

Curriculum Vitae

Personal Information

Name : Javier Andrés Pinto
Nationality : Chilean.
Address : 600 Mountain Ave. 2A-442
Murray Hill,
New Jersey, 07974, U.S.A.
Telephone : (908)-582-1707
Fax : (908)-582-5809
Email : jpinto@research.bell-labs.com

Current Position

Member of Technical Staff, Database Systems Research Department, Bell Labs, Lucent Technologies.

Academic Qualifications.

1. Professional Degree.

- Industrial and Electrical Engineer, Pontificia Universidad Católica de Chile, November 1982.

2. Graduate Degrees.

- Master of Science in Computer Science. University of California, Los Angeles, United States of America, June 1986.
- Doctor of Philosophy. School of Graduate Studies, Dept. of Computer Science. University of Toronto, Ontario, Canada, April 1994.

Research Interests

- Logical Approaches to Knowledge Representation and Reasoning.
- Conceptual Modeling, Databases and Knowledge Representation.

- Logic Programming.
- Logic in Computer Science.
- Cognitive Robotics.
- Automated Learning and Discovery.

Professional History.

- Since January 2001. Member of Technical Staff. Database Research Department, Bell Labs, Lucent Technologies.
- July 1996 – December 2000. Associate Professor, Department of Computer Science, Pontificia Universidad Católica de Chile.
- 1983 – June 1996. Assistant Professor, Department of Computer Science, Pontificia Universidad Católica de Chile. On leave 8/84–5/86 and 9/89–2/94.
- September 1989 – February 1994. Working towards the degree of Doctor of Philosophy in Computer Science. Department of Computer Science, University of Toronto.
- September 1990 – August 1993. Instructor, Department of Computer Science, University of Toronto.
- June 1985 – April 1986. Post Graduate Research Engineer, Cognitive Systems Laboratory, University of California, Los Angeles.
- September 1984 – April 1986. Working towards the degree of Master of Science in Computer Science. Department of Computer Science, University of California, Los Angeles.
- August 1982 – September 1983. Half Time Instructor, Department of Computer Science, Pontificia Universidad Católica de Chile.
- December 1982 – September 1983. Project Engineer, Department of Electrical Engineering, Pontificia Universidad Católica de Chile.
- September 1980 – July 1982. Research Assistant, Department of Computer Science, Pontificia Universidad Católica de Chile.

Teaching Experience

- 1982 – 1984: Taught Introductory and advanced courses in Computer Programming. Also taught Computer Architecture. (Catholic University of Chile).
- 1986 – 1989: Taught Computer Programming, Formal Languages and Automata Theory, Artificial Intelligence, and Knowledge Representation and Reasoning. (Catholic University of Chile).
- 1989 – 1993: Taught Principles of Programming Languages on several occasions. (University of Toronto).
- 1994 – 2000: Taught Introduction to Computer Programming Knowledge Representation and Reasoning, Artificial Intelligence, Advanced Artificial Intelligence, Modern Databases.

Publications.

Article under Review

- Javier Pinto. Concurrency and Action Interaction. Submitted November 2000.

Journal Publications

- P. Mateus, A. Pacheco, J. Pinto, A. Sernadas and C. Sernadas. Probabilistic Situation Calculus. *Annals of Mathematics and Artificial Intelligence*. To appear.
- Javier Pinto, Amílcar Sernadas, Cristina Sernadas, and Paulo Mateus. Non-determinism and Uncertainty in the Situation Calculus. *International Journal of Uncertainty, Fuzziness and Knowledge Based Systems*, 2000. pp 127–149.
- Javier A. Pinto. Compiling Ramification Constraints into Effect Axioms. *Computational Intelligence*, 15(3):280–307, 1999.

- Javier Pinto. Occurrences and Narratives as Constraints in the Branching Structure of the Situation Calculus. *Journal of Logic and Computation*, 8:777–808, 1998.
- Javier Pinto. Integrating Discrete and Continuous Change in a Logical Framework. *Computational Intelligence*, 14(1):39–88, 1998.
- Javier Pinto and Raymond Reiter. Reasoning about Time in the Situation Calculus. *Annals of Mathematics and Artificial Intelligence*, 14(2-4):251–268, September 1995.

Articles in Refereed Conferences

- Alvaro Campos, Claudia Navarrete, and Javier Pinto. Logical Modeling of a Distributed Mutual Exclusion Algorithm in the Situation Calculus. In *Proceedings of the Eleventh IASTED International Conference on Parallel and Distributed Computing and Systems*, Boston, MA, November 1999.
- Jorge Baier and Javier Pinto. Integrating True Concurrency into the Robot Programming Language GOLOG. In *XIX International Conference of the Chilean Computer Science Society (SCCC'99)*, pages 179–186. IEEE Computer Society, 1999.
- Javier Pinto, Amílcar Sernadas, Cristina Sernadas, and Paulo Mateus. Non-determinism and Uncertainty in the Situation Calculus. In *Proceedings of the FLAIRS'99 - the 12th International Florida AI Research Symposium*. AAAI Press, 1999.
- Javier Pinto. Concurrent actions and interacting effects. In A.G. Cohn, L.K. Schubert, and S.C. Shapiro, editors, *Principles of Knowledge Representation and Reasoning: Proceedings of the Sixth International Conference (KR'98)*, pages 292–303, San Francisco, CA, 1998. Morgan Kaufmann Publishers.
- Javier Pinto. Causality, Indirect Effects and Triggers (Preliminary Report). In *Seventh International Workshop on Non-monotonic Reasoning*, Trento, Italy, 1998. URL=<http://www.cs.utexas.edu/users/vl/nmr98.html>.

- Javier Pinto. Causality in Theories of Action. In Rob Miller and Murray Shanahan, editors, *Fourth Symposium on Logical Formalizations of Commonsense Reasoning, Common-Sense '98*, pages 349–364. Queen Mary and Westfield College, University of London, January 1998. Also found at URL = <http://www.ida.liu.se/ext/etai/nj/fcs-98/349/paper.ps>.
- Jorge Baier and Javier Pinto. Non-instantaneous Actions and Concurrency in the Situation Calculus (Extended Abstract). In Giuseppe de Giacomo and Daniele Nardi, editors, *10th European Summer School in Logic, Language and Information*, 1998.
- Leopoldo Bertossi, Javier Pinto, and Ricardo Valdivia. Specifying Active Databases in the Situation Calculus, Preliminary Report. In *XVIII International Conference of the Chilean Computer Science Society (SCCC'98)*, pages 32–39. IEEE Computer Society, 1998.
- Alvaro Campos, Claudia Navarrete, and Javier Pinto. Modelación Lógica de un Algoritmo de Exclusión Mutua Distribuido. In *II Workshop Chileno de Sistemas Distribuidos y Paralelismo*, pages 33–42, Valparaíso, Chile, 1997. SCCC.
- Javier Pinto. Incorporating Observations in Theories of Action. In Grigoris Antoniou and Marek Truszczyński, editors, *PRICAI'96 Workshop on Reasoning with Incomplete and Changing Information. Research Report CIT-96-06, School of Computing and Information Technology, Griffith University*, pages 79–88, 1996.
- Javier Pinto. Occurrences in the Hypothetical Worlds of the Situation Calculus: Extended Abstract. In Ute C. Sigmund and Michael Thielscher, editors, *Reasoning about Actions and Planning in Complex Environments, FAPR'96 Workshop. Technical Report AIDA-96-11, Technische Hochschule Darmstadt, Fachbereich Informatik*, pages VII–1 – VII–8, 1996.
- Javier A. Pinto. On the Existence and Formalization of Natural Events. In *Proceedings of the IJCAI Workshop on Nonmonotonic Reasoning, Action and Change.*, August 1995. URL = <ftp://lyrcc.ing.puc.cl/pub/jpinto/ijcwrk.ps.gz>.
- Michael Gruninger and Javier Pinto. A Theory of Complex Actions for Enterprise Modeling. In Craig Boutilier and Moises Goldszmidt, editors,

Symposium Extending Theories of Action: Formal Theory and Practical Applications, 1995 AAAI Symposium, pages 94–99, Stanford, California, March 1995. Stanford University, AAAI Press. ISBN 0-929280-90-3.

- Javier Pinto. Concurrent Events: Synergy and Cancellation of Effects. In *European Conference on Artificial Intelligence, Workshop on Logic and Change*, pages 105–110, 1994. URL = <ftp://lyrcc.ing.puc.cl/pub/jpinto/ecai.ps.gz>.
- Javier Pinto and Raymond Reiter. Temporal Reasoning in Logic Programming: A Case for the Situation Calculus. In David S. Warren, editor, *Proceedings of the Tenth International Conference on Logic Programming*, pages 203–221, Budapest, June 1993. The MIT Press.
- Javier Pinto and Raymond Reiter. Adding a Time Line to the Situation Calculus. In *The Second Symposium on Logical Formalizations of Commonsense Reasoning*, pages 172–177, January 1993.

Articles in Lecture Notes

- Leopoldo Bertossi and Javier Pinto. Specifying Active Rules for Database Maintenance. In G. Saake, editor, *Transactions and Database Dynamics*, Lecture Notes in Computer Science. Springer, 2000. To appear.
- Javier Pinto. Using Histories to Model Observations in Theories of Action. In Grigoris Antoniou and Marek Truszczyński, editors, *Learning and Reasoning with Complex Representations*, number 1359 in Lectures Notes in Artificial Intelligence, pages 223–235. Springer-Verlag, 1998. ISBN 3-540-64413-X.
- Leopoldo Bertossi, Javier Pinto, Pablo Saez, Deepak Kapur, and Mahadevan Subramaniam. Automating Proofs of Integrity Constraints in Situation Calculus. In Zdzisław Pawlak and Zbigniew W. Ras, editors, *Proc. of the 9th International Symposium on Methodologies for Intelligent Systems*, number 1079 in Lectures Notes in Artificial Intelligence, pages 212–222. Springer-Verlag, 1996. ISBN 3-540-61286-6.

Book Chapter

- Leopoldo Bertossi, Javier Pinto, and Ricardo Valdivia. Specifying Database Transactions and Active Rules in the Situation Calculus. In Hector Levesque and Fiora Pirri, editors, *Logical Foundations for Cognitive Agents*, pages 41–56. Springer, 1999.

Fellowships.

- Fulbright Fellowship for graduate studies, August 1984 – April 1986.
- University of Toronto Open Fellowship, September 1989 – August 1990.
- Mary H. Beatty Fellowship, September 1990 – August 1991.

Theses.

- “Temporal Reasoning in the Situation Calculus,” PhD. thesis, Department of Computer Science, University of Toronto, Toronto, Ontario, Canada, February 1994. Supervised by prof. Raymond Reiter.
- “Relevance Based Propagation in Bayesian Networks,” M.Sc. thesis, Computer Science Department, University of California, Los Angeles, May 1986. Supervised by prof. Judea Pearl.
- “Task Scheduling of Dynamic Systems Models for Parallel Simulation,” Engineering thesis, Dept. of Electrical Engineering, Pontificia Universidad Católica de Chile, November 1982. Supervised by prof. Aldo Cipriano.

Research Projects.

- *Extending Logics of Action and Change for Modeling Agent Communication and Databases*. Fondecyt project 1971304
- *The Development of a Logical Language for Reasoning About Actions and Change*. Fondecyt project 1950885.

- *Development of a logical language for the representation of knowledge in continuous domains.* DIUC, project 94/05.
- *Experts Systems for Process Automation.* DIUC, project 13/87.

Invited Talks

I have given invited talks at the following institutions:

- Imperial College, London. Invited by Robert Kowalski.
- Technical University of Lisbon, Portugal. Invited by Amílcar Sernadas.
- University of Paris (Orsay), France. Invited by Marie-Christine Rousset.
- University of Marseille (Luminy), France. Invited by Camilla Schwind.
- Aachen University of Technology, Germany. Invited by Matthias Jarke.
- University of Linköping, Sweden. Invited by Patrick Doherty.
- SRI International, Menlo Park, CA. Invited by Vinay Chaudri.

Miscellaneous

Society Memberships: American Association for Artificial Intelligence (AAAI), Canadian Society for the Computational Studies of Intelligence (CSCSI), Association for Computing Machinery (ACM), IEEE Computer Society, Sociedad Chilena de Ciencia de la Computación.

Administrative Duties

- Chairman of the Computer Science Department, Catholic University of Chile. 1998-99.
- Member of the Board of Directors Chilean Computer Science Society. 1997-2000.
- Member of the Advisory Committee, Research and Graduate Studies Office, School of Engineering, PUC. Starting in Dec. 1999.

Program Committees and Refereeing I have been member of the program committees of CLEI (Latin-American Conference on Informatics), International Conference of the Chilean Computer Science Society (SCCC), Ibero-American Conference on Artificial Intelligence (IBERAMIA), etc. I have also been a reviewer for IJCAI. Member of the program committee for ER-2000.

Also, I have been a referee for several Journals: Computational Intelligence, Artificial Intelligence, Journal of Logic and Computation, Journal of the Interest Group on Pure and Applied Logic, etc.

References

References

- Raymond Reiter, Dept. of Computer Science, University of Toronto.
- Hector Levesque, Dept. of Computer Science, University of Toronto.
- Leopoldo Bertossi, Dept. of Computer Science, Pontificia Universidad Católica de Chile.
- Amílcar Sernadas, Center for Logic and Computation, Technical University of Lisbon.
- Murray Shahahan, Dept. of Electrical and Electronic Engineering, Imperial College of Science, Technology and Medicine.
- Erik Sandewall, Dept. of Computer and Information Science, Linköping University.
- Patrick Doherty, Dept. of Computer and Information Science, Linköping University.