

# CURRICULUM VITÆ

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**Nationality:** Portuguese (born 1967)

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## 1 Education

- Ph.D. in Applied Mathematics, Rice University, USA, 1996.
- M.A. in Applied Mathematics, Rice University, USA, 1994.
- M.S. in Optimization, University of Coimbra, Portugal, 1992.
- B.S. in Mathematics (and Operations Research), University of Coimbra, Portugal, 1990.

## 2 Positions

- Full Professor, Department of Mathematics, University of Coimbra, January 2009 –.
- Visiting Full Professor, Department of Computational and Applied Mathematics, Rice University, August 2016 – May 2017.
- Visiting Chercheur Sénior of the Fondation de Coopération Sciences et Technologies pour l'Aéronautique et l'Espace (Réseau Thématique de Recherche Avancée), at CERFACS and Institut National Polytechnique, Toulouse, 2010 – 2015.
- Academic Visitor, Courant Institute of Mathematical Sciences, NYU, September 2009 – April 2010.
- Professeur des Universités, Université Paul Verlaine, Metz, May-June 2009, 2010.
- Associate Professor (tenured, holding *agregação*), Department of Mathematics, University of Coimbra, July 2004 – December 2008.

- Associate Professor (with tenure), Department of Mathematics, University of Coimbra, May 2002 – June 2004.
- Academic Visitor, IBM T. J. Watson Research Center, Mathematical Sciences Department, September 2002 – June 2003.
- Long Term Visitor, IMA, University of Minneapolis, January – March 2003.
- Assistant Professor, Department of Mathematics, University of Coimbra, September 1996 – May 2002.
- Academic Visitor, IBM T. J. Watson Research Center, Mathematical Sciences Department, June and July 1996.
- Ph.D. Student, Rice University, August 1993 – May 1996.
- Teaching Assistant, Department of Mathematics, University of Coimbra, November 1990 – August 1993.
- Monitor, Department of Mathematics, University of Coimbra, November 1988 – November 1990.

### **3 Awards**

- Co-recipient in 2015 of the Lagrange Prize of SIAM (Society for Industrial and Applied Mathematics) and MOS (Mathematical Optimization Society), given every three years for outstanding works in the area of Continuous Optimization.
- 94-96 Finalist of the A. W. Tucker Prize of the Mathematical Optimization Society.
- Ralph Budd Award for the best doctoral thesis of 1996 in the School of Engineering of Rice University.
- Doutor João Farinha Award for the student who finishes a BS in mathematics with the highest GPA.

### **4 Fellowships (selected)**

- Fulbright Scholar to Rice University, August 1993 – May 1996.
- NATO Scholar to Rice University, August 1993 – May 1996.

### **5 Teaching**

- 1996/1997: Calculus (fall and spring), Computacional Mathematics (spring) – computer science undergraduate program

- 1997/1998: Calculus (fall and spring), Computacional Mathematics (spring) – computer science undergraduate program  
Topics of Convex Analysis and Optimization (fall) – math. graduate program
- 1998/1999: Calculus (fall and spring), Computacional Mathematics (spring) – computer science undergraduate program  
Topics of Convex Analysis and Optimization (fall) – math. graduate program
- 1999/2000: Calculus (spring) – computer science undergraduate program  
Nonlinear Programming (spring) – math. undergraduate program
- 2000/2001, 2001/2002: Linear Algebra (fall) – undergraduate program in sciences and engineering  
Nonlinear Programming (spring) – math. undergraduate program
- 2003/2004: Advanced Linear Algebra (spring) – undergraduate program in visual information technology for design  
Nonlinear Programming (spring) – math. undergraduate program
- 2004/2005, 2005/2006: Numerical Mathematics (fall) – math. undergraduate program  
Mathematical Finance (spring) – math. undergraduate and graduate programs
- 2006/2007: Numerical Mathematics (fall) – math. undergraduate program  
Mathematical Finance (fall) – math. undergraduate and graduate programs  
Optimization Methods in Finance (spring) – math. graduate program
- 2007/2008: Object-Oriented Programming (spring) – math. undergraduate and graduate programs  
Optimization Methods in Finance (spring) – math. graduate program
- 2008/2009: Object-Oriented Programming (spring) – math. undergraduate and graduate programs  
Optimization Methods in Finance (spring) – math. graduate program  
Optimization (spring) – PhD math. program
- 2010/2011: Numerical Optimization (fall) – math. graduate program  
Optimization Methods in Finance (spring) – math. and quantitative finance graduate programs  
Optimization (spring) – PhD math. program
- 2011/2012, 2012/2013, 2013/2014, 2014/2015, 2015/2016: Optimization Methods in Finance (fall) – math. and quantitative finance graduate programs  
Numerical Optimization (spring) – math. graduate program  
Mathematical Finance (spring) – math. and quantitative finance graduate programs

## 6 Postdocs and Students Supervised

### 6.1 Postdoctoral Researchers

- E. Mostafa, February 2001 – July 2002.

- R. Silva, January 2008 – April 2009.
- S. R. Pattanaik, August 2011 – July 2012.
- M. Poss, September 2011 – August 2012.
- Z. Zhang, September 2012 – August 2014.
- R. Garmanjani, January 2013 –.

## 6.2 Ph.D. Students

- C. P. Avelino, On Augmented Lagrangian Multiplier Methods, June 1999 – July 2004.
- A. L. Custódio, Applications of Simplex Derivatives to Direct Search Methods, January 2003 – September 2007.
- R. Silva, Analysis and Implementation of Filter Primal-Dual Interior-Point Methods for Non-Linear Programming, May 2001 – October 2007.
- A. M. Monteiro, Estimating Risk-Neutral Probability Density Functions from Options Prices, July 2000 – April 2008.
- R. Garmanjani, Smoothing and Worst Case Complexity for Direct-Search Methods in Non-Smooth Optimization, September 2009 – December 2012.
- M. Li, Inexactness in Decomposition Methods for MINLP, September 2009 – April 2013.
- Y. Diouane (in co-supervision with Professor Serge Gratton at the Institut National Polytechnique de Toulouse), Globally Convergent Evolution Strategies with Application to an Earth Imaging Problem in Geophysics, September 2011 – October 2014.
- M. Dodangeh, Worst Case Complexity of Direct Search under Convexity, September 2011 – November 2014.
- D. Júdice, Trust-Region Methods without using Derivatives: Worst Case Complexity and the Non-Smooth Case, September 2012 – December 2015.
- C. W. Royer (in co-supervision with Professor Serge Gratton at the Université Toulouse 3 Paul Sabatier), Derivative-Free Optimization Methods based on Probabilistic and Deterministic Properties: Complexity Analysis and Numerical Relevance, September 2013 – November 2016.
- A. Moghanni, September 2017 –.
- L. Song, September 2017 –.

### 6.3 Master Students

- H. Rocha, Pattern Search Methods for Molecular Geometry Problems, October 1998 – March 2001.
- R. D. Silva, The Primal-Dual Interior-Point Method for Nonlinear Optimization and its Globalization by the Filter Technique, October 1999 – June 2002.
- M. Figueiredo (co-advised), An Instance of the Tri-Dimensional Bin Packing Problem, September 2007 – July 2008.
- S. Neves (co-advised), Optimization of Routes in Storage Information Centers, September 2007 – July 2008.
- M. Caceiro, Robust Optimization Problems in Portfolio Selection, March 2006 – July 2009.
- A. Bandeira, Computation of Sparse Low Degree Interpolating Polynomials and their Application to Derivative-Free Optimization, October 2009 – July 2010.
- M. Cavaleiro, Sparse Nonlinear Recovery, September 2010 – July 2011.
- R. P. Brito, Efficient Cardinality/Mean-Variance Portfolios, September 2011 – January 2012.
- X. Fernandes, Mathematical Modeling of Option Prices in the Electric Power Sector, September 2012 – September 2013.
- J. Rodrigues, Measuring and Optimizing Risk in Portfolio Selection, September 2014 – July 2015.
- G. Galvan (in co-supervision with Professor Marco Sciandrone at the Università degli Studi di Firenze), Optimization Methods for Recurrent Neural Networks Training, May 2015 – April 2016.
- M. Sereni (in co-supervision with Professor Marco Sciandrone at the Università degli Studi di Firenze), Feature Selection using LASSO Sparse Optimization Methods, May 2015 – April 2016.

## 7 Research

### 7.1 Research Interests

Continuous Optimization, Computational Science and Engineering, and Machine Learning and Data Science.

### 7.2 Editorial Boards

- Associate Editor, Computational Management Science, 2005-.
- Associate Editor, European Journal of Operational Research (EJOR), 2001-2006.
- Editor, EURO Journal on Computational Optimization, 2012-.

- Member of the Editorial Board, Journal of Global Optimization, 2007-2013.
- Member of the Editorial Board, MOS-SIAM Series on Optimization, 2014-.
- Member of the Editorial Board, Optimization Letters, 2006-2013.
- Member of the Editorial Board, Optimization Methods and Software, 2010-.
- Associate Editor, SIAM Journal on Optimization, 2009-.
- Editor, SIAG/Optimization Views-and-News, 2003-2008.
- Associate Editor, TOP, An Official Journal of the Spanish Society of Statistics and Operations Research, 2006-2013.
- Editor, Portugaliae Mathematica, 2007-2012.
- Editor-in-Chief, Portugaliae Mathematica, 2013-.

### **7.3 Editor of Special Numbers and Newsletters**

- Optimization and Engineering, Special Issue on Surrogate Optimization, Vol. 5 (2004).
- Editor, SIAG/Optimization Views-and-News, 2003-2008.
- Associate Editor, Portuguese Operations Research Journal, 2000-.

### **7.4 Boards and Committees (selected)**

- Executive Board, Centro Internacional de Matemática, 2000-2004.
- SIAM Young Mathematician's 50th Anniversary Focus Committee, 2000-2002.
- Committee for the Award for Young Researchers in Continuous Optimization, Mathematical Optimization Society, 2002-2004.
- Director, Centre for Mathematics, University of Coimbra, 2005.
- Co-Director, Area of Mathematics, UT Austin | Portugal Program, 2008-2012.
- Space Trajectory Analysis Group, European Space Agency, 2007-2010.
- Scientific Council, Centro Internacional de Matemática, 2009-.
- Council Member-at-large, Mathematical Optimization Society, 2009-2012.
- Nominating committee Office SIAM Activity Group on Optimization (SIAG/OPT) Fall 2010.
- Selection Committee, SIAM Activity Group on Optimization (SIAG/OPT) Prize, edition 2012-2014.
- Symposium Advisory Committee for ISMP 2018, Mathematical Optimization Society.
- Chair of the Executive Committee, Mathematical Optimization Society, 2015-.

- IBM Scientific Award Committee, editions 2015, 2016.
- Symposium Advisory Committee for ISMP 2021, Mathematical Optimization Society.
- Lecture Committee, Paul Y. Tseng Memorial Lectureship in Continuous Optimization Mathematical Optimization Society, edition 2018.

Academic Administrative Experience (selected):

- Director, Centre for Mathematics, University of Coimbra, 2005.
- Chair of the Graduate Committee, MS Program in Mathematics, University of Coimbra, 2007/2008.
- Chair of the Graduate Committee, MS Program in Quantitative Finance, University of Coimbra, 2007-2016 (except on sabbatical).
- Chair of the Graduate Committee, Joint UCoimbra|UPorto PhD Program in Mathematics, 2014-2015.

## 7.5 Refereeing

Annals of Operations Research. APDIO. Computational and Applied Mathematics. Computational Management Science. Computational Optimization and Applications. European Journal of Operational Research. ‘High Performance Optimization Techniques 97’ (Special Volume). IMA Journal of Numerical Analysis. Investigação Operacional. Investigación Operativa. Journal of Applied Numerical Mathematics. Journal of Convex Analysis. Journal of Mathematical Analysis and Applications. Journal of Optimization Theory and Applications. Linear Algebra and Its Applications. Mathematics of Operations Research. Mathematical Programming (A, B, and C). Mathematical Reviews. Naval Research Logistics. Operations Research. Optimal Control, Applications and Methods Optimization. Optimization and Engineering. Optimization Methods and Software. Portugaliæ Mathematica. 4OR – Quarterly Journal of the Belgium, French and Italian Operation Research Societies. SIAM Book Series. SIAM Journal on Numerical Analysis. SIAM Journal on Optimization. SIAM Journal on Scientific Computing. SIAM Review.

## 7.6 Review of research grant proposals

Agence Nationale de la Recherche (ANR), France. Dutch Science Council (NWO). Fonds de la Recherche Scientifique, Belgium. MITACS, The Mathematics of Information Technology and Complex Systems, Network of Centres of Excellence, Canada. National Research Foundation, South Africa. National Science Foundation, USA. NSERC, the Natural Sciences and Engineering Research Council, Canada. Research Council of Norway. WWTF, the Vienna Science and Technology Fund.

## 7.7 Funding

- PI: Algorithms, Analysis and Software for Engineering Inverse Design Optimization Problems, 1997-1998, NATO Linkage Grant CRG 960945 (6370 EUR).

- Member: Numerical Linear Algebra and Optimization and Applications to Structural Engineering, Genetics, and Finance, 1996-1999, Science and Technology Portuguese Foundation, Praxis XXI 2/2.1/MAT/346/94 (PI: Joaquim J. Júdice).
- Member: Optimization in Physics, 1999-2000, Science and Technology Portuguese Foundation, Praxis/P/FIS/14195/1998 (PI: Orlando Oliveira).
- Member: Integrated Supervision and Real-Time Optimization of Chemical Processes, 1999-2000, Science and Technology Portuguese Foundation, Praxis/C/EQU/11239/1998 (PI: Nuno Oliveira).
- PI: Nonlinear Optimization, 2001-2004, Science and Technology Portuguese Foundation, POCTI 35059/99 (32422 EUR), 2 PhD members, Application Review: MB+ (4.5 from 1 to 5).
- PI: Continuous Constraints: Updating the Technology, 2000-2004, Future and Emerging Technologies (FET), European Union, IST-2000-26063 (266719 EUR), 1 PhD member, Application Review: Excellent (5 from 1 to 5).
- PI: Derivative-Free Optimization and Applications, 2005-2008, Science and Technology Portuguese Foundation, POCI/MAT/59442/2004 (23000 EUR), 2 PhD members, Application Review: Excellent (5 from 1 to 5).
- Member: Simulation and Optimization — Advanced Computing in Basic Research, 2004-2007, Science and Technology Portuguese Foundation, REEQ/628/FIS/2005 (PI: Carlos Fiolhais).
- PI: Computational Mathematical Finance, 2007-2010, Science and Technology Portuguese Foundation, PTDC/MAT/64838/2006 (69000 EUR), 3 PhD members, Application Review: Excellent (5 from 1 to 5).
- PI: Research Grant, co-directorship, Area of Mathematics, UT Austin | Portugal Program, 2008-2012 (167007 EUR).
- PI: Non-linear Programming Solver for Space Trajectory Optimization (eNLP Solver), 2008-2010, European Space Agency, GSTP-4 G603-45EC (134750 EUR), 2 PhD members.
- PI: Versatility of Filtering Techniques in Non-Linear Programming Optimization, 2009-2010, European Space Agency, RFQ/3-12584/08/NL/ST (42000 EUR), 3 PhD members.
- PI: Derivative-Free Optimization: Future Challenges and New Applications, 2010-2012, Science and Technology Portuguese Foundation, PTDC/MAT/098214/2008 (158256 EUR), 4 core PhD members, Application Review: 98 from 0 to 100.
- PI: Sparse and Smoothing Methods for Nonlinear Optimization of Complex Models, 2012-2014, Science and Technology Portuguese Foundation, PTDC/MAT/116736/2010 (78500 EUR), 3 PhD members, Application Review: Excellent (5 from 1 to 5).
- PI (within Univ. Coimbra): mobiOS – mobility Operating System, July 2012 – May 2013, QREN / Agência de Inovação, (29765 EUR), involving the companies Critical Software (main partner) and INTELI, 3 PhD members.



- Member of the Management Committee, Mathematical Optimization in the Decision Support Systems for Efficient and Robust Energy Networks, 2013-2017, European Union, COST TD1207.
- PI: Etude Mathématique d'Algorithmes d'Optimisation Globales Multi Niveaux utilisés sur des Plateformes Massivement Parallèles destinés à la Résolution de Problèmes Industriels, January 2016 – June 2017, CERFACS, Toulouse (30000 EUR).
- PI of the Optimization Group: **MobiWise: From Mobile Sensing to Mobility Advising**, January 2017 – December 2019, Science and Technology Portuguese Foundation (among others), (337949 EUR), 4 PhD members, Application Review: 4.9 from 1 to 5, for the overall project.

## 7.8 Meetings

- Chair of the organizing committee of Optimization 98, July 20-22, 1998.
- Organizer of The Contribution of Survey Engineering in the Context of the National Economy, April 28th, 1999.
- Organizer of the First Workshop on Nonlinear Optimization: “Interior-Point and Filter Methods”, October 27-30, 1999.
- Organizer of the Second Debate on Mathematical Research in Portugal, April 1-2, 2000.
- Member of the organizing committee of Mathematical Webs, October 18-20, 2000.
- Member of the organizing committee of Optimization 2001, July 23-25, 2001.
- Co-chair of the National Meeting of the Portuguese Mathematical Society, February 5-8, 2002.
- Organizer of the Second Workshop on Nonlinear Optimization: “Theoretical Aspects of Surrogate Optimization”, May 16-17, 2002.
- Member of the organizing committee of Optimization 2004, July 25-28, 2004.
- Member of the organizing committee of the Eighth SIAM Conference on Optimization, May 15-18, 2005.
- Organizer of the CIM Thematic Term on Optimization, Portugal, July 2005.
- Co-organizer of the Workshop on Optimization in Finance, CIM-Portugal, July 5-9, 2005.
- Co-organizer of the Workshop on Optimization in Medicine, CIM-Portugal, July 20-22, 2005.
- Co-organizer of the Third Workshop on Nonlinear Optimization / Workshop on PDE Constrained Optimization, CIM-Portugal, July 26-29, 2005.
- Co-organizer of the Industrial Workshop, LCM-CMUC, October 14-15, 2005.
- Chair of the program committee and member of the organizing committee of Optimization 2007, July 23-25, 2007.

- Co-organizer of the Workshop on Mathematics: Analysis, Modeling, Optimization and Simulation (MAMOS), Program UT Austin | Portugal, University of Texas at Austin, October 15-26, 2007.
- Co-organizer of the Follow-up Workshop on Optimization in Finance, CIM-Portugal, October 26-27, 2007.
- Co-organizer of the Summer Course and Workshop on Optimization in Machine Learning, Program UT Austin | Portugal, May 31–June 7, 2010.
- Chair of the program committee and member of the organizing committee of Optimization 2011, July 24-27, 2011.
- Member of the program committee of the 21st International Symposium on Mathematical Programming, August 19-24, 2012.
- Co-chair of the Cluster of Sessions on Derivative-Free and Simulated-Based Optimization, 21st International Symposium on Mathematical Programming, August 19-24, 2012.
- Chair of the program committee, 3rd Conference on Optimization Methods and Software, May 13-17, 2012.
- Chair of the organizing committee and member of the program committee, The Fourth International Conference on Continuous Optimization (ICCOPT) 2013, July 27–August 1, 2013.
- Member of the program committee of the 11th EUROPT Workshop on “Advances in Continuous Optimization”, June 26-28, 2013.
- Member of the program committee of the EURO mini-Conference on Optimization in the Natural Sciences, February 5-9, 2014.
- Chair of the program committee and member of the organizing committee of Optimization 2014, July 28-30, 2014.
- Member of the program committee of the 2015 Joint International Meeting AMS-EMS-SPM, June 10-13, 2015.
- Member of the program committee of the EURO Mini Conference 2015 on Improving Healthcare: New Challenges, New Approaches, March 30–April 1, 2015.
- Co-chair of the Cluster of Sessions on Derivative-Free and Simulated-Based Optimization, 22nd International Symposium on Mathematical Programming, July 12-17, 2015.
- Chair of the program committee and member of the organizing committee of Optimization 2017, September 6-8, 2017.
- Member of the program committee, 4th Conference on Optimization Methods and Software, December 16-20, 2017.

## 8 Presentations and Lectures

### 8.1 Plenary and Invited Talks

- Workshop on Iterative Methods for Large Scale Nonlinear Problems, Logan, USA, September 1995.
- Mathematische Optimierung, Oberwolfach, Germany, January 1997.
- II Panamerican Workshop on Scientific Computing and Applied Mathematics, Gramado, Brazil, September 1997.
- Summer School of the Portuguese Mathematical Society, University of Aveiro, Portugal, September 1997.
- School of Finite Elements and Applications, Centro Internacional de Matemática, University of Coimbra, Portugal, September/October 1998.
- Semi-Plenary Talk, APDIO – National Meeting, Oporto, Portugal, April 2004.
- Plenary Talk, Workshop on Applied Optimization Challenges, Models, and Methods, Technische Universität Dresden, Germany, October 2004.
- Plenary Talk, Terceiro Workshop Anual de Engenharia de Processos e Sistemas, Department of Chemical Engineering, April 2005.
- Plenary Talk, SPM – National Meeting, Lisbon, Portugal, June 2006.
- Plenary Talk, Second International Workshop on Surrogate Modelling and Space Mapping for Engineering Optimization, Technical University of Denmark, Lyngby, Denmark, November 2006.
- Iberian Conference in Optimization, International Center for Mathematics, Coimbra, Portugal, November 2006.
- Plenary Talk, Workshop on New Problems and Innovative Methods in Nonlinear Optimization, International School of Mathematics “G. Stampacchia”, Ettore Majorana Centre for Scientific Culture, Erice, Italy, August 2007.
- Plenary Talk, 13th French-German-Czech Conference on Optimization, University of Heidelberg, Germany, September 2007.
- Workshop on Mathematics: Analysis, Modeling, Optimization and Simulation (MAMOS), UT Austin | Portugal Program, University of Texas at Austin, October 2007.
- Invited Minitutorial, Ninth SIAM Conference on Optimization, Boston, USA, May 2008.
- Plenary Talk, Fifth Workshop on Continuous Optimization, Campinas State University, Brazil, July 2008.
- Invited Tutorial, Graduate School in Systems, Optimization, Control and Networks (SOCN), K. U. Leuven, Leuven, Belgium, November and December 2008.

- 1st Porto Meeting on Mathematics for Industry, Porto, April 2009.
- RTRA STAE Workshop on Advances Methods and Perspectives in Nonlinear Optimization and Control Toulouse, France, February 2010.
- Plenary Talk, 8th EUROPT Workshop on “Advances in Continuous Optimization”, Aveiro, Portugal, July 2010.
- Plenary Talk, The Third International Conference on Continuous Optimization (ICCOPT), Santiago, Chile, July 2010.
- Plenary Talk, Weekend on Numerical Optimization, Campinas State University, Brazil, July/August 2010.
- Plenary Talk, Workshop Investigação Operacional na Robótica, Coimbra, Portugal, March 2011.
- Plenary Talk, Journées de l’Optimisation / Optimization Days, Montréal, Canada, May 2011.
- Workshop on Optimization and Learning: Theory, Algorithms and Applications, Université Paul Verlaine, Metz, France, May 2011.
- Plenary Talk, The 5th Sino-Japanese Optimization Meeting, Beijing, China, September 2011.
- Keynote Speaker, Workshop on Design Optimization, ABB Corporate Research, Basel, Switzerland, November 2011.
- Plenary Talk, 3rd Conference on Optimization Methods and Software, Chania, Greece, May 2012.
- Plenary Talk, 43rd Annual Conference of the Italian Operational Research Society, Vietri sul Mare, Italy, September 2012.
- Plenary Talk, LANCS International Workshop on Discrete and Nonlinear Optimisation, University of Cardiff, UK, May 2013.
- Plenary Talk, The Third European Conference on Computational Optimization (EUCCO) 2013, Chemnitz University of Technology, Germany, July 2013.
- Plenary Talk, International Conference on Recent Advances on Optimization, RTRA-STAE, CERFACS, Toulouse, France, July 2013.
- Invited Tutorial, Graduate School in Systems, Optimization, Control and Networks (SOCN), Université Catholique de Louvain, Louvain-la-Neuve, Belgium, August 2013.
- Plenary Talk, 26th IFIP TC7 Conference 2013 on System Modelling and Optimization, Alpen-Adria University in Klagenfurt, Germany, September 2013.
- Plenary Talk, 5th Iberian Mathematical Meeting, Aveiro, Portugal, October 2014.
- Plenary Talk, Journées Annuelles 2014 du GdR MOA (CNRS), Université de Limoges, France, December 2014.

- Plenary Talk, Second Seville Workshop on MINLP, Universidad de Sevilla, Spain, March 2015.
- Sparse Days in St Girons III, CIMI, Saint Girons, France, June/July 2015.
- Plenary Talk, 15th MOPTA – Modeling and Optimization: Theory and Applications, Lehigh University, USA, July 2015.
- Main Invited Talk, Workshop on Advances in Optimization with Application to Data Assimilation, CIMI semester on High Performance Linear and Nonlinear Methods for Large Scale Applications, CERFACS, France, January 2016.
- Workshop on Nonlinear Optimization Algorithms and Industrial Applications, The Fields Institute, Toronto, Canada, June 2016.
- Workshop I: Optimization and Optimal Control for Complex Energy and Property Landscapes, Institute for Pure & Applied Mathematics (IPAM) at UCLA, October 2017.

## 8.2 Invited Talks at Minisymposia and Special Sessions

- Optimization Days, Montreal, Canada, May 1992.
- Optimization Days, Montreal, Canada, May 1993.
- IFORS93, Lisbon, Portugal, July 1993.
- 15th International Symposium on Mathematical Programming, Ann Arbor, USA, August 1994.
- 1995 SIAM Annual Meeting, Charlotte, USA, October 1995.
- Fifth SIAM Conference on Optimization, Victoria, Canada, May 1995.
- 16th International Symposium on Mathematical Programming, Genève, Switzerland, August 1997.
- ProfMat 97, Figueira da Foz, Portugal, November 1997.
- Optimization 98, Coimbra, Portugal, July 1998.
- John E. Dennis - Richard A. Tapia Day, Sixth SIAM Conference on Optimization, Atlanta, USA, May 1999.
- Fast Solution of Discretized Optimization Problems, WIAS, Berlin, Germany, May 2000.
- 17th International Symposium on Mathematical Programming, Atlanta, USA, August 2000.
- Optimization 2001, Aveiro, Portugal, July 2001.
- Optimization 2001, Aveiro, Portugal, July 2001.
- Seventh SIAM Conference on Optimization, Toronto, Canada, May 2002.

- 18th International Symposium on Mathematical Programming, Lyngby, Denmark, August 2003.
- Eighth SIAM Conference on Optimization, Stockholm, Sweden, May 2005.
- Workshop on Computational Mathematics, Centre for Mathematics, University of Coimbra, February 2007.
- Journées de l'Optimisation / Optimization Days, Montréal, Canada, May 2011.
- Tenth SIAM Conference on Optimization, Darmstadt, Germany, May 2011.
- Invited Tutorials, Departamento de Estadística e Investigación Operativa, Universidad Rey Juan Carlos, Madrid, Spain, April 2011 and March 2012.
- 21st International Symposium on Mathematical Programming, Berlin, Germany, August 2012.
- 11th EUROPT Workshop on "Advances in Continuous Optimization", Florence, Italy, June 2013.
- "Optimization, Control and Applications in the Information Age", organized in honor of the 60th birthday of Professor Panos Pardalos Porto Carras, Greece, June 2014.

### 8.3 Contributed Talks

Not shown to keep the CV short.

### 8.4 Seminars in Universities and Research Centers

- Engineering Optimization Group, University of Waterloo, Canada, December 1992.
- Interdisciplinary Center for Applied Mathematics, Virginia Polytechnic Institute and State University, USA, March 1995.
- GERAD, École Polytechnique de Montréal, Canada, April 1996.
- GERAD, École Polytechnique de Montréal, Canada, May 1996.
- Mathematical Sciences Department, IBM T. J. Watson Research Center, USA, July 1996.
- University of Trier, Department of Mathematics, Germany, November 1996.
- Pontifícia Universidade Católica, Porto Alegre, Brasil, September 1997.
- Centre for Computational Physics, University of Coimbra, Portugal, December 1998.
- Departamento de Estadística y Econometría, Universidad Carlos III de Madrid, Spain, February 1999.
- Telecommunications Institute, Coimbra, Portugal, September 2000.
- University of Coimbra – Calouste Gulbenkian Foundation, Portugal, March 2001.

- Department of Mathematics, Technical University of Lisbon, Portugal, April 2001.
- Centre for Computational Physics, University of Coimbra, Portugal, December 2000.
- Institut für Mathematik, Universität Graz, Austria, July 2002.
- Department of Mathematical Sciences, Carnegie Mellon University, USA, October 2002.
- Center for Nonlinear Analysis, Carnegie Mellon University, USA, October 2002.
- Sandia National Laboratories, Albuquerque, USA, November 2002.
- Department of Mathematics, Simon Fraser University, Canada, November 2002.
- Institute for Mathematics and its Applications, Minneapolis, USA, January 2003.
- Institute for Mathematics and its Applications, Minneapolis, USA, February 2003.
- Institute for Mathematics and its Applications, Minneapolis, USA, March 2003.
- Courant Institute of Mathematical Sciences, New York University, New York, USA, April 2003.
- Department of Operations Research & Financial Engineering, Princeton University, Princeton, USA, May 2003.
- Département de Mathématique, Facultés Universitaires Notre-Dame de la Paix, Namur, Belgium, July 2003.
- Department of Mathematics, University of Aveiro, Portugal, November 2003.
- Department of Industrial Engineering, Boğaziçi University, Istanbul, Turkey, July 2005.
- Department of Computational and Applied Mathematics, Rice University, Houston, USA, October 2007.
- Department of Physics, University of Coimbra, March 2008.
- OPTEC, K. U. Leuven, Leuven, Belgium, November 2008.
- CERFACS, Toulouse, France, January 2009.
- LITA, Université Paul Verlaine, Metz, France, May 2009.
- Courant Institute of Mathematical Sciences, New York University, New York, USA, October 2009.
- Department of Computational and Applied Mathematics, Rice University, Houston, USA, February 2010.
- School of Operations Research and Information Engineering, Cornell University, Ithaca, USA, March 2010.
- CERFACS, Toulouse, France, July 2010.

- Computer Science Department, University of Coimbra, Portugal, December 2011.
- Edinburgh Research Group in Optimization, School of Mathematics, University of Edinburgh, March 2012.
- Edinburgh Compressed Sensing Seminars, University of Edinburgh, March 2012.
- Computational Mathematics and Applications Seminars, University of Oxford, January 2014.
- Séminaire Pluridisciplinaire d'Optimisation de Toulouse (SPOT), ENSEEIHT, Institut National Polytechnique de Toulouse, June 2015.
- Department of Information Engineering, Università degli Studi di Firenze, Italy, April 2016.
- Department of Computer, Control, and Management Engineering, Sapienza Università di Roma, Italy, June 24, 2016.
- Department of Computer, Control, and Management Engineering, Sapienza Università di Roma, Italy, June 27, 2016.
- Department of Computer, Control, and Management Engineering, Sapienza Università di Roma, Italy, June 28, 2016.
- Department of Computational and Applied Mathematics, Rice University, Houston, USA, August 2016.
- Scientific Computing Seminar, Department of Mathematics, University of Houston, USA, September 2016.
- Courant Institute of Mathematical Sciences, New York University, New York, USA, April 2017.
- Applied Math Colloquium, Department of Mathematics, University of California, Los Angeles (UCLA).

## 9 Publications

### 9.1 Books

- A. R. Conn, K. Scheinberg, and **L. N. Vicente**, Introduction to Derivative-Free Optimization, MPS/SIAM Book Series on Optimization, SIAM, Philadelphia, 2009.

### 9.2 Edited Books and Volumes

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