

Curriculum Vitae

Luis Torgo
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1 Personal Data

- Luis Fernando Rainho Alves Torgo
- Born on the 26th of February of 1966, in Felgueiras, Portugal
- Institutional address: LIACC, R. Campo Alegre, 823, 4150 PORTO, PORTUGAL
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2 Education

- Ph.D. on Computer Science at the Faculty of Sciences of the University of Porto, March 2000.
- Summer School on Artificial Intelligence for Multi-Agent Systems: methodologies and applications , Troia, Portugal, 1994.
- Pedagogical and Scientific abilities examinations at the Faculty of Economics of the University of Porto (equivalent to M.Sc. by Portuguese regulations), 1992.
- Summer School on Advanced Topics in Artificial Intelligence, Czech Republic, 1992.
- Summer School on Machine Learning (European Summer School on Learning - 91), Belgium, 1991.
- Degree in Systems and Informatics Engineering from the University of Minho, Portugal, 1989.

3 Professional Activities

- Data Mining Project for the company MBA Consultores, concerning data from a survey of the company Soane Distribuição, 2005.
- Development of an autonomous trading system for a private financial institution, 2003-2004.
- Faculty of Economics of the University of Porto, Assistant Professor (since 2000).
- Development of the program EcoTerme for the company Termolan (1995).

- Faculty of Economics of the University of Porto, Assistente (1993-2000).
- Development of a client management system for the company JOUCOMATIC (1992).
- Faculty of Economics of the University of Porto, Assistente Estagiario (1990-92).
- Researcher of the Laboratory of Artificial Intelligence and Computer Science (LIACC) of the University of Porto (since 1989).

4 Teaching Activities

Faculty Subjects

- Lecturer of *Informatics* at the Faculty of Economics, University of Porto (since 1990).
- Lecturer of *Complements of Artificial Intelligence* on the Computer Science degree at the Faculty of Sciences, University of Porto (1998-2000).
- Lecturer and Responsible for the subject *Databases and Programming* at the Masters on Data Analysis and Decision Support Systems, Faculty of Economics, University of Porto (since 2000).
- Lecturer of *Knowledge Discovery from Data I* at the Masters on Data Analysis and Decision Support Systems, Faculty of Economics, University of Porto (since 2000).
- Lecturer of *Methodologies of Artificial Intelligence* at the Masters on Artificial Intelligence and Computer Science, Faculties of Economics, Engineering and Sciences, University of Porto (since 2000).
- Lecturer and Responsible for the subject *Knowledge Extraction from the Internet* at the Masters on Artificial Intelligence and Computer Science, Faculties of Economics, Engineering and Sciences, University of Porto (since 2002).
- Lecturer and Responsible for the subject *Time Series Analysis* at the Masters on New Media and E-science, Josef Stefan International Postgraduate School (since 2005).

Short Term Courses

- Lecture of a Hands on Session entitled “Data Mining with R” on the ACAI Summer School on Knowledge Discovery, July 2005.
- Lecture on the topic “An Autonomous Trading System” at the International Summer School on Data Analysis, Lisbon, Portugal, September, 2004.

- Lecture on the topic “Time Series Analysis” at the International Summer School on Neural Networks (NN’03), Porto, Portugal, July, 2003.
- Lecture on the topic “Financial Applications” at the International Summer School on Neural Networks (NN’02), Porto, Portugal, July, 2002.
- Lecture on the topic “Time Series Analysis” at the International Summer School on Neural Networks (NN’02), Porto, Portugal, July, 2002.
- Lecture on the topic ”Introduction to Regression Methods useful in Data Mining” at the International Summer School on Knowledge Discovery and Data Mining: Methods and Applications, Caminha, Portugal (1998).
- Invited lecture on ”Regression Problems” at the Master on Artificial Intelligence and Computer Science of the Faculties of Economics, Science and Engineering of the University of Porto (1998).
- Course given at the University of Sao Paulo, Brazil under the topic ”Applications of Propositional Learning Systems: examples and techniques” (1994).
- Invited lecture on ”Propositional Rule Learning” given at the Faculty of Sciences of the University of Porto, in the Complements of Artificial Intelligence course of the Computer Science degree (1994).
- Lecturer of the topic ”Numerical Classification and Prediction” at the International Workshop on Artificial Intelligence Techniques, Tempus EC project (JEN-01191-93), Czech Republic (1994).
- Invited lecture on ”Machine Learning” given at the Faculty of Sciences of the University of Porto, in one course of the Computer Science degree (1993).
- Lecturer of the topic ”Introduction to Machine Learning” at the International Diploma Course in Artificial Intelligence , Tempus EC project, Czech Republic (1993).
- Lecturer of several short courses on Computer Science sponsored by the European Community at the Faculty of Economics, University of Porto (1990-1991).
- Lecturer of several short courses on Computer Science sponsored by the European Community at the University of Minho (1987-1989).

Theses Supervision

PhD Theses

- Supervision of the Ph.D Thesis (co-supervisor: Joaquim Costa) of Rita Ribeiro, entitled ”Modelling Rare Cases”, Faculty of Sciences, University of Porto, since Feb, 2005.

- Supervision of the Ph.D Thesis of Pedro Domingues de Almeida, entitled "Intelligent data analysis for financial time series prediction", University of Beira Interior, finished in Dec, 2003.

MSc Theses

- Supervision of the Master thesis of Jorge Barbosa, entitled "Using Multiple Models for Detecting Regime Changes in Financial Time Series", Masters on Data Analysis and Decision Support Systems, Faculty of Economics, University of Porto, since October 2004.
- Supervision of the Master thesis of Joana Marques, entitled "Efficiency Issues on Regression Trees", Masters on Artificial Intelligence and Computing, Faculties of Sciences, Economics and Engineering, University of Porto, finished on Sep, 2005.
- Co-supervision of the Master thesis (supervisor: Joaquim Costa) of Clara Gonçalves, entitled "Regression Approaches using Clustering", Masters in Statistics, Faculty of Sciences, University of Porto, finished on June 2005.
- Supervision of the Master thesis (co-supervisor: Carlos Soares) of António Loureiro, entitled "Fraude Detection", Masters on Data Analysis and Decision Support Systems, Faculty of Economics, University of Porto, since October 2003.
- Supervision of the Master thesis of Rita Ribeiro, entitled "Models for Predicting Rare Events", Masters on Artificial Intelligence and Computing, Faculties of Sciences, Economics and Engineering, University of Porto, finished on Feb, 2004.
- Supervision of the Master thesis (co-supervisor: Pavel Brazdil) of Mario Oldemiro Fernandes, entitled "Artificial Intelligence techniques Applied to Financial Time Series Forecasting", Masters on Data Analysis and Decision Support Systems, Faculty of Economics, University of Porto, finished on Oct, 2002.
- Co-supervision of the Master Thesis (supervisor: Alipio Jorge) of Ana Silva, entitled "Information Exrtaction from Reports of Non-financial Portuguese Companies", Masters on Data Analysis and Decision Support Systems, Faculty of Economics, University of Porto, finished on Oct, 2002.
- Co-supervision of the Master thesis (supervisor: Joaquim Pinto da Costa) of Silvia Maria Sousa Amorim, entitled "The choice of the number of clusters in the K means method", Masters on Statistics, Faculty of Sciences, University of Porto (finished on Dec, 2001).
- Supervision of the Master thesis (co-supervisor: Joaquim Pinto da Costa) of Cesar Duarte Alves da Rocha, entitled "The Recursive Least Squares Algorithm for Local Regression", Masters on Statistics, Faculty of Sciences, University of Porto (finished on Nov, 2001).

Other

- Supervisor of a post-graduation work by Ana Ferreira of the Computer Science degree of the Faculty of Sciences of the University of Porto (1993-1994).

Academic Juris

PhD Thesis

Participation on the Juris of the thesis that has supervised, plus the following by invitation:

- Kwok Pan Pang, “Statistics for Structural Break Detection and Their Application to Forecasting and Statistical Process Control”, Monash University, Australia. External Examiner, Dec 2005.
- Vitor Lobo, “Ship Noise Classification, a contribution to prototype based classifier design”, New University of Lisbon, Portugal. External Examiner, Jan 2003.

Master Thesis

Participation on the Juris of the thesis that has supervised, plus the following by invitation:

- Susana Pereira, “Análise de Séries Temporais no Domínio das Telecomunicações Móveis”, Masters on Statistics and Information Management, ISEGI, New University of Lisbon, Nov 2004.
- Raul Moisés, “Modelo Predictivo, Baseado em Redes Neurais, para Previsão em Séries Temporais com Origem em Sistemas Financeiros”, New University of Lisbon, Portugal, Mar 2003.

5 Research Activities

Main Topics of Interest

- Artificial Intelligence in general.
- Machine Learning in general.
- Knowledge Discovery in Databases in general.
- Propositional Learning methods.
- Classification and Regression methods.
- Tree-based models.

- Financial applications of learning methods.
- Ecological applications of learning methods.
- Time Series Prediction associated with Complex Dynamic Systems.

Prizes

- Sabbatical scholarship for a 6 month stay at Stern School of Business, NY, USA, by the Portuguese Science Foundation (FCT).
- 3rd International Competition "Protecting rivers and streams by monitoring chemical concentrations and algae communities" , organized by ERUDIT in conjunction with COIL, the cluster of four European Research Networks (ERUDIT, EvoNet, MLNet and NeuroNet). Declared runner-up winner by the international jury of this data analysis competition.

Publications

Journals

- L. Torgo and J.P. Costa. Clustered partial linear regression. *Machine Learning*, 50(3):303–319, 2003.
- L. Torgo and J. Gama. Regression using classification algorithms. *Intelligent Data Analysis*, 1(4), 1997.

Invited Papers

- L. Torgo. Computationally efficient linear regression trees. In Jajuga, K., Sokolowski, A., and Bock, H., editors, *Classification, Clustering and Data Analysis: recent advances and applications (Proc. of IFCS 2002)*, Studies in Classification, data analysis, and knowledge organization, pages 409–415. Springer, 2002.
- L. Torgo. Predicting the density of algae communities using local regression trees. In *Proceedings of the European Congress on Intelligent Techniques and Soft Computing (EUFIT'99)*, 1999.

Published Conference Papers (with International Reviewing Committee)

- L. Torgo and R. Ribeiro. Predicting Rare Extreme Values. To appear in *Proceedings of the 10th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'2006)*. Springer, 2006.
- L. Torgo and J. Marques. Adapting Peephaling to Regression Trees. In *Proceedings of the 12th EPIA*. Springer, 2005

- L. Torgo. Regression Error Characteristic Surfaces. In *Proceedings of the Eleventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2005)*. Chicago, USA. ACM, 2005.
- R. Ribeiro and L. Torgo. A Comparative Study on Predicting Algae Blooms in River Douro, Portugal. In *Proceedings of the V European Conference on Ecological Modelling (ECEM-2005)*, 2005.
- A. Loureiro, L. Torgo, and C. Soares. Outlier detection using clustering methods: a data cleaning application. In *Proceedings of KNet Symposium on Knowledge-based Systems for the Public Sector*, 2004.
- A. Silva, A. Jorge, and L. Torgo. Selection of table areas for information extraction. In *Proceedings of the 3rd International Workshop in Document Analysis and its Applications (DLIA 2003)*, 2003.
- A. Silva, A. Jorge, and L. Torgo. Automatic selection of table areas in documents for information extraction. In *Proceedings of Portuguese AI Conference (EPIA '03)*, number 2902. Springer, 2003.
- R. Ribeiro and L. Torgo. R. Ribeiro and L. Torgo. Predicting harmful algae blooms. In *Proceedings of Portuguese AI Conference (EPIA '03)*, number 2902 in LNAI. Springer, 2003.
- L. Torgo and R. Ribeiro. Predicting outliers. In N. Lavrac, D. Gamberger, L. Todorovski, and H. Blockeel, editors, *Proceedings of Principles of Data Mining and Knowledge Discovery (PKDD'03)*, number 2838 in LNAI, pages 447–458. Springer, 2003.
- T. Hellström and L. Torgo. Post processing trading signals for improved trading performance. In A. Zanasi, C. A. Brebbia, N. F. F. E. Ebecken, and P. Melli, editors, *Data Mining III*, pages 437–447. WIT Press, 2002.
- L. Torgo. A study on end-cut preference in least squares regression trees. In P. Brazdil and A. Jorge, editors, *Proceedings of the Portuguese AI Conference (EPIA 2001)*, number 2258 in LNAI, pages 104–115. Springer, 2001.
- P. Almeida and L. Torgo. The use of domain knowledge in feature construction for financial time series prediction. In P. Brazdil and A. Jorge, editors, *Proceedings of the Portuguese AI Conference (EPIA '01)*, number 2258 in LNAI, pages 116–129. Springer, 2001.
- L. Torgo and J. P. Costa. Clustered partial linear regression. In R. Michalski and P. Brazdil, editors, *Proceedings of the Fifth International Workshop on Multistrategy Learning (MSL-2000)*, 2000.
- L. Torgo and J. P. Costa. Clustered partial linear regression. In R. Manataras and E. Plaza, editors, *Proceedings of the 11th European Conference on Machine Learning (ECML 2000)*, number 1810 in LNAI, pages 426–436. Springer, 2000.

- L. Torgo and J. P. Costa. Clustered multivariate regression. In Kiers, Rasson, Groenen, and Schader, editors, *Data Analysis, Classification, and Related Methods*. Springer, 2000.
- L. Torgo. Partial linear trees. In P. Langley, editor, *Proceedings of the 17th International Conference on Machine Learning (ICML 2000)*, pages 1007–1014. Morgan Kaufmann Publishers, 2000.
- L. Torgo. Efficient and comprehensible local regression. In Terano, Liu, and Chen, editors, *Proceedings of the 4th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2000)*, number 1805 in LNAI, pages 376–379. Springer, 2000.
- L. Torgo. Error estimates for pruning regression trees. In C. Nedellec and C. Rouveirol, editors, *Proceedings of the 10th European Conference on Machine Learning*, number 1398 in LNAI. Springer Verlag, 1998.
- L. Torgo. A comparative study of reliable error estimators for pruning regression trees. In H. Coelho, editor, *Proceedings of the Iberoamerican Conference on AI (IBERAMIA-98)*, 1998.
- J. Gama, L. Torgo, and C. Soares. Dynamic discretization of continuous attributes. In H. Coelho, editor, *Proceedings of the Iberoamerican Conference on AI (IBERAMIA-98)*, 1998.
- L. Torgo. Functional models for regression tree leaves. In D. Fisher, editor, *Proceedings of the 14th International Conference on Machine Learning*. Morgan Kaufmann Publishers, 1997.
- L. Torgo and J. Gama. Search-based class discretization. In *Proceedings of the European Conference on Machine Learning (ECML-97)*, number 1224 in LNAI. Springer, 1997.
- L. Torgo and J. Gama. Regression by classification. In ?? (ed.), editor, *Proceedings of SBIA'96 (Brazilian AI Symposium)*, number ?? in LNAI. Springer, 1996.
- L. Torgo. Controlled redundancy in incremental rule learning. In P. Brazdil, editor, *European Conference on Machine Learning (ECML-93)*, number 667 in LNAI, pages 185–195. Springer-Verlag, 1993.
- L. Torgo. Rule combination in inductive learning. In P. Brazdil, editor, *European Conference on Machine Learning (ECML-93)*, number 667 in LNAI, pages 384–389. Springer Verlag, 1993.
- P. Brazdil, M. Gams, S. Sian, L. Torgo, and Van de Velde. Learning in distributed systems and multi-agent environments. In Y. Kodratoff, editor, *Machine Learning: EWSL-91 (European Working Session on Learning)*, Lecture Notes in Artificial Intelligence, pages 412–423. Springer-Verlag, 1991.

- P. Brazdil and L. Torgo. Knowledge acquisition via knowledge integration. In B. et al. Wielinga, editor, *Current Trends in Knowledge Acquisition*, pages 90–104. IOS Press, 1990.

Other Papers with Reviewing

- L. Torgo. Kernel regression trees. In *Poster papers of the European Conference on Machine Learning (ECML-97)*, 1997.
- L. Torgo. Applying propositional learning to time series prediction. In Y. et al Kodratoff, editor, *Workshop on Statistics, Machine Learning and Knowledge Discovery in Databases*, 1995.
- L. Torgo. Data fitting with rule-based regression. In J. Zizka and P. Brazdil, editors, *Workshop on Artificial Intelligence Techniques (AIT'95)*, 1995.
- L. Torgo and M. Kubat. Knowledge integration and forgetting. In *Czechoslovak AI Conference*, 1991.

Papers without Reviewing

- L. Torgo. Pruning Regression Trees in Large Data Sets. In *Proceedings of JOCLAD-97*, Porto, Portugal, 1997.

Theses

- L. Torgo. *Inductive Learning of Tree-based Regression Models*. PhD thesis, Faculty of Sciences, University of Porto, 1999.
- L. Torgo. A aprendizagem através de exemplos - trabalho de síntese, 1992. Provas de Aptidão Pedagógica e Capacidade Científica.
- L. Torgo. Relatório de uma aula prática sobre windows, 1992. Provas de Aptidão Pedagógica e Capacidade Científica.
- L. Torgo. Aprendizagem em Sistemas Informáticos, 1989. Report of the final graduation work, University of Minho, Portugal.

Internal Reports

- L. Torgo. Efficient and Comprehensible Local Regression. LIACC, Machine Learning Group, Technical Report-99.1 (shorter version appeared in PAKDD-2000), 1999.
- L. Torgo. A Comparative Study of Reliable Error Estimators for Pruning Regression Trees. LIACC, Machine Learning Group, Technical Report-98.2, 1998.

- L. Torgo. Sequence-based Methods for Pruning Regression Trees. LIACC, Machine Learning Group, Technical Report-98.1, 1998.
- L. Torgo. RT programs, an users manual. LIACC, Machine Learning Group, Technical Report-97.1, 1997.
- L. Torgo. Tools for Comparative Experiments using K-Fold Cross Validation. LIACC, Machine Learning Group, Technical Report-96.2, 1996.
- L. Torgo. RECLA program. LIACC, Machine Learning Group, Technical Report-96.1, 1996.
- L. Torgo. YAILS, an incremental learning program. LIACC, Machine Learning Group, Technical Report-92.1, 1992.
- P. Brazdil and L. Torgo. Knowledge Integration and Learning. LIACC, Machine Learning Group, Technical Report-91.1, 1991.

Software

- CLRT, a multi-strategy learning system that learns clustered regression models, 2000.
- RT, a system that learns local regression trees [www.liacc.up.pt/~ltorgo/RT/], 1998.
- RECLA, a systems that deals with regression using classification systems, 1997.
- KERTI, a system that learns kernel regression trees, 1996.
- Development of the program EcoTerme for the company Termolan, 1996.
- R^2 , a regression rules learner, 1995.
- YAILS, an incremental classification rules learner, 1992.
- Development of a client management system for the company JOUCO-MATIC, 1990.

Research Projects

Participation in Funded Projects

- Project with a private institution on the development of an intraday stock trading system, [2003].
- POSI national project MODAL, [2003-2004].
- Praxis XXI national project TSAM, [2001-2002].
- IST EC project Sol-Eu-Net, [2000-2003].

- EC Esprit project METAL [1998-2001].
- Praxis XXI project ECO [1997-2000].
- EC Esprit project n. 5170 StatLog [1991-1994].
- EC Esprit project n. 3059 ECOLES [1989-1992].

Local Projects

- Learning Clustered Regression Models (with J. P. Costa), [2000-2001].
- Learning Tree-based Regression Models, [1997-].
- Mapping Regression into Classification (with João Gama), [1996].
- A Propositional Learning Library in C (with João Gama), [1995-1997].
- Learning Regression Rules, [1995].
- A Propositional Learning Library in YAP-prolog, [1993-1995].
- Incremental Learning of Classification Rules, [1991-1993].
- Knowledge Integration and Multi-Agent Learning (with Pavel Brazdil), [1989-1991].

Submitted Projects

- National project, CEF, creation of a Computational Economics and Finance Laboratory at the University of Porto, together with the laboratories LIACC, CEMPRE and CETE.

Research Networks

- EC Esprit Network of Excellence (n.7115) in Machine Learning.

Conference Presentations

- *Adapting Peepholing to Regression Trees*, talk at the conference *12th EPIA (EPIA-2005)*. Covilhã, Portugal, Dec 2005.
- *Regression Error Characteristic Surfaces*, talk at the conference *Eleventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2005)*. Chicago, USA, Aug 2005.
- *Predicting Outliers*, talk at the conference *Principles of Data Mining and Knowledge Discovery (PKDD'03)*. Cavtat, Croácia, Setembro 2003.
- *Predicting Outliers*, talk at the *International Workshop on Data Mining and Adaptive Modelling Methods for Economics and Management* Porto, Portugal, Setembro 2003.

- *Computationally Efficient Linear Regression Trees*, talk at an invited session on Classification and Regression Trees at the 8th International Federation of Classification Societies (IFCS'2002) conference. Krakow, Poland, July 2002.
- *A study of End-Cut preference in Least Squares Regression Trees*, talk at the Encontro Português de Inteligência Artificial (EPIA'01), Porto, Portugal, December, 2001.
- *Partial Linear Trees*, talk at the 17th International Conference on Machine Learning (ICML 2000), Stanford, California, USA, July, 2000.
- *Clustered Multivariate Regression*, talk at the 7th Conference of the International Federation of Classification Societies (IFCS-2000), Namur, Belgium, July, 2000.
- *Clustered Partial Linear Regression*, talk given in the 5th International Workshop on Multistrategy Learning (MSL-2000), Guimarães, Portugal, June, 2000.
- *Clustered Partial Linear Regression*, talk given at the 11th European Conference on Machine Learning (ECML 2000), Barcelona, May, 2000.
- *Efficient and Comprehensible Local Regression*, talk given at the Pacif-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2000), Kyoto, Japan, April 2000.
- *Predicting the Density of Algae Communities using Local Regression Trees*, invited talk at the 7th European Congress on Intelligent Techniques and Soft Computing, Aachen, Germany, September, 1999.
- *Predicting the Density of Algae Communities using Local Regression Trees*, talk given at the 2nd International Workshop on Extraction of Knowledge from Data Bases (EKDB'99), Évora, Portugal, 1999.
- *A Comparative Study of Reliable Error Estimators for Pruning Regression Trees*, talk given at the Iberoamerican Conference on AI (IBERAMIA-98), Lisbon, Portugal.
- *Error Estimators for Pruning Regression Trees*, talk at the European Conference on Machine Learning (ECML98), Chemnitz, Germany, 1998.
- *Pruning Regression Trees in Large Datasets*, talk at Jornadas de Classificação e Análise de Dados (JOCLAD97), Porto, Portugal, 1997.
- *Tree-based Regression for Large Datasets*, talk at the Workshop on KDD of the Portuguese AI conference (EPIA97), Coimbra, Portugal, 1997.
- *Functional Models for Regression Tree Leaves*, talk given at the International Conference on Machine Learning (ICML97), Nashville, Tennessee, USA, 1997.

- *Kernel Regression Trees*, poster at the European Conference on Machine Learning (ECML97), Prague, Czech Republic, 1997.
- *Search-based Class Discretization*, talk at the European Conference on Machine Learning (ECML97), Prague, Czech Republic, 1997.
- *Data Fitting with Rule-based Regression*, talk at the Workshop on Artificial Intelligence Techniques (AIT'95), Brno, Czech Republic, 1995.
- *Controlled Redundancy in Incremental Rule Learning*, talk at the European Conference on Machine Learning (ECML-93), Vienna, Austria, 1993.
- *Knowledge Integration and Forgetting*, talk at the Czechoslovak Conference on AI, 1991.
- *Distributed Knowledge Integration*, talk at the Panel on Learning in Distributed Systems. European Working Session on Learning (EWSL-91), Porto, Portugal, 1991.

Invited Presentations

- Non-uniform Cost Surfaces for Predicting Rare Extreme Values, invited seminar at Josef Stefan Institute, Slovenia, January 2006.
- An autonomous trading system, invited talk at the International Summer School on Data Analysis, ISG, Lisbon, Portugal, September 2004.
- *Um sistema de trading intraday autónomo*, invited talk at the Faculty of Economics, University of Porto, January 2004.
- Mining DNA microarray data: techniques and applications, invited talk at Institute for Molecular and Cell Biology, Porto, Portugal, November 2003.
- *Modelos de Previsão da Qualidade da Água*, invited talk at *Jornadas em Informática (JOIN'03)*, University of Minho, Braga, Portugal, June 2003.
- *Inteligência Artificial, da ficção à realidade*, invited presentation at the 2nd *Ciclo de Conferências em Cibercultura*, Guarda, Outubro de 2002.
- Presentation of the Machine Learning group of LIACC, at the ISTEC, Porto, May, 2001.
- *Descoberta de Conhecimento em Bases de Dados (Data Mining)*, invited talk at the Engineering Institute of Porto (ISEP), May, 2001.
- Presentation of the Machine Learning group of LIACC at the company Novabase, Lisbon, February, 2001.
- *Árvores de Regressão Locais*, invited talk at the Informatics Department of the University of Minho, September, 2000.

- *Descoberta de conhecimento em bases de dados (data mining)*, invited talk given at IX Jornadas de Informática of the University of Beira Interior, Covilhã, Portugal, May 2000.
- *Abordagens Híbridas ao Problema da Regressão Múltipla*, invited talk at the Department of Applied Mathematics of the Faculty of Sciences, University of Porto, April, 2000.
- *Abordagens Híbridas ao Problema da Regressão Múltipla*, invited talk at "Ciclo de Conferências em Estatística e Aplicações" organized by the Faculties of Economics Sciences and Engineering of the University of Porto, by the University Católica and by the University Portucalense, Porto, Portugal, 1999.
- *Árvores de Regressão*, invited talk at the Faculty of Economics, University of Porto, April, 1999.
- *Indução de Árvores de Regressão*, invited talk at the Faculty of Sciences of the New University of Lisbon, January, 1999.
- *Árvores de Regressão - aplicações e métodos*, invited talk at the Department of Applied Mathematics of the Faculty of Sciences, University of Porto, November, 1998.
- *Métodos Inductivos e Extração de Conhecimento*, talk at the Workshop on Applications of AI, LIACC, Porto, Portugal, 1996.
- *European ESPRIT projects*, invited talk at the Panel "Applications of AI" in a Seminar on Applications of AI, University of São Paulo - campus São Carlos, São Carlos, Brazil, 1994.
- *Controlled Redundancy in Incremental Rule Learning*, talk at the Josef Stefan Institute, Ljubljana, Slovenia, 1993.
- *YAILS, an incremental rule learning system*, talk given at the Faculty of Electrical Engineering, Prague, Czechoslovakia, 1992.
- *Sistemas Periciais e Aprendizagem - ferramentas de apoio à decisão*, talk at the 11th EJC, Maia, Portugal, 1991.

Scientific Reviewing

Participation in Program Committees

- IADIS International Conference - Applied Computing 2006.
- The 20th Annual ACM Symposium on Applied Computing (SAC'2005), track on Data Streams.
- The First International Conference on Advanced Data Mining and Applications (ADMA 2005).

- Portuguese AI Conference (EPIA'05).
- The 5th IEEE International Conference on Data Mining, ICMD'2005.
- The 16th European Conference on Machine Learning, ECML'2005 (program committee member and area chair).
- 9th European Conference on Principles and Practice of Knowledge Discovery, PKDD'2005 (program chair).
- The 4th IEEE International Conference on Data Mining, ICMD'2004.
- The 21st International Conference on Machine Learning, ICML'2004.
- The 17th Brazilian Symposium on Artificial Intelligence, SBIA'2004.
- 8th European Conference on Principles and Practice of Knowledge Discovery, PKDD'2004.
- 15th European Conference on Machine Learning, ECML'2004.
- 14th European Conference on Machine Learning, ECML'2003 (program committee member and workshop chair).
- 7th European Conference on Principles and Practice of Knowledge Discovery, PKDD'2003 (program committee member and workshop chair).
- 1st International Workshop on Data Mining and Adaptive Modelling Methods for Economics and Management, 2003.
- Portuguese AI Conference (EPIA'01), 2001.
- Workshop on Artificial Intelligence Techniques for Financial Time Series Analysis (AIFTSA, program chair), 2001.

Journals

- Decision Support Systems, Elsevier Science. [reviewing]
- Machine Learning Journal, Kluwer Academic Publishers. [reviewing]
- Journal of Artificial Intelligence Research, Morgan Kaufmann. [reviewing]
- Intelligent Data Analysis, Elsevier Science. [reviewing]
- International Journal of Human-Computer Studies. [reviewing]
- AI Communications. [reviewing]

Conferences

- International Conference on Machine Learning: ICML'99, ICML'2004.
- European Conference on Machine Learning: EWSL'91, ECML'93, ECML'94, ECML'95, ECML'97, ECML'98, ECML'2000, ECML'2001, ECML'2003, ECML'2004, ECML'2005.
- Knowledge Discovery in Databases (KDD): KDD'01.
- European Conference on Principles and Practice of Knowledge Discovery in Databases: PKDD'99, PKDD'2003, PKDD'2004, PKDD'2005.
- International Joint Conference on Artificial Intelligence: IJCAI'99.
- European Conference on Artificial Intelligence: ECAI'94, ECAI'98, ECAI'02.
- Iberoamerican Conference on Artificial Intelligence: IBERAMIA'98, IBERAMIA'2000, IBERAMIA'02.
- International Workshop on Artificial Intelligence Techniques: AIT'95, AIT'96.
- Portuguese Conference on Artificial Intelligence: EPIA'93, EPIA'95, EPIA'97, EPIA'99, EPIA'01, EPIA'03, EPIA'05.
- Brazilian Symposium on Artificial Intelligence: SBIA'02, SBIA'04.
- International Federation of Classification Societies: IFCS'2000.

Organization of Scientific Events

- 9th European Conference on Principles and Practice of Knowledge Discovery, PKDD'2005 Program chair
- 14th European Conference on Machine Learning, ECML'2003 Workshop chair
- 7th European Conference on Principles and Practice of Knowledge Discovery, PKDD'2003 Workshop chair
- International Workshop on Data Mining and Adaptive Modelling Methods for Economics and Management, 2003. Organizing committee member
- Workshop on Artificial Intelligence for Financial Time Series Analysis (AIFTSA, www.liacc.up.pt/~ltorgo/AIFTSA/), 2001. Program Chair and Workshop Organizer.

Participation in Conferences

- 12th Portuguese Conference on Artificial Intelligence, EPIA 2005, Covilhã, Portugal, December, 2005.
- 16th European Conference on Machine Learning, ECML'2005, Porto, Portugal, October, 2005.
- 9th European Conference on Principles and Practice of Knowledge Discovery, PKDD'2005, Porto, Portugal, October, 2005.
- 11th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2005), Chicago, USA, August, 2005.
- 14th European Conference on Machine Learning, ECML'2003, Cavtat, Croatia, September, 2003.
- 7th European Conference on Principles and Practice of Knowledge Discovery, PKDD'2003, Cavtat, Croatia, September, 2003.
- International Workshop on Data Mining and Adaptive Modelling Methods for Economics and Management, Porto, Portugal, September 2003.
- 8th International Federation of Classification Societies Conference (IFCS'2002), Krakow, Poland, July, 2002.
- Seminar on Data Mining and Decision Support in Marketing, Porto, Portugal, December, 2001.
- Workshop on Artificial Intelligence Techniques for Financial Time Series Analysis, Porto, Portugal, December, 2001.
- 10th Encontro Português de Inteligência Artificial (EPIA'01), Porto, Portugal, December, 2001.
- 17th International Conference on Machine Learning (ICML 2000), Stanford, California, USA, July, 2000.
- 7th Conference of the International Federation of Classification Societies (IFCS-2000), Namur, Belgium, July, 2000.
- 5th International Workshop on Multistrategy Learning (MSL-2000), Guimarães, Portugal, June, 2000.
- 11th European Conference on Machine Learning (ECML 2000), Barcelona, May, 2000.
- 4th Pacif-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2000), Kyoto, Japan, 2000.
- 9th Portuguese AI Conference (EPIA'99), Évora, Portugal, 1999.

- European Congress on Intelligent Techniques and Soft Computing (EU-FIT'99), Aachen, Germany, 1999.
- 16th International Conference on Machine Learning (ICLM'99), Bled, Slovenia, 1999.
- Ibero-American Conference on Artificial Intelligence (IBERAMIA'98), Lisbon, Portugal, 1998.
- European Conference on Machine Learning (ECML'98), Chemnitz, Germany, 1998.
- Portuguese AI Conference (EPIA'97), Coimbra, Portugal, 1997.
- Jornadas de Classificação e Análise de Dados (JOCLAD'97), Porto, Portugal, 1997.
- Conference on Computational Learning Theory (COLT'97), Nashville, USA, 1997.
- International Conference on Machine Learning (ICML'97), Nashville, USA, 1997.
- European Conference on Machine Learning (ECML'97), Prague, Czech Republic, 1997.
- International Workshop on Artificial Intelligence Techniques (AIT'95), Brno, Czech Republic, 1995.
- European Conference on Machine Learning (ECML'95), Heraclion, Greece, 1995.
- European Conference on Machine Learning (ECML'94), Catania, Italy, 1994.
- Portuguese AI Conference (EPIA'93), Porto, Portugal, 1993.
- European Conference on Machine Learning (ECML'93), Vienna, Austria, 1993.
- International Workshop on ILP (ILP'93), Bled, Slovenia, 1993.
- International Conference on Machine Learning (ICML'92), Aberdeen, Scotland, 1992.
- Czechoslovak AI Conference, Prague, Czechoslovakia, 1991.
- European Working Session on Learning (EWSL'91), Porto, Portugal, 1991.
- International Workshop on ILP, Viana do Castelo, Portugal, 1991.
- ESPRIT Conference, Brussels, Belgium, 1990.

- European Knowledge Acquisition Workshop (EKAW'90), Netherlands, 1990.
- Portuguese AI Conference (EPIA'89), Lisboa, Portugal, 1989.
- European Working Session on Learning (EWSL'89), Montpellier, France, 1989.
- Portuguese AI Conference (EPIA'87), Braga, Portugal, 1987.

Visits to Research Labs

- Josef Stefan Institute, Ljubljana, Slovenia, January 2006, 1 week.
- Stern School of Business, University of New York, New York, USA, 2004.
- University of São Paulo - campus São Carlos, São Carlos, Brazil, 1994.
- Technical University of Brno, Brno, Czech Republic, 1994.
- Faculty of Electrotechnical Engineering, Ljubljana, Slovenia, 1993.
- Josef Stefan Institute, Ljubljana, Slovenia, 1993.
- The University of Aberdeen, Aberdeen, Scotland, 1992.
- The University of Strathclyde, Glasgow, Scotland, 1992.
- The Turing Institute, Glasgow, Scotland, 1992.

6 Other Activities

Managing Activities

- Member of the ECML-PKDD Steering Committee, since 2005.
- Responsible for the Web pages of the Faculty of Economics of the University of Porto, since 2005.
- Member of the board of the Portuguese AI Society (APPIA, www.appia.pt), since 1999.

Memberships of Societies

- Member of the International Machine Learning Society.
- Member of the Portuguese AI Society.