

## XAVIER LLORÀ, Ph.D.

*National Center for Supercomputing Applications*  
*University of Illinois at Urbana Champaign*  
1205 W. Clark Street, 2028 NCSA Building, Urbana, IL 61801  
Phone: 1-217-265 0894 — FAX: 1-217-244 5705  
WWW: <http://www.uiuc.edu/~xllora> — <http://dita.ncsa.uiuc.edu/xllora>  
E-mail: [xllora@uiuc.edu](mailto:xllora@uiuc.edu)

Updated: March 30, 2008

---

### 1 RESEARCH INTERESTS

Genetic and evolutionary algorithms, machine learning and data mining, adaptive human-computer interaction, creativity and innovation support in collaborative design and decision-making processes, bioinformatics, data-intensive applications, data-intensive flow architecture and components, semantic web technologies and storage.

### 2 EDUCATION

**1998–2002 (February)** PH.D DEGREE IN COMPUTER SCIENCE, Enginyeria i Arquitectura La Salle, Ramon Llull University, Barcelona, European Union (Catalonia, Spain). Thesis title: “*Genetics-Based Machine Learning using Fine-grained Parallelism for Data Mining.*”

**2000 (September)** ADVANCED STUDIES DEGREE, Enginyeria i Arquitectura La Salle, Ramon Llull University, Barcelona, European Union (Catalonia, Spain).

**1996–1998** COMPUTER ENGINEERING DEGREE, Enginyeria i Arquitectura La Salle, Ramon Llull University, Barcelona, European Union (Catalonia, Spain). Thesis title: “*Automatic Classification with Genetic Algorithms using the Pittsburgh approach.*”

**1993–1996** TECHNICAL DEGREE IN COMPUTER ENGINEERING, Enginyeria i Arquitectura La Salle, Ramon Llull University, Barcelona, European Union (Catalonia, Spain). Thesis title: “*Self-teaching tools for Genetic Algorithms on MS Windows Platforms.*”

### 3 RESEARCH EXPERIENCE

**2006–present** Researcher at the *Data-Intensive Technologies and Applications* (DITA) group, National Center for Supercomputing Applications (NCSA), University of Illinois at Urbana Champaign, Urbana, IL, USA.

**2005–present** Research Assistant Professor at the *Illinois Genetic Algorithms Laboratory* (IlliGAL), Department of Industrial and Enterprise Systems Engineering, University of Illinois at Urbana Champaign, Urbana, IL, USA.

**2003–present** Team leader of the DISCUS project. This project involves the development of innovative chance discovering methodologies. The project relies on data mining techniques, knowledge management tools, interactive genetic algorithms, and human-based genetic algorithms—among others.

- 2003–present** Collaborator of the group of *Design, Synthesis, and Structure of Peptides and Proteins: Molecular Recognition*, Institute of Biomedical Research (IRBB), Barcelona Science Park (PCB), Barcelona, Catalonia, Spain, EU.
- 2003–present** Collaborator of the *Automated Learning Group* (ALG), National Center for Supercomputing Application (NCSA), University of Illinois at Urbana Champaign, IL, USA.
- 2003–2005** Postdoctoral research associate at the *Illinois Genetic Algorithms Laboratory* (IlliGAL), Department of General Engineering, University of Illinois at Urbana Champaign, IL, USA.
- 2003–2005** Postdoctoral research associate at the *Automated Learning Group* (ALG), National Center for Supercomputing Application (NCSA), University of Illinois at Urbana Champaign, IL, USA.
- 2000–2002** “*Design and Implementation of Predictive Data Mining using Parallel and Distributed Evolutionary Algorithms*,” Research Group in Intelligent Systems. Enginyeria i Arquitectura La Salle, Ramon Llull University.
- 2000–2002** “*Design and Implementation of Machine Learning techniques for the Diagnosis of Breast Cancer*.” Project: “*Breast cancer diagnosis using Computer Vision and Machine Learning techniques*.” Sponsor: *Fondo de Investigación Sanitaria (Instituto Carlos III), FIS 00/0033-02* (Spanish Government). Ramon Llull University and University of Girona.
- 2000–2002** “*Design and Implementation of Predictive Data Mining using Parallel and Distributed Evolutionary Algorithms*,” Research Group in Intelligent Systems. Enginyeria i Arquitectura La Salle, Ramon Llull University.
- 1998–2002** Research assistant at the Research Group in Intelligent Systems, Enginyeria i Arquitectura La Salle, Ramon Llull University.
- 2000–2001** “*Design and Implementation of the Web Work-flow for the 4th Catalan Conference on Artificial Intelligence (CCIA’2001)*,” Department of Computer Science, Enginyeria i Arquitectura La Salle, Ramon Llull University.
- 1999–2000** “*Design and Implementation of a Distributed Object-oriented Framework for the Cooperation and Competition of Intelligent Agents*,” Research Group in Intelligent Systems. Enginyeria i Arquitectura La Salle, Ramon Llull University.
- 1998–2000** “*Design of Machine Learning techniques for Distance-Learning Platforms*”. Project: “*Study and implementation of Artificial Intelligence tools for Distance Learning Tools and ATM networks*.” Sponsor: *Consejo de Investigaciones Científicas Y Tecnológicas, TEL98-0408-C02-02* (Spanish Government). Ramon Llull University, University of Girona and The Open University of Catalonia.

## 4 TEACHING EXPERIENCE

- Spring 2007** GE/IE 498-ECI, “*Enterprise Collaboration and Innovation Support Systems*” (1 credit course). Department of Industrial and Enterprise Systems Engineering, University of Illinois at Urbana-Champaign.
- 1998–2002** “*Introduction to Intelligent Systems*” (30 hours course), Enginyeria i Arquitectura La Salle, Ramon Llull University.
- 1998–1999** “*Introduction to Programming*” (two semester course, 120 hours course). Enginyeria i Arquitectura La Salle, Ramon Llull University, Barcelona, European Union (Catalonia, Spain).
- 1997–1999** Teacher of “*Algorithms and Data Structures*” (two semester course, 120 hours course). Enginyeria i Arquitectura La Salle, Ramon Llull University, Barcelona, European Union (Catalonia, Spain).

## 5 AWARDS AND GRANTS

### 5.1 AWARDS

**GECCO-2007 Humies awards.** Two entries won two bronze Humies awards at the human-competitive results competition at the 2007 Genetic and Evolutionary Computation Conference.

**GECCO 2007 Best paper award.** Best paper nomination in Estimation of Distribution Algorithms track during Genetic and Evolutionary Computation Conference 2007.

**IECES 2007 Best paper award.** Best paper award 2007 International Conference on Enterprise Information Systems.

**GECCO 2005 Best paper nomination.** Best paper nomination in Estimation of Distribution Algorithms track during Genetic and Evolutionary Computation Conference 2005.

**GECCO 2004 Best paper nomination.** Best paper nomination in Learning Classifier Systems track during Genetic and Evolutionary Computation Conference 2004.

**1999–2002** FI Fellowship (grant-no FI1999-00719). Sponsor: *Departament d'Universitats, Recerca i Societat de la Informació, Generalitat de Catalunya* (Catalan Government).

**1993–1996** Becas del Ministerio de Educación. Sponsor: *Ministerio de Educación y Ciencia*, Spanish Government.

### 5.2 GRANTS

**2005–2008** Co-PI in “*Enhancing Command Communication and Innovation with SAINT: Semantics Adaptation, and Influence in Networked Teams*” project, Air Force Office of Scientific Research. Grant Number FA9550-06-1-0370. Principal Investigator Prof. David E. Goldberg.

**2004–2005** Co-PI in “*Tracking Conceptual Influence Through a Temporally Sequenced Set of Documents*” project, National Center for Advance Secure Systems Research under Office of Naval Research Grant Number N00014-01-1-0175. Principal Investigator Prof. David E. Goldberg.

**2004–2005** Co-PI in “*DISCUS : Distributed Innovation and Scalable Collaboration in Uncertain Settings*” project, Technology Research, Education, and Commercialization Center (TRECC) under Office of Naval Research Grant Number N00014-01-1-0175. Principal Investigator Prof. David E. Goldberg.

**2004–2005** Co-PI in “*Evolutionary algorithms for de novo peptide design*” project, Fundación Banco Bilbao Vizcaya Argentaria (BBVA). Led by the Institute of Biomedical Research of Barcelona (IRBB), Parc Científic de Barcelona. Amount 75,126 EUR.

## 6 PATENTS

- Goldberg, D. E., M. Welge, and X. Llorà (2004), X. *Methods and Systems for Collaboration, Decision Support, and Knowledge Management*. Patent appl 11/119,636. US utility patent pending.
- Llorà, X., K. Sastry and D. E. Goldberg (2007) *Methods and Systems for Interactive Computing*. US utility patent pending.

## 7 PROFESSIONAL ACTIVITIES

### 7.1 CONFERENCE ORGANIZATION

- NCSA/iliGAL Gathering on Evolutionary Learning (NIGEL'2006).
- International Workshop on Learning Classifier Systems Organizer (IWLCS'2006).
- International Workshop on Learning Classifier Systems Organizer (IWLCS'2005).
- Learning Classifier Systems and Other Genetics-Based Machine Learning Track Chair, Genetic and Evolutionary Computation Conference (GECCO'2005).
- Electronic Work-flow Chair, 4th Catalan Conference on Artificial Intelligence (CCIA'2001).

### 7.2 CONFERENCE PROGRAM COMMITTEES AND OTHER ACTIVITIES

- Genetic and Evolutionary Computation Conference (GECCO'2008).
- 11th International Workshop on Learning Classifier Systems (IWLCS2008).
- Genetic and Evolutionary Computation Conference (GECCO'2007).
- 10th International Workshop on Learning Classifier Systems (IWLCS2007).
- Genetic and Evolutionary Computation Conference (GECCO'2006).
- 9th International Workshop on Learning Classifier Systems (IWLCS2006).
- Special issue on Learning Classifier Systems of the *Natural Computing* Journal, Springer, (reviewer).
- Special issue on Intelligent Data Mining of the *Data & Knowledge Engineering* Journal, Elsevier, (reviewer).
- *IEEE Transaction on Evolutionary Computation*, (reviewer).
- Second Australian Conference on Artificial Life (ACAL'2005).
- Genetic and Evolutionary Computation Conference (GECCO'2005).
- 8th International Workshop on Learning Classifier Systems (IWLCS2005).
- Parallel Problem Solving from Nature (PPSN'2004).
- *IEEE Systems, Man and Cybernetics Part-B* (reviewer).
- Genetic and Evolutionary Computation Conference (GECCO'2004).
- 7th International Workshop on Learning Classifier Systems (IWLCS2004).
- Special Issue on Knowledge Extraction and Incorporation in Evolutionary Computation of the *IEEE Transactions on Systems, Man, and Cybernetics*, (reviewer).
- Genetic and Evolutionary Computation Conference (GECCO'2003).
- 6th International Workshop on Learning Classifier Systems (IWLCS2003).
- Special Issue on Learning Classifier Systems of the *Journal of Evolutionary Computation*, MIT press, (reviewer).

- Special Issue on Data Mining of the *Transaction on Evolutionary Computational*, IEEE, (reviewer).
- Workshop on Real-Time Decision Support and Diagnosis Systems (RTDSDS2002).
- 5th International Workshop on Learning Classifier Systems (IWLCS2002).

### 7.3 MEMBERSHIPS

**2005–present** Member of ACM SIGEVO.

**2004–present** Member of the United States Fencing Association, Illinois Division. Ranked foil fencer (D05, E006).

**2001–2005** Member of the International Society of Genetic and Evolutionary Computation.

### 7.4 MAJOR CONSULTING

**2004–2005** **Nextumi Inc.**, Genetic algorithms in social networking & search web sites, Cincinnati, Ohio. (Now ShareThis)

## 8 INVITED TALKS AND SEMINARS

### 8.1 KEYNOTE SPEAKER

**2006, December.** “*Information Technologies for Supporting Human Innovation and Creativity*”, Institute of People-Centered Computation (IPCC), Bristol, UK.

**2005, June.** “*Innovation and Creativity Support: Fusing Human and Computer Efforts using Genetic Algorithms*”, Keynote Speaker, Mexican Conference on Evolutionary Computation (COMCEV’2005).

### 8.2 LECTURES

**2006, September.** “*Combating user fatigue and contradictions in subjective-based optimization schemes*”, Artificial Intelligence - Machine Learning Seminars, Computer Science Department, University of Illinois at Urbana-Champaign.

**2004, March.** “*Enhanced Innovation: A fusion of Chance Discovery and Evolutionary Computation to foster Creative Processes and Decision Making*”, Artificial Intelligence - Machine Learning Seminars, Computer Science Department, University of Illinois at Urbana-Champaign.

**2003, September.** “*Machine Learning for Evolutionary Computation - Evolutionary Computation for Machine Learning*”, Artificial Intelligence - Machine Learning Seminars, Computer Science Department, University of Illinois at Urbana-Champaign.

### 8.3 INVITED TALKS

**2007, March.** “*Evolution and Information Technologies to Support Innovation and Creativity*”, Cubes for Innovation: Information Systems for Design and Marketing, Tokyo, Japan.

**2007, March.** “*Innovation and Creativity Support for Real-World Online Marketing*”, Boeing Corporation, Seattle.

**2006, September.** “*Evolutionary Tools for Human-Innovation and Creativity*”, DTM-2006 Synthesis and Innovation, Philadelphia.

**2003, July.** “*Data Mining with Learning Classifier Systems*”, Invited talk, Genetic and Evolutionary Computation Conference (GECCO’2004), Chicago.

## 9 SOFTWARE

### 9.1 GENETIC ALGORITHMS

- **AgExp**: Self-teaching tools for genetic algorithms on MS Windows platforms.
- **E2K**: Competent genetic algorithms for D2K.

### 9.2 GENETICS-BASED MACHINE LEARNING

- **CCS**: Genetics-based machine learning platform based on estimation of distribution algorithms.
- **E2K**: Competent genetics-based machine learning for D2K.
- **Genifer**: Automatic classification environment with genetic algorithms using the Pittsburgh approach.
- **GALE**: Genetics-based machine learning platform using fine-grained parallelism for data mining.
- **NAX**: Efficient parallel genetics-based machine learning package.
- **MOLCS**: Genetics-based machine learning platform based on multi-objective optimization for data mining.

### 9.3 INNOVATION AND CREATIVITY COLLABORATION SUPPORT

- **aiGA**: Active interactive genetic algorithms for web applications.
- **DISCUS**: Web portal for distributed innovation and scalable collaboration in uncertain settings. Portal includes:
  - Homogeneous platform for on-line collaboration.
  - Integrated collaboration tools (message boards, chat rooms, file sharing, etc.).
  - Chance discovery using KeyGraph analysis of on-line collaboration.
  - Influence diffusion models for on-line collaboration.
  - Innovation and creativity support by means of human-based genetic algorithms.
  - Fully integrated data analysis and model simulation using D2K web services.
  - Fully integrated document archiving, crawling, and retrieval using ThemeWeaver.
- **OpenDISCUS**: Advanced toolkit for collaboration analysis. It includes analysis of web content, RSS feeds, blogs, wikis, and email—among others.
- **XDA storage**: the *extensible discuss architecture* storage is a xml driven storage facility to support the storage needs of the DISCUS portal.

### 9.4 DATA-INTENSIVE FLOW ARCHITECTURE

- **Meandre**: Semantic-web-driven data-intensive flow architecture. Defined the component and flow ontologies and overall architecture. Develop the execution and storage engines, web interfaces and components (machine learning, evolutionary computation, text mining and semantic-storage).

## 10 PUBLICATIONS

### 10.1 EDITED BOOKS

Kovacs, T., Llorà, X., Takadama, K., Lanzi, P.L., Stolzman, W., Wilson, S.W. (2007). *Learning Classifier Systems: International Workshops, IWLCS 2003-2005, Revised Selected Papers* Lecture Notes in Computer Science. Springer.

Beyer, H.G, O'Reilly, U.M, Arnold, D.V., Banzhaf, W., Blum, C., Bonabeau, E.W, Cantú-Paz, E., Dasgupta, D., Deb, K. Foster, J.A., de Jong, E. Lipson, H, Llorà X., Macoridis, S., Pelikan, M., Raidl, G.R., Sould, T., Tyrell, A.M., Watson, J.P., Zitzler, E. (2005). *Proceedings of the 2005 conference on Genetic and evolutionary computation*, ACM Press.

### 10.2 JOURNAL ARTICLES

Goldberg, D. E., Sastry, K. and Llorà, X. (2007), Toward routine billion-variable optimization using genetic algorithms. *Complexity*, 12(3), 27–29.

Matsumura, N., Goldberg, D.E., and Llorà, X. (2007). Communication gap management for fertile community, *Journal of Soft Computing*, Volume 11 , Issue 8, pp. 791798, ACM press.

Llorà, X., Goldberg, D. E., Ohsawa, Y., Matsumura, N. Washida, W., Tamura, H., Yoshikawa, M., Welge, M., Auvil, L. Searshmith, D., Ohnishi, K. and Chao, C.-J., (2006), Innovation and Creativity Support via Chance Discovery, Genetic Algorithms, and Data Mining. *New Mathematics and Natural Computation*, 2(1), 85–100.

Llorà, X. (2006), Evolution to Knowledge, *ACM SIGEvolution Newsletter*, Volume 1 , Issue 3, pp. 10-17.

Belda, I., Llorà, X., and Giralt, E. (2006). “Evolutionary algorithms and *de novo* peptide design,” to *Special Issue on Soft Computing for Bioinformatics*, *Soft Computing Journal*, Volume 10, Issue 4, 295–304.

Teixidó, M., Belda, I., Roselló, X., González, S., Fabre, M., Llorà, X., Bacardit, J., Garrell, J. M., Vilaró, S., Albericio, F., and Giralt, E. (2003). “Development of a Genetic Algorithm to Design and Identify Peptides that can Cross the Blood-Brain Barrier: Design and validation in silico,” *Journal of QSAR and Combinatorial Science*, No. 7, pp. 745–753, Wiley-VCH.

Llorà, X., and Goldberg, D.E. (2003). “Bounding the effect of noise in Multiobjective Learning Classifier Systems,” *Journal of Evolutionary Computation*, Vol. 11 (3), pp. 279–298, MIT Press.

Llorà, X., and Garrell, J.M. (2003). “Prototype Induction and Attribute Selection via Evolutionary Algorithms,” *Journal of Intelligent Data Analysis*, Vol. 7 (3), pp. 193–208, IOS Press.

Alías, F., Llorà, X., Iriondo, I., and Formiga, L. (2003). ”Subjective Weight Tuning for Unit Selection by means of Interactive Genetic Algorithms”, in *Procesamiento del Lenguaje Natural*, n 31 (ISSN:1135-5948), pp. 75-82, SEPLN press. (in Spanish)

Golobardes, E., Llorà, X., Salamó, M., and Martí, J. (2002). “Computer aided diagnosis with case-based reasoning and genetic algorithms,” *Journal of Knowledge-based Systems*, Vol. 15 (1–2), pp. 45–52, Elsevier Science.

Garrell, J. M., Golobardes, E., Bernadó, E., and Llorà, X. (1999). “Automatic Diagnosis with Genetic Algorithms and Case-based Reasoning,” in *Journal of Artificial Intelligence in Engineering*, Vol. 13, pp. 367–372, Elsevier Science.

### 10.3 BOOK CHAPTERS

- Llor, X., Sastry, K., Lima, C., Lobo, F.G., Goldberg, D.E. (2008, in press). “*Linkage Learning, Rule Representation, and the  $\chi$ -ary Extended Compact Classifier System*,” in Advances in Learning Classifier Systems (10th International Workshop, IWLCS 2007), London, USA, LNAI, Springer.
- Llorà, X., K. Sastry, D. E. Goldberg, and L. de la Ossa (Accepted, final version), The  $\chi$ -ary extended compact classifier system: Linkage learning in Pittsburgh LCS. In T. Kovacs, X. Llorà, and K. Takadama (Eds.), *Advances at the frontier of LCS*. Berlin: Springer.
- Llorà, X., Sastry, K. and Goldberg, D. E. (2007), Binary Rule Encoding Schemes: A Study Using the Compact Classifier System. In in Advances in Learning Classifier Systems (10th International Workshop, IWLCS 2007), Seattle, USA, LNAI, Springer.
- Bernadó, E., Llorà, X., and Traus, I. (2005). “*Multiobjective Learning Classifier Systems: An Overview*,” in Jin, Y. (Ed.) Multiobjective Machine Learning, Springer.
- Barry, A., Holmes, J., and Llorà, X. (2004). “*Data Mining using Learning Classifier Systems*,” in Bull, L. (Ed.) Applications of Learning Classifier Systems. LNCS Studies in Fuzziness and Soft Computing, pp. 15–67, Springer (Berlin).
- Llorà, X., Goldberg, D.E., Traus, I., and Bernadó, E. (2003). “*Accuracy, Parsimony, and Generality in Evolutionary Learning Systems via Multiobjective Selection*,” in Lanzi, P.L., Stolzman, W., and Wilson, S.W. (Eds.) Advances in Learning Classifier Systems (5th International Workshop, IWLCS 2002), pp. 118–142, Granada, Spain, LNAI, Springer.
- Bernadó, E., Llorà, X., and Garrell, J. M. (2002). “*XCS and GALE: A Comparative Study of Two Learning Classifier Systems on Data Mining*,” in Lanzi, P.L., Stolzman, W., and Wilson, S.W. Advances in Learning Classifier Systems (4th International Workshop, IWLCS 2001), San Francisco, CA, USA, July 7-8, 2001. Revised Papers, LNAI 2321, pp. 115–133, Springer.

### 10.4 REFEREED CONFERENCES

- Saruwatari, S., Llorà, X., Yasui, N. I., Tamura, H., Sastry, K. and Goldberg, D. E., (2008, in press). Speeding Online Synthesis via Enforced Selecto-Recombination. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2008)*.
- Llorà, X., Yasui, N. I., Goldberg, D. E., (2008, in press). Graph-Theoretic Measure for Active iGAs: Interaction Sizing and Parallel Evaluation Ensemble. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2008)*.
- Yasui, N. I., X. Llorà, D. E. Goldberg (2007). Discourse Analysis and Creativity Support for Concept Product Design. *Data Mining for Design and Marketing*.
- Yasui, N. I., X. Llorà, Saruwatari, S., Goldberg, D. E. (2007) Facilitation Support for On-line Focus Group Discussions by Message Feature Map. *Proceedings of the International Conference on Enterprise Information Systems (ICEIS)*, (2008).
- Ueda, T., Yasui, N. I. , Llorà, X., Sastry, K. and Goldberg, D. E. (2007), Discovering Building Blocks for Human Based Genetic Algorithms. *Artificial Neural Networks In Engineering*.
- Llorà, X., Yasui, N. I. , Welge, M. and Goldberg, D. E. (2007), Human-Centered Analysis and Visualization Tools for the Blogosphere. *Proceedings of the 2007 Digital Humanities Conference*.
- Sastry, K., Goldberg, D. E., and Llorà, X. (2007) Towards billion bit optimization via parallel estimation of distribution algorithm. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2007)*, 577–584.

- Bacardit, J., Stout, M., Sastry, K., Llorà, X., Krasnogor, N. and Hirst, J. D., (2007), Automated alphabet reduction method with evolutionary algorithms for protein structure prediction. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2007)*, 346–353 .
- Llorà, X., Sastry, K., Yu, T.-L. and Goldberg, D. E. (2007) Do not match, Inherit: Fitness surrogates for genetics-based machine learning techniques. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2007)*, 1798–1805 .
- Llorà, X., Priya, A., and Bhargava, R. (2007), Observer-Invariant Histopathology using Genetics-Based Machine Learning. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2007)*, 2098–2105 .
- Llorà, X., Yasui, N. I. and Goldberg, D. E. (2007) Analyzing trends in the blogosphere using human-centered analysis and visualization tools (2007), *Proceedings of the International Conference on Weblogs and Social Mining (ICWSM 2007)* 285–286.
- Yasui, N. I., Llorà, X., Goldberg, D. E., Washida, Y. and Tamura, H. (2007), Delineating Topic and Discus-sant Transitions in Online Collaborative Environments. *Proceedings of the International Conference on Enterprise Information Systems (ICEIS)*.
- Llorà, X., and Sastry, K. (2006), Fast rule matching for learning classifier systems via vector instructions. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2006)*, 1513–1520.
- Llorà, X., Sastry, K., Alías, F., Goldberg, D. E. and Welge, M. (2006), Analyzing active interactive genetic algorithms using visual analytics. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2006)*, 1417–1418.
- Alías, F. , Llorà, X., Formiga, L., Sastry, K. and Goldberg, D. E. (2006), Efficient interactive weight tuning for TTS synthesis: Reducing user fatigue by improving user consistency. *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2006)*, 1, 865–868, (2006).
- Butz, M.V., Pelikan, M., Llorà, X., and Goldberg, D. E., Automated Global Structure Extraction For Effective Local Building Block Processing in XCS. *Evolutionary Computation*. 14(3), 345–380 (2006).
- Llorà, X. Sastry, K., and Goldberg, D.E. (2005). “The Compact Classifier System: Scalability Analysis and First Results”. *IEEE Conference on Evolutionary Computation (CEC 2005)*, 1, pp. 596–603, IEEE press.
- Butz, M., Pelikan, M., Llorà, X., and Goldberg, D.E. (2005). “Extracted Global Structure Makes Local Building Block Processing Effective in XCS”. *ACM Genetic and Evolutionary Computation Conference (GECCO 2005)*, ACM press, pp. 655–663.
- Llorà, X., Sastry, K., Goldberg, D.E., and Gupta, A., and Lakshmi, L. (2005). “Combating User Fatigue in iGAs: Partial Ordering, Support Vector Machines, and Synthetic Fitness”. *ACM Genetic and Evolutionary Computation Conference (GECCO 2005)*, ACM press, pp. 1363–1371.
- Llorà, X., Sastry, K., and Goldberg, D.E. (2005). “The Compact Classifier System: Motivation, Analysis, and First Results”. *ACM Genetic and Evolutionary Computation Conference (GECCO 2005)*, ACM press, pp. 1893–1894.
- Matsumura, N., Llorà, X., and Goldberg, D.E. (2005). “Mining Social Networks in Message Boards”. *Symposium on Conversational Informatics for Supporting Social Intelligence*, The Society for the Study of Artificial Intelligence and the Simulation of Behavior Press, pp. 18–27.
- Belda, I., Madurga, S., Llorà, X., Sastry, K., Pelikan, M., Martinell, M., and Giralt, E. (2005). “Fitness inheritance for peptide de novo evolutionary design”. *VI European Symposium of the Protein Society*, Poster.

- Teixid, M., Belda, I., Zurita, E., Prades, R., Llorà, X., Fabre, M., Vilaró, S., Albericio, F., and Giralt, E. (2005). “Study of peptide transport across the blood-brain barrier using evolutionary combinatorial chemistry. Design, synthesis and evaluation of the first peptide generation.” *VI European Symposium of the Protein Society*, Poster.
- Belda, I., Llorà, X., Madurga, S., Martinell, M., Tarragó, T., and Giralt, E. (2005). “Evolutionary algorithms and de novo peptide design.” *Second West Mediterranean Chemistry*.
- Belda, I., Madurga, S., Llorà, X., Sastry, K., Pelikan, M., Martinell, M., Tarragó, and Giralt, E. (2005). “Fitness inheritance for peptide de novo evolutionary design.” *Segunda Reunión de la Red Nacional de Modelización Molecular y Quimioinformática*.
- Belda, I., Llorà, X., Martinell, M., Tarragó, T., and Giralt, E. (2004). “Computer-Aided Peptide Evolution for Virtual Drug Design,” *V Jornades de Recerca en Enginyeria Biomèdica (JEBC’04)*.
- Alías, F., Llorà, X., Iriondo, I., Sevillano, X., Formiga, L., Socorro, J.C. (2004). “Perception-Guided and Phonetic Clustering Weight Tuning Based on Diphone Pairs for Unit Selection TTS,” i *8th International Conference on Spoken Language Processing (ICSLP2004)*, pp 1221–1224, Interspeech Press.
- Llorà, X., Matsumura, N., Goldberg, D. E., Ohsawa, Y., Ohnishi, K., and Gonzales, A. (2004). “Discovering Chance Scenarios using Small-World KeyGraphs and Evolutionary Computation,” in *First European Workshop on Chance Discovery (EWCD’2004)*, pp 51–61, ECAI press.
- Llorà, X., Goldberg, D. E., Ohsawa, Y., Ohnishi, K., Tamura, H., Washida, Y., and Yoshikawa, M. (2004). “Chances and Marketing: On-line Conversation Analysis for Creative Scenario Discussion,” *First European Workshop on Chance Discovery (EWCD’2004)*, pp 152–161, ECAI press.
- Bacardit, J., Goldberg, D.E., Butz, M., Llorà, X., and Garrell, J. M. (2004). “Speeding-up Pittsburgh Learning Classifier Systems: Modeling Time and Accuracy,” in *Parallel Problem Solving from Nature (PPSN-2004)*, Springer.
- Butz, M., Lanzi, P.L., Llorà, X., and Goldberg, D. E. (2004). “Knowledge Extraction and Problem Structure Identification in XCS,” in *Parallel Problem Solving from Nature (PPSN-2004)*, Springer.
- Belda, I., Llorà, X., Martinell, M., Tarragó, T., and Giralt, E. (2004). “Computer-Aided Peptide Evolution for Virtual Drug Design,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’2004)*, pp. 321–333, Morgan Kaufmann Publishers.
- Llorà, X., and Wilson, S. W. (2004). “Mixed Decision Trees: Minimizing Knowledge Representation Bias in LCS,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’2004)*, pp. 797–809, Morgan Kaufmann Publishers.
- Llorà, X., Ohnishi, K., Chen, Y.-P., Goldberg, D. E., and Welge, M. E. (2004). “Enhanced Innovation: A Fusion of Chance Discovery and Evolutionary Computation to Foster Creative Processes and Decision Making,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’2004)*, pp. 1314–1315 Morgan Kaufmann Publishers.
- Alías, F., Llorà, X., Iriondo, I., and Formiga, L. (2003). “Subjective Weight Tuning for Unit Selection by means of Interactive Genetic Algorithms,” *Procesamiento del Lenguaje Natural*, 31 (ISSN:1135-5948), pp. 75-82, september, Alcal de Henares.
- Martinell, M., Salvatella, X., Belda, I., Llorà, X., Pastor, J. J., Vilaseca, M., Gairí, M., and Giralt, E. (2003). “Design, synthesis and study of peptides able to recognize hydrophilic protein-surface patches,” *Peptide Revolution: Genomics, Proteomics & Therapeutics*, Chorev, M. & Sawyer, T.K. (editors). American Peptide Society, 2003.

- Llorà, X., and Goldberg, D. E. (2003). “Wise Breeding GA via Machine Learning Techniques for Function Optimization,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’2003)*, pp. 1172–1183, Springer.
- Alfías, F., and Llorà, X. (2003). “Evolutionary weight tuning based on diphone pairs for unit selection speech synthesis,” *Proceedings of the 8th European Conference on Speech Communication and Technology (EuroSpeech)* pp. 1333-1336, September, Geneve (Switzerland), ISCA press, ISSN 1019-40-74.
- Llorà, X., Goldberg, D. E., Traus, I., and Bernadó, E. (Accepted, final version). “Accuracy, Parsimony, and Generality in Evolutionary Learning Systems via Multiobjective Selection,” *Proceedings of the 5th International Workshop on Learning Classifier Systems (IWLCS-2002)* held in PPSN’2002.
- Llorà, X., and Garrell, J. M. (2002). “Co-evolving Different Knowledge Representations with fine-grained Parallel Learning Classifier Systems,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’2002)*, pp. 934–941, Morgan Kaufmann Publishers.
- Bernadó, E., Llorà, X., and Garrell, J. M. (2001). “Incremental Evaluation and Efficient Genetic Algorithm Usage in a Classifier System,” *Proceedings of the Fourth Catalan Conference on Artificial Intelligence (CCIA’2001)*, pp. 16–23. *Bulletí de l’ACIA*.
- Golobardes, E., Martí, J., Español, J., Salamó, M., Freixenet, J., Llorà, X., Maroto, A., and Bernadó, E. (2001). “Classifying Microcalcifications in Digital Mammograms using Machine Learning techniques,” *Proceedings of the Fourth Catalan Conference on Artificial Intelligence (CCIA-2001)*, pp. 92-99. *Bulletí de l’ACIA*.
- Llorà, X., and Garrell, J. M. (2001c). “Evolution of Decision Trees,” *Proceedings of the Fourth Catalan Conference on Artificial Intelligence (CCIA’2001)*, pp. 115–122. *Bulletí de l’ACIA*.
- Llorà, X., and Garrell, J. M. (2001b). “Knowledge-Independent Data Mining with Fine-Grained Parallel Evolutionary Algorithms,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’2001)*, pp. 461–468, Morgan Kaufmann Publishers.
- Bernadó, E., Llorà, X., and Garrell, J. M. (2001). “XCS and GALE: a Comparative Study of Two Learning Classifier Systems with Six Other Learning Algorithms on Classification Tasks,” *Proceedings of the 4th International Workshop on Learning Classifier Systems (IWLCS-2001)* held in GECCO’2001, pp. 337–341.
- Llorà, X., and Garrell, J. M. (2001a). “Evolving Partially-Defined Instances with Evolutionary Algorithms,” in *Proceedings of the Proceedings of the 18th International Conference on Machine Learning (ICML’2001)*, pp. 337–344, Morgan Kaufmann Publishers.
- Golobardes, E., Llorà, X., Garrell, J. M., and et al. (2000). “Genetic Classifier System as a heuristic weighting method for a i Case-Based Classifier System,” *Proceedings of the Fourth Catalan Conference on Artificial Intelligence (CCIA’2000)*, pp. 161–168. *Bulletí de l’ACIA*.
- Llorà, X., and Golobardes, E. and Salamó, M. (2000). “Diagnosis of microcalcification using Case-Based and Genetic Algorithms,” *Proceedings of Engineering of Intelligent Systems (EIS2000)*, pp. 258–265, ISCS Publishers.
- Llorà, X., and Garrell, J. M. (2000b). “Evolving Hierarchical Agents using Cellular Genetic Algorithms,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’2000)*, pp. 868, Morgan Kaufmann Publishers.
- Llorà, X., and Garrell, J. M. (2000a). “Automatic Classification and Artificial Life Models,” *Proceedings of the International Workshop on Learning (Learning00)*, IEEE Spanish section.

- Llorà, X., and Garrell, J. M. (1999b). “Extensions to the GENIFER system: an incremental Machine Learning Approach,” *Proceedings of the Second Catalan Conference on Artificial Intelligence (CCIA’99)*, pp. 253–260. *Bulletí de l’ACIA*.
- Llorà, X., and Garrell, J. M. (1999a). “GENIFER: A Nearest Neighbor based Classifier System using GA,” *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO’99)*, pp. 797, Morgan Kaufmann Publishers.
- Llorà, X., Garrell, J. M., and Bernadó, E. (1998). “A Classifier System based on Genetic Algorithm under the Pittsburgh approach for problems with real valued attributes,” *Proceedings of the First Catalan Conference on Artificial Intelligence (CCIA’98)*, *Bulletí de l’ACIA* 14–15:85–94.
- Garrell, J. M., Golobardes, E., Bernadó, E., and Llorà, X. (1998). “Automatic Classification of Mammary Biopsy Images with Machine Learning Techniques,” *Proceedings of the International ICSC Symposium on Engineering of Intelligent Systems (EIS’98)*, Vol. 3, pp. 411–418, ICSC Academic Press.

## 10.5 TEACHING METHODOLOGY RELATED PUBLICATIONS

- Llorà, X., Bernadó, E., Golobardes, E., and et al. (2000b). “Introducción a las técnicas de aprendizaje automático (Parte II): entorno de competición,” *Proceedings of Jornadas sobre Enseñanza Universitarias de Informática (JENUI2000)*. Jenui press.
- Golobardes, E., Bernadó, E., Llorà, X., and et al. (2000a). “Introducción a las técnicas de aprendizaje automático (Parte I): estructura de un curso docente,” *Proceedings of Jornadas sobre Enseñanza Universitarias de Informática (JENUI2000)*. Jenui press.

## 10.6 TECHNICAL REPORTS

- Bacardit J., Stout M., Hirst J. D., Sastry K., Llorà X., Krasnogor N. (2007). “*Automated Alphabet Reduction with Evolutionary Algorithms for Protein Structure Prediction*,” Illinois Genetic Algorithms Laboratory, Technical report 2007015. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Sastry K., Yu T.-L., and Goldberg D. E. (2007). “*Do not Match Inherit: Fitness Surrogates for Genetics-Based Machine Learning Techniques*,” Illinois Genetic Algorithms Laboratory, Technical report 2007011. University of Illinois at Urbana-Champaign, IL, USA.
- Sastry K., Goldberg D. E., and Llorà X. (2007). “*Towards Billion Bit Optimization via Efficient Genetic Algorithms*,” Illinois Genetic Algorithms Laboratory, Technical report 2007007. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Reddy R., Matesic B., and Bhargava, R. (2007). “*Towards Better than Human Capability in Diagnosing Prostate Cancer Using Infrared Spectroscopic Imaging*,” Illinois Genetic Algorithms Laboratory, Technical report 2007006. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Reddy R., Matesic B., and Bhargava, R. (2006). “*Towards Better than Human Capability in Diagnosing Prostate Cancer Using Infrared Spectroscopic Imaging*,” Illinois Genetic Algorithms Laboratory, Technical report 2007006. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Priya. A., and Bhargava, R. (2006). “*Analyzing Trends in the Blogosphere Using Human-Centered Analysis and Visualization Tools*,” Illinois Genetic Algorithms Laboratory, Technical report 2006027. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Yasui, N. I., Welge, M., and Goldberg, D. E.(2006). “*Analyzing Trends in the Blogosphere Using Human-Centered Analysis and Visualization Tools*,” Illinois Genetic Algorithms Laboratory, Technical report 2006026. University of Illinois at Urbana-Champaign, IL, USA.

- Yasui, N. I., Llorà X., Goldberg, D. E., Washida, Y., and Tamura, H. (2006). “*Delineating Topic and Discussant Transitions in Online Collaborative Environments*,” Illinois Genetic Algorithms Laboratory, Technical report 2006025. University of Illinois at Urbana-Champaign, IL, USA.
- Yasui, N. I., Llorà X., and Goldberg, D. E. (2006). “*Adaptable Extraction of Key Elements from Weblogs*,” Illinois Genetic Algorithms Laboratory, Technical report 2006024. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Yasui, N. I., Welge, M., and Goldberg, D. E. (2006). “*Human-Centered Analysis and Visualization Tools for the Blogosphere*,” Illinois Genetic Algorithms Laboratory, Technical report 2006023. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X. (2006). “*E2K: Evolution to Knowledge*,” Illinois Genetic Algorithms Laboratory, Technical report 2006022. University of Illinois at Urbana-Champaign, IL, USA.
- Alm C. O. and Llorà X. (2006). “*Evolving Emotional Prosody*,” Illinois Genetic Algorithms Laboratory, Technical report 2006018. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Sastry K., Goldberg D.E., and de la Ossa L. (2006). “*Fast Fitness Implementation of Multiplexer Problems for Pittsburgh LCS*,” Illinois Genetic Algorithms Laboratory, Technical report 2006015. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X. (2006). “*The  $\chi$ -ary Extended Compact Classifier System: Linkage Learning in Pittsburgh LCS*,” Illinois Genetic Algorithms Laboratory, Technical report 2006017. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X. and Goldberg D. E. (2006). “*The Innovation Pump: Supporting Creative Processes in Collaborative Engineering*,” Illinois Genetic Algorithms Laboratory, Technical report 2006011. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Sastry K., Alas F., Goldberg D. E., and Welge M. (2006). “*Analyzing Active Interactive Genetic Algorithms using Visual Analytics*,” Illinois Genetic Algorithms Laboratory, Technical report 2006004. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X. and Sastry K. (2006). “*Fast Rule Matching for Learning Classifier Systems via Vector Instructions*,” Illinois Genetic Algorithms Laboratory, Technical report 2006001. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà X., Alas F., Formiga L., Sastry K., and Goldberg D. E. (2005). “*Evaluation Consistency in iGAs: User Contradictions as Cycles in Partial-Ordering Graphs*,” Illinois Genetic Algorithms Laboratory, Technical report 2005022. University of Illinois at Urbana-Champaign, IL, USA.
- Bernadó, E., Llorà, X., and Traus I. (2005). “*Multiobjective Learning Classifier Systems: An Overview*,” Illinois Genetic Algorithms Laboratory, Technical report 2005020. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., Sastry, K., and Goldberg, D.E. (2005). “*The Compact Classifier System: Scalability Analysis and First Results*,” Illinois Genetic Algorithms Laboratory, Technical report 2005019. University of Illinois at Urbana-Champaign, IL, USA.
- Butz, M.V., Pelikan, M., Llorà, X., and Goldberg, D.E.. (2005). “*Automated Global Structure Extraction For Effective Local Building Block Processing in XCS*,” Illinois Genetic Algorithms Laboratory, Technical report 2005011. University of Illinois at Urbana-Champaign, IL, USA.
- Butz, M.V., Pelikan, M., Llorà, X., and Goldberg, D.E.. (2005). “*Extracted Global Structure Makes Local Building Block Processing Effective in XCS*,” Illinois Genetic Algorithms Laboratory, Technical report 2005010. University of Illinois at Urbana-Champaign, IL, USA.

- Llorà, X., Sastry, K., Goldberg, D.E., Gupta, A., and Lakshmi, L. (2005). “*Combating User Fatigue in iGAs: Partial Ordering, Support Vector Machines, and Synthetic Fitness*,” Illinois Genetic Algorithms Laboratory, Technical report 2005009. University of Illinois at Urbana-Champaign, IL, USA.
- Matsumura, N., Goldberg, D.E., and Llorà, X. (2005). “*Mining Social Networks in Message Boards*,” Illinois Genetic Algorithms Laboratory, Technical report 2005001. University of Illinois at Urbana-Champaign, IL, USA.
- Abbass, H.A., Bacardit, J., Butz, M.V., and Llorà, X. (2004). “*Online adaptation in Learning Classifier Systems: Stream Data*,” Illinois Genetic Algorithms Laboratory, Technical report 2004031. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., Matsumura, N., Goldberg, D. E., Ohsawa, Y., Ohnishi, K., and Gonzales, A. (2004). “*Discovering Chance Scenarios using Small-World KeyGraphs and Evolutionary Computation*,” Illinois Genetic Algorithms Laboratory, Technical report 2004026. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., Goldberg, D. E., Ohsawa, Y., Ohnishi, K., Tamura, H., Washida, Y., and Yoshikawa, M. (2004). “*Chances and Marketing: On-line Conversation Analysis for Creative Scenario Discussion*,” Illinois Genetic Algorithms Laboratory, Technical report 2004025. University of Illinois at Urbana-Champaign, IL, USA.
- Butz, M. V., Lanzi, P. L., Llorà, X., and Goldberg, D. E. (2004). “*Knowledge Extraction and Problem Structure Identification in XCS*,” Illinois Genetic Algorithms Laboratory, Technical report 2004024. University of Illinois at Urbana-Champaign, IL, USA.
- Bacardit, J., Goldberg, D. E., Butz, M. V., Llorà, X., and Garrell J.M. (2004). “*Speeding-up Pittsburgh Learning Classifier Systems: Modeling Time and Accuracy*,” Illinois Genetic Algorithms Laboratory, Technical report 2004022. University of Illinois at Urbana-Champaign, IL, USA.
- Belda, I, Llorà, X., Martinell, M., Tarragó, T., and Giralt, E. (2004). “*Computer-Aided Peptide Evolution for Virtual Drug Design*,” Illinois Genetic Algorithms Laboratory, Technical report 2004015. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., and Wilson, S. W. (2004). “*Mixed Decision Trees: Minimizing Knowledge Representation Bias in LCS*,” Illinois Genetic Algorithms Laboratory, Technical report 2004014. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., Ohnishi, K., Chen, Y.-P., Goldberg, D. E., and Welge, M. E. (2004). “*Enhanced Innovation: A Fusion of Chance Discovery and Evolutionary Computation to Foster Creative Processes and Decision Making*,” Illinois Genetic Algorithms Laboratory, Technical report 2004012. University of Illinois at Urbana-Champaign, IL, USA.
- Alías, F. and Llorà, X. (2003). “*Evolutionary Weight Tuning for Unit Selection Based on Diphone Pairs*,” Illinois Genetic Algorithms Laboratory, Technical report 2003018. University of Illinois at Urbana-Champaign, IL, USA.
- Goldberg, D.E., Welge, M., and Llorà, X. (2003). “*Distributed Innovation and Scalable Collaboration in Uncertain Settings*,” Illinois Genetic Algorithms Laboratory, Technical report 2003017. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., and Goldberg, D. E. (2003). “*Bounding the effect of noise in Multiobjective Learning Classifier Systems*,” Illinois Genetic Algorithms Laboratory, Technical report 2003011. University of Illinois at Urbana-Champaign, IL, USA.

- Llorà, X., and Goldberg, D. E. (2003). “*Wise Breeding GA via Machine Learning Techniques for Function Optimization*,” Illinois Genetic Algorithms Laboratory, Technical report 2003006. University of Illinois at Urbana-Champaign, IL, USA.
- Belda, I., Llorà, X., Piqueras, M. G., Teixido, M., Nicolas, E., and Giralt, E. (2003). “*Evolutionary Algorithms and De Novo Peptide Design*,” Illinois Genetic Algorithms Laboratory, Technical report 2003005. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., and Goldberg, D. E. (2002b). “*Accuracy, Parsimony, and Generality in Evolutionary Learning Systems via Multiobjective Selection*,” Illinois Genetic Algorithms Laboratory, Technical report 2002016. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X., and Goldberg, D. E. (2002a). “*Minimal Achievable Error in the LED problem*,” Illinois Genetic Algorithms Laboratory, Technical report 2002015. University of Illinois at Urbana-Champaign, IL, USA.
- Llorà, X. (2000b). “*Genetic Artificial Life Environment: mixing cellular genetic algorithms and artificial life ideas*.” Technical report Number ISRG-EALS-2000002, Ingeniería i Arquitectura La Salle, Ramon Llull University, Barcelona, Catalonia, Spain, European Union.
- Llorà, X. (2000a). “*Genetic Artificial Life Environment: solving classification problems using cooperative agents*.” Technical report Number ISRG-EALS-2000001, Ingeniería i Arquitectura La Salle, Ramon Llull University, Barcelona, Catalonia, Spain, European Union.

## 11 OTHER ACTIVITIES AND NON-SCIENTIFIC PUBLICATIONS

**2003–2006** Graphic designer assistant of the “*El Informador de Urbana-Champaign*” newspaper.

**2003–2006** Columnist of the “*El Informador de Urbana-Champaign*” newspaper. Regular “Caracol Acróbata” columns articles published:

- “*Varas de medir inútiles*”, May 2006.
- “*Hojas de te*”, April 2006.
- “*Y ya nadie recuerda la verdad*”, February 2006.
- “*En un mundo de etiquetas*”, November 2005.
- “*Nunca había estado en la Mancha*”, October 2005.
- “*Ese cálido hogar*”, December 2004.
- “*Zapatos blancos, topes negros*”, November 2004.
- “*Tomando decisiones sin tomarlas*”, October 2004.
- “*De este agua no beberé*”, September 2004.
- “*Perdidos en alguna parte*”, August 2004.
- “*Destellos de vida*”, July 2004.
- “*De paso, una vida*”, June 2004.
- “*Opciones desaprovechadas*”, May 2004.
- “*Reflexionando a ciegas*”, April 2004.
- “*Navegantes solitarios*”, March 2004.
- “*El efecto mariposa*”, February 2004.
- “*Rebelión*”, December 2003.

- “*Venimos de parte de Pepe Carvalho*”, November 2003.
- “*Arde Europa*”, October 2003.

**2003–present** Member of *The Point Fencing Club*, Champaign, Illinois.

## 12 SKILLS AND OTHER INTERESTS

- Distributed and Web systems.
- C, C++, Java, Perl, PHP, Python, Javascript.
- Semantic-web (ontologies and storage media).
- Languages for data-intensive computing (PIG, ZigZag).
- XML, XSL, XSLT, XSP, CGI, Java networking (RMI, CORBA, JDBC).
- Database administration and programming (MySQL, Oracle).
- Linux, Solaris, Windows, and Mac OS X platforms.
- Languages: English, Spanish, and Catalan.