonlinear Complementarity Problems.
- Global Optimization: Branch and Bound, Sequential Complementarity, Interior-Point and Complementarity Active-Set Algorithms for Mathematical Programming Problems with Complementarity Constraints, Quadratic Programming and Integer Programming.
- Applications of Optimization in Telecommunications and Civil Engineering.

B— MEMBER OF RESEARCH PROJECTS

- Restructuring of sparse matrices into block diagonal and band diagonal forms: applications to LP problems, England, 1985-87
 - Resolução de Problemas de Optimização Não Linear de Grandes Dimensões e Aplicações a Problemas de Engenharia Química, INIC, 1990-91 *
 - Algoritmos de Ponto Interior para Problemas de Optimização em Redes e Aplicações em Telecomunicações e Finanças, Project FLAD, 1996-97 *
 - Solução de Problemas de Álgebra Linear Numérica e de Optimização e Aplicações em Engenharia Estrutural, Genética e Finanças, Project PRAXIS XXI, 1996-99 *
 - Modelos Variacionais e Optimização, Project PRAXIS XXI, 1997-2000
 - Optimização em Física, Project PRAXIS XXI, 1999-2000
 - TRANSPARENTE- TRANSPORTE, Acesso e Distribuição em REDES de Comunicação óptica multiplExadas, Project FCT, 2000-2002
 - Optimização Não Linear, Project FCT, 2000-2004
 - ORAL – Optimal Resource Allocation, Project FCT, 2005-2008
- * Investigador Responsável

C— SUPERVISION OF RESEARCH STUDENTS

1 – Master

- L. M. Fernandes, Resolução de problemas lineares complementares monótonos de grandes dimensões, Universidade de Lisboa, September 1992.
- L. F. Portugal, Resolução de problemas de mínimos quadrados, Universidade de Coimbra, January 1993 (co-supervision with A. Portugal).
- M. A. Coelho, Aplicação da complementaridade linear num problema de equilíbrio económico, Instituto Superior Técnico, January 1993.
- A. P. Lima, Um estudo do problema linear complementar, Universidade do Porto, February 1995 (co-supervision with M. C. Guedes).
- I. C. Ribeiro, Um estudo de técnicas enumerativas e bilineares para problemas lineares complementares, Universidade do Porto, April 1996 (co-supervision with A. M. Faustino).
- A. P. Teixeira, Uma abordagem de optimização não linear para problemas lineares complementares, Universidade do Porto, May 1996 (co-supervision with M. C. Guedes).
- J. J. Corado, Optimização de portfolios obrigacionistas, Instituto Superior Técnico, December 1996.
- M. C. Soares, Complementaridade linear em modelos variacionais de mecânica, Universidade de Coimbra, March 1997.
- M. A. Cruz, Programação de dois níveis linear e quadrática, Universidade do Porto, May 1997 (co-supervision with A. M. Faustino).
- M. M. Fonseca, Programação quadrática estritamente convexa e aplicações, Universidade de Coimbra, September 1997.
- J. J. Santos, Programação quadrática e modelos de investimento, Universidade de Aveiro, September 1998.
- S. S. Rosa, Análise e resolução numérica de alguns problemas de optimização de estruturas, Universidade de Coimbra, February 2002 (co-supervision with I. Figueiredo).
- C. P. Baptista, Resolução de Dois Problemas de Optimização em Telecomunicações e em Hidráulica, Universidade de Lisboa, February 2005.

2- Other Academic Degrees

- J. M. Patrício, Um estudo sobre o método do invólucro para matrizes esparsas positivas definidas, Universidade de Coimbra, June 1991.
- L. N. Vicente, Programação de dois níveis, Universidade de Coimbra, November 1992.
- J. L. Soares, Métodos de Newton para optimização com restrições simples, Universidade de Coimbra, December 1993.
- L. M. Fernandes, Problemas de optimização com restrições de limites, Provas para Professor Coordenador, Instituto Politécnico de Tomar, July 1999.
- J. M. Patrício, Algoritmos de pontos interiores para problemas de optimização linear e quadrática, Provas para Professor Adjunto, Instituto Politécnico de Tomar, September 2001.

3 – PhD

- A. M. Faustino, Complementaridade Linear e Aplicação em Optimização Global, Universidade de Coimbra, July 1992.
- F. M. Pires, Problemas Lineares Complementares Monótonos, Universidade do Algarve, December 1994.
- M. G. Queiroz, Três Problemas em Complementaridade e Programação Matemática, Universidade de São Paulo, Brasil, November 2001 (co-supervision with C. Humes).
- L. M. Fernandes, Análise de Algoritmos de Complementaridade e Aplicação em Modelos de Equilíbrio, Universidade de Coimbra, July 2002.
- I. Ribeiro, Optimização Global e Aplicações em Engenharia Estrutural, Universidade do Porto, February 2005 (co-supervision with A. M. Faustino).
- M. C. Brás, Problemas de Programação Matemática com Restrições Lineares de Equilíbrio e Aplicações, Universidade Nova de Lisboa, April 2007.
- J. M. Patrício, Algoritmos de Pontos Interiores para Problemas Complementares Monótonos e suas Aplicações, Universidade de Coimbra, April 2007.
- P. Tavares, Optimização de Gestão de Lamas de ETAR numa Perspectiva Regional, Universidade de Coimbra, Fevereiro 2008 (co-supervision with J. Temido).
- S. Rosa, Problema Complementar de Valores Próprios, Universidade da Beira-Interior, November 2009.
- H. Apolinário, Algoritmos de Pontos Próximos para Problemas de Complementaridade, Universidade Federal do Rio de Janeiro, Brasil, in progress (co-supervision with P. R. Oliveira).

D – COMMUNICATIONS

Invited:

- 3rd Iberian Mathematical Meeting, Braga, October 2010.
- 42^o Simpósio Brasileiro de pesquisa Operacional, Bento Gonçalves, Brasil, August-September 2010.
- ECMI 2010, University of Wuppertal, Germany, July 2010.
- EURO XXIV, Lisboa, July 2010.
- Encontro Nacional da SPM, Leiria, July 2010.
- EUROPT Workshop, Aveiro, July 2010.
- 14th WSEAS International Conference on Applied Mathematics (MATH'09), Tenerife, December 2009.
- IO2009 – 14^o Congresso da APDIO, Caparica, September 2009
- ESMC2009 – 7th EUROMECH Solid Mechanics, Lisbon, September 2009
- 20th International Symposium on Mathematical Programming, Chicago, August 2009
- 4th IFIP TC7 Conference, Buenos Aires, July 2009
- Calculus of Variations and its Applications from Engineering to Economy, New University of Lisbon, September 2008.
- MOPTA 08, University of Guelph, Guelph, Canada, August 2008.
- Encontro Nacional da SPM, Coimbra, June 2008.
- i-Math Intensive School on Mathematical Programming and its Applications, CIEM, Castro Urdiales.
- NCP07 – Nonconvex Programming, Local and Global Approaches, Rouen, December 2007.
- Optimization 2007, Porto, July 2007.
- ISMP2006 - 19th International Symposium on Mathematical Programming, Rio de Janeiro, Brazil, July and August 2006.
- EURO XXI - European Conference on Operational Research, Reykjavik, Iceland, July 2006.
- Workshop on Advances in Continuous Optimization, Reykjavik, Iceland, June and July 2006.
- 29o. Congreso Nacional de Estadística y Investigación Operativa, Tenerife, Spain, May 2006.
- INFORMS Annual Meeting 2005, San Francisco, USA, November 2005.
- International Conference on Complementarity, Duality and Global Optimization in Science and Engineering, Virginia Tech, Virginia, USA, August 2005.
- 17th EURO Mini Conference: Continuous Optimization in Industry, Pecs, Hungary, June 2005.
- Workshop on Applied Optimization, Dresden, Germany, October 2004.
- Encontro Nacional da SPM, Porto, Portugal, May 2004.
- EURO/INFORMS Joint International Meeting, Istanbul, Turkey, July 2003.
- International Conference on Frontiers in Global Optimization, Santorini, Greece, June 2003.
- IV Brazilian Workshop on Continuous Optimization, Rio de Janeiro, Brazil, July 2002.
- Third Contact Mechanics International Symposium, Peniche, Portugal, June 2001.
- X CLAIO - Congreso Latinoamericano de Investigación Operativa, Mexico City, September 2000.
- International Symposium on Mathematical Programming, Atlanta, USA, August 2000.
- INFORMS 99, Philadelphia, USA, November 1999.
- Colloque Instabilité du Frottement, Bourget-du-Lac, France, September 1999.
- International Conference on Complementarity Problems, Madison, USA, June 1999.
- EURO XVI, Brussels, July 1998.
- IV World Congress on Computational Mechanics, Buenos Aires, Argentina, July 1998.

- 7º Encontro Nacional da SPM, February 1998.
- International Symposium on Mathematical Programming, Lausanne, Switzerland, August 1997.
- EURO / INFORMS Joint International Meeting, Barcelona, Spain, July 1997.
- 1ª Conferência Nacional de Telecomunicações, Aveiro, Portugal, April 1997.
- International Conference on Complementarity Problems, Baltimore, USA, November 1995.
- TIMS XXXIII- Singapore, Singapore, June 1995.
- APMOD95, London, April 1995.
- 15th International Symposium on Mathematical Programming, Ann Arbor, USA, August 1994.
- ORSA/TIMS Boston Joint National Meeting, Boston, April 1994.
- IFORS 93, Lisbon, July 1993.
- Optimization Days 1993, Montreal, Canada, May 1993.
- Third Franco-Latinamerican Conference in Applied Mathematics, Santiago, Chile, September 1992.
- EURO XII/TIMS XXXI, Helsinki, Finland, June 1992.
- Optimization Days 1992, Montreal, Canada, May 1992.
- Recent Advances in Global Optimization, Princeton, U.S.A., May 1991.
- APMOD 91-Applied Mathematical Programming and Modelling, London, UK, January 1991.
- NATO Advanced Study Institute: Computer Algorithms for solving linear algebraic systems: the state of art, Il Ciocco, Italy, September 1990.
- Optimization Days 1990, Montreal, Canada, May 1990.
- 1º Seminário Avançado sobre Optimização, Lisboa, December 1982.

Contributed:

- IO2009 – 14ª Congresso da APDIO, Caparica, September 2009
- 7th EUROPT, Remagen, Germany, July 2009
- IO 2008 – 13º Congresso da APDIO., Vila Real, March 2008.
- IO 2006 - 12º Congresso da APDIO, Lisboa, October 2006.
- First International Conference on Modelling, Simulation and Applied Optimization, Dubai, February 2005.
- Optimization 2004, Lisboa, Portugal, July 2004.
- IO2004 -11º Congresso da APDIO, Porto, Portugal, April 2004.
- 18th International Symposium on Mathematical Programming, Copenhagen, Denmark, August 2003.
- XXX IAHS World Congress on Housing, Coimbra, Portugal, September 2002.
- IO 2002 - 10º Congresso da APDIO, Guimarães, Portugal, March 2002.
- Optimization 2001, Aveiro, Portugal, July 2001.
- International Symposium on Mathematical Programming, Atlanta, USA, August 2000.
- IASS-IACM 2000 - Fourth Colloquium on Computation of Shell & Spatial Structures, Crete, Greece, June 2000.
- RECPAD 2000 - Congresso Nacional da Associação Portuguesa de Reconhecimento de Padrões, Porto, Portugal, May 2000.
- IO2000 - 9º Congresso da APDIO, Setúbal, Portugal, April 2000.
- 6º Encontro Nacional de Mecânica Computacional, Aveiro, Portugal, April 2000.
- Second Conference on Operations and Quantitative Management, Ahmedabad, India, January 1999.
- IO 98 - 8º Congresso da APDIO, Faro, Portugal, December 1998.
- Optimization 98, Coimbra, Portugal, July 1998.
- INFORMS Israel Meeting, TelAviv, Israel, June 1998.
- 5º Encontro Nacional de Mecânica Computacional, Guimarães, Portugal, October 1997.
- IO96 - 7º Congresso da APDIO, Aveiro, Portugal, April 1996.
- Optimization 95, Braga, Portugal, July 1995.
- IO94 - 6º Congresso da APDIO, Braga, Portugal, March 1994.
- NATO ASI: Algorithms for Continuous Optimization, Il Ciocco, Italy, September 1993.
- TIMS/ORSA Joint National Meeting, Chicago, USA, May 1993.
- Lisbon Meeting of the International Linear Algebra Society, Lisboa, Portugal, August 1992.
- Fourth SIAM Conference on Optimization, Chicago, USA, May 1992.
- IO92 - 5º Congresso da APDIO, Évora, Portugal, April 1992.
- 15th IFIP Conference on System Modelling and Optimization, Zurich, Switzerland, September 1991.
- 14th International Symposium on Mathematical Programming, Amsterdam, The Netherlands, August 1991.
- Workshop on Large-Scale Optimization, Coimbra, Portugal, July 1991.
- 3ª Conferência sobre Aplicações da Matemática à Economia e à Gestão, Lisboa, Portugal, May 1991.
- TIMS/ORSA Nashville Joint National Meeting, Nashville, USA, May 1991.
- IMACS International Symposium on Iterative Methods in Linear Algebra, Brussels, Belgium, April 1991.
- 1ª Conferência em Estatística e Optimização, Tróia, Portugal, December 1990.
- XV Jornadas Luso-Espanholas de Matemática, Évora, Portugal, September 1990.

- Operations Research 1990, Vienna, Austria, August 1990.
- Las Vegas TIMS/ORSA Joint National Meeting, Las Vegas, USA, May 1990.
- Copper Mountain Conference on Iterative Methods, Copper Mountain, Colorado, USA, April 1990.
- IO89 - 4º Congresso da APDIO, Lisboa, Portugal, December 1989.
- Conferencia en Algebra Lineal y Aplicaciones, Valencia, Spain, October 1989.
- EURO X, Beograd, Yugoslavia, June 1989.
- Third SIAM Conference on Optimization, Boston, USA, April 1989.
- 2ª Conferência sobre Aplicações da Matemática à Economia e à Gestão, Lisboa, Portugal, November 1988.
- 13th Symposium on Mathematical Programming, Tokyo, Japan, August/September 1988.
- EURO IX - TIMS XXVIII, Paris, France, July 1988.
- ORSA-TIMS Joint Meeting, St Louis, USA, October 1987.
- IO 87 - 3º Congresso da APDIO, Coimbra, Portugal, October 1987.
- International Conference on Linear Algebra and Applications, Valencia, Spain, September 1987.
- Martin Beale Memorial Symposium, London, UK, July 1987.
- XII Jornadas Luso-Espanholas de Matemática, Braga, Portugal, May 1987.
- Optimization Days 1987, Montreal, Canada, May 1987.
- Conferência sobre Aplicações da Matemática à Economia e à Gestão, Lisboa, Portugal, December 1986.
- EURO VIII, Lisboa, Portugal, September 1986.
- 1º Ciclo de Conferências em Análise Numérica e Optimização, Coimbra, Portugal, April/May 1986.
- OR Models on Microcomputers, Lisboa, Portugal, September 1985.
- XII Symposium on Mathematical Programming, Boston, USA, August 1985.
- 2º Congresso da APDIO, Porto, Portugal, April 1984.
- Encuentro Internacional de Algebra Lineal y Aplicaciones, Victoria-Gasteiz, Spain, September 1983.
- Encontro Internacional de Álgebra Linear e Aplicações, Coimbra, Portugal, October 1982.
- XI International Symposium on Mathematical Programming, Bonn, Germany, August 1982.

E - PUBLICATIONS

1- BOOKS AND LECTURE NOTES

- 1- Sobre o Problema Inverso dos Valores Próprios, Departamento de Matemática da Universidade de Coimbra, 1974.
- 2- Análise Matemática, vol. 1 e 2, Instituto Superior de Engenharia de Coimbra, 1978.
- 3- A Study of the Linear Complementarity Problems, PhD Thesis, Department of Mathematics and Statistics, Brunel University, 1981.
- 4- Análise Matemática I, Departamento de Matemática, Universidade de Coimbra, 1984.
- 5- 1º Ciclo de Conferências em Análise Numérica e Optimização, co-editor with M. P. Oliveira e M. S. Rosa, Departamento de Matemática da Universidade de Coimbra, 1986.
- 6- Programação Linear, Relatório de um Curso, Concurso para Professor Associado, Universidade de Coimbra, 1987.
- 7- Funções Reais de uma Variável Real, Departamento de Matemática, Universidade de Coimbra, 1988.
- 8- Sistemas de Equações Lineares, co-author com J. Patrício, Departamento de Matemática, Universidade de Coimbra, 1994.
- 9- Matemática 1, Polo da Figueira da Foz da Universidade Católica Portuguesa, 1994.
- 10- Programação Não Linear, Relatório de um Curso, Provas de Agregação, Universidade de Coimbra, 1996.
- 11- Funções Mérito para o Problema Linear Complementar e seus Algoritmos, Texto da Lição de Síntese para Provas de Agregação, Universidade de Coimbra, 1996.
- 12- Matemática Aplicada em Telecomunicações: Que Problemas?, co-editor with M. C. Gouveia, Instituto de Telecomunicações, 1999.
- 13- Mathematical Techniques and Problems in Telecommunications, co-editor with C. Fernandes e C. Salema, Centro Internacional de Matemática 24, 2003.
- 14- Texto de Apoio às Aulas de Álgebra Linear Numérica, Departamento de Matemática, Universidade de Coimbra, 2003.
- 15- Equações Não Lineares e Optimização Unidimensional, co-author with L. Merca Fernandes, Departamento de Matemática, Universidade de Coimbra, 2005.
- 16- Programação Linear, co-author with P. Martins, M. Pascoal e J. Santos, Departamento de Matemática, Universidade de Coimbra, 2006.
- 17- Optimização em Redes, co-author with P. Martins, M. Pascoal e J. Santos, Departamento de Matemática, Universidade de Coimbra, 2006.
- 18- Optimização Numérica, co-autor com J. L. Santos, Departamento de Matemática, Universidade de Coimbra, Setembro 2009

2- PAPERS IN RESEARCH JOURNALS

- 1- Classes of matrices for the Linear Complementarity Problem, Linear Algebra and its Applications 54 (1984) 122-125.

- 2- The duality theory of general quadratic programs, *Portugaliae Mathematica* 42 (1984) 113-121.
- 3- Direct methods for the solution of Linear Complementarity Problems with symmetric positive semi-definite matrices, co-author with F. M. Pires, *Investigação Operacional* 6 (1986) 115-152.
- 4- A program to reorder and solve sparse unsymmetric systems using the envelope method, co-author with G. Mitra e M. Tamiz, *Operations Research Letters* 6 (1987) 257-258.
- 5- Reformulations of mathematical programming problems as linear complementarity problems and an investigation of their solution methods, co-author with G. Mitra, *Journal of Optimization Theory and Applications* 57 (1988) 123-149.
- 6- An enumerative method for the solution of linear complementarity problems, co-author with G. Mitra, *European Journal of Operational Research* 36 (1988) 122-128.
- 7- An experimental investigation of enumerative methods for the linear complementarity problem, co-author with A. M. Faustino, *Computers and Operations Research* 15 (1988) 417-426.
- 8- The solution of the linear bilevel programming problem by using the linear complementarity problem, co-author with A. M. Faustino, *Investigação Operacional* 8 (1) (1988) 77-95.
- 9- A SLCP algorithm for bilinear and concave quadratic programming, co-author with A. M. Faustino, *Investigação Operacional* 8 (2) (1988) 67-87.
- 10- Bard-type methods for the linear complementarity problem with symmetric positive definite matrices, co-author with F. M. Pires, *IMA Journal of Mathematics Applied in Business and Industry* 2 (1988/89) 51-68.
- 11- A comparison between direct and iterative methods for solving large-scale convex quadratic programs on the simplex, co-author with F. M. Pires, *Pesquisa Operacional* 9 (1989) 55-78.
- 12- Direct methods for convex quadratic programs subject to box constraints, co-author with F. M. Pires, *Investigação Operacional* 9 (1) (1989) 23-56.
- 13- A Bard-type method for a generalized linear complementarity problem with a nonsingular M-matrix, co-author with F. M. Pires, *Naval Research Logistics* 37 (1990) 279-297.
- 14- An implementation of Keller's method for two concave optimization problems, co-author with A. M. Faustino, *Investigação Operacional* 10 (2) (1990) 95-109.
- 15- A computational analysis of LCP methods for bilinear and concave quadratic programming, co-author with A. M. Faustino, *Computers and Operations Research* 18 (1991) 645-654.
- 16- Solution of large-scale strictly convex linear complementarity problems, co-author with F. M. Pires, *Investigação Operacional* 11 (1991) 31-51.
- 17- A SLCP method for bilevel linear programming, co-author with A. M. Faustino, *Annals of Operations Research* 34 (1992) 89-106.
- 18- A basic-set algorithm for a generalized linear complementarity problem, co-author with F. M. Pires, *Journal of Optimization Theory and Applications* 74 (1992) 391-411.
- 19- A polynomial method for a generalized linear complementarity problem with a nonsingular M-matrix, co-author with F. M. Pires, *IMA Journal of Mathematics Applied in Business and Industry* 4 (1992) 211-224.
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