

Curriculum Vitae

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1 Personal Data

Name : John Anthony Atkinson-Abutridy.

Age : 37.

Date of Birth : July 1st, 1968.

Nationality : Chilean.

Marital Status : Married.

Current Address : Departamento de Ingeniería Informática, Facultad de Ingeniería, Universidad de Concepción, Edmundo Larenas 215, Concepción, Chile

Current Appointment : Associate Professor, Departamento de Ingeniería Informática, Facultad de Ingeniería, Universidad de Concepción, Chile

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2 Higher Education

2003 PhD in Artificial Intelligence, University of Edinburgh, Edinburgh, Scotland (UK).

1995 Dip. in Space Studies, “International Space University”, Space Robotics, Resources and Manufacturing Department. Royal Institute of Technology (KTH), Stockholm, Sweden.

1994 Master in Informatics Engineering (M. Eng), Universidad Técnica Federico Santa María (UTFSM), Valparaíso, Chile.

1991 Informatics Engineer (B. Eng), Universidad Técnica Federico Santa María (UTFSM), Valparaíso, Chile.

3 Research Interests

- Natural-Language Processing.
- Text Mining and Knowledge Discovery from Texts.
- Artificial Intelligence.
- Autonomous Agents.
- Evolutionary Computing.

4 Research Experience

2004-2007 Main Researcher, project: *An Evolutionary Computation Model to Explanatory and Semantically-guided Knowledge Discovery from Texts with Implications for Intelligence Analysis*, grant from the Chilean Research and Technological Council, FONDECYT No. 1040469.

2001-2003 Researcher, *Isaac Newton Institute for Mathematical Sciences*, University of Cambridge, UK.

- 1998-1999 Visiting Researcher, INRIA-Loria (CNRS) and INIST, Nancy, France.
- 1998-2000 Main Researcher in Chile, project ECOS/CONICYT: *Scientific and Technical Information Analysis: The ANISTEC Project*. Joint research project between researchers in France (INRIA-Loria) and Chile (Universidad de Concepción). Grant CONICYT No. C97E04.
- 1998-1999 Main Researcher, project: *Creating an ALife Model for Designing Emergent Autonomous Systems*, Grant No. 98093002-1, Universidad de Concepción, Concepción, Chile
- 1998-1999 Co-Researcher, project: *Processing Interactive Dialog Discourses in an Information Retrieval Agent Context*, Grant No. 98062032-1, Universidad de Concepción, Concepción, Chile
- 1997 Researcher, project: *Intelligent Systems for Checking Imports/Exports*. Grant from National Customs Office and Universidad Tecnica Federico Santa Maria, Valparaiso, Chile.
- 1996 Researcher, project: *Software Technology in Distributed and Concurrent Systems*, Dept. de Informática, Universidad Técnica Federico Santa María (UTFSM), Valparaíso, grant USM 952401.
- 1996 Researcher, project: *Novel Technologies for Teaching Fundamentals of Informatics*, Dept. de Informática, UTFSM, Valparaíso, grant USM 962431,
- 1994 Researcher, project: *Hypercube Multicomputers on Transputer Networks* (M. Eng thesis), grant FONDECYT No. 1930055, Chile.
- 1993 Researcher, project: *Parallelisation Techniques Research for a Parallel Logic Programming Model*. Joint project between UTFSM Dept. de Informática and University of Santiago, Chile.
- 1992 Research Assistant, project: *Algorithms Parallelisation using Messages-Passing Architectures based in Transputers*, Dept. de Informática, UTFSM, Valparaiso, Chile.
- 1991 Research Assistant, project: *Algorithms Parallelisation with Weakly-Coupled Processors*, Dept. de Informática, UTFSM.

5 Publications

- [1] A. Ferreira and J. Atkinson. Intelligent search agents using web-driven natural language explanatory dialogs. *IEEE Computer, Special Theme on Intelligent Search*, pages 44–52, October 2005.
- [2] A. Ferreira and J. Atkinson. Towards effective adaptive information filtering using natural language dialogs and search-driven agents. *18th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA/AIE), Springer Lecture Notes in Artificial Intelligence 3533*, pages 290–299, 2005.
- [3] J. Atkinson. A domain-independent approach to discourse-level knowledge discovery from texts. *18th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA/AIE), Italy. Springer Lecture Notes in Artificial Intelligence 3533*, pages 470–479, 2005.
- [4] J. Atkinson. Semantically-driven explanatory text mining: Beyond keywords. *Advances in Artificial Intelligence-IBERAMIA 2004, Mexico. Springer Lecture Notes in Artificial Intelligence No. 3315*, pages 275–285, 2004.
- [5] J. Atkinson and C. Mellish. A semantically-guided and domain-independent evolutionary model for knowledge discovery from texts. *IEEE Transactions on Evolutionary Computation, Special issue on evolutionary methods in Knowledge discovery from data and Data Mining*, 7(6):546–560, December 2003.
- [6] J. Atkinson and C. Mellish. Combining information extraction with genetic algorithms for text mining. *IEEE Intelligent Systems and Their Applications*, 19(3):2–30, 2004.
- [7] A. Ferreira and John Atkinson. A model for generating explanatory web-based natural-language dialog interactions for documents filtering. *Journal of Research and Practice in Information Technology*, 34(1):2–19, 2002.
- [8] John Atkinson. A domain-independent evolutionary approach for corpus high-level knowledge discovery from texts. *SIGSCE, Cincinnati, USA*, March 2002.

- [9] J. Atkinson, C. Mellish, and S. Aitken. An evolutionary genre-based and domain-independent approach for high-level knowledge discovery from texts. *AAAI Symposium on Mining Answers from Texts and Knowledge Bases, Stanford, CA*, March 2002.
- [10] A. Ferreira and J. Atkinson. Web-based natural language explanatory generation for assisting dialog interactions aimed at information filtering. *EPIA01: 10th Portuguese Conference on Artificial Intelligence*, December 2001.
- [11] J. Atkinson, A. Ferreira, and V. Riquelme. Cooperative learning on autonomous agents acquiring common language for action and perception. *International Conference of the Chilean Computer Science Society/IEEE CS Press, Santiago, Chile*, November 2000.
- [12] Coauthored with A. Ferreira and A. Bassi. Un metodo experimental para el preprocesamiento y etiquetado automatico de textos electronicos en lenguaje natural. *Proceedings of the Chilean Computing Meeting, Santiago, Chile*, November 2000.
- [13] J. Atkinson. Text mining: Principles and applications. *Revista Facultad de Ingenieria, U. de Tarapaca, Chile*, 7:57–61, June 2000.
- [14] J. Atkinson and J. Carrasco. An approach for controlling an autonomous agent by dynamically generating run-time behavior nets. *Argentine Symposium on Artificial Intelligence, Buenos Aires, Argentina*, September 1999.
- [15] J. Atkinson and S. Munoz. Un modelo semi reactivo para la comunicacion y cooperacion en sistemas multi-agentes. *VII Encuentro Chileno de Computacion, Talca (Chile)*, November 1999.
- [16] J. Atkinson and J. Carrasco. An evolutionary model for dynamically controlling a behavior-based autonomous agent. *Proceedings of the 1999 Genetic and Evolutionary Computation Conference (GECCO), Orlando (USA)*, pages 16–24, July 1999.
- [17] J. Atkinson and J. Carrasco. An adaptive approach for generating behavior nets on intelligent agents. *Proceedings of the 1999 International Conference of the Chilean Computer Science Society/IEEE CS Press, Talca Chile*, pages 9–18, November 1999.

- [18] J. Atkinson and J. Carrasco. Un modelo evolutivo de redes de comportamiento para agentes autonomos que utilizan mecanismos de emergencia. *Revista Iberoamericana de Inteligencia Artificial*, 4(8):59–67, August 1999.
- [19] J. Atkinson and A. Ferreira. The design and implementation of the gilena natural language interfaces specification language. *ACM SIGPLAN*, 33(9):108–117, September 1998.
- [20] A. Ferreira and J. Atkinson. Un enfoque integrado para disminuir la sobrecarga en la busqueda de informacion utilizando un agente adaptivo guiado por interacciones dialogicas en lenguaje natural. *Iberoamerican Journal of Research on Computer Science*, 2(1):14–23, September 1998.
- [21] J. Atkinson. Diseno de agentes autonomos utilizando un enfoque de control basado en conductas. *Revista Facultad de Ingenieria, Universidad de Tarapaca, Chile*, 5:49–58, December 1998.
- [22] J. Atkinson and A. Ferreira. Un modelo de agente de busqueda y filtrado de informacion inteligente apoyado por interacciones en lenguaje natural. *Revista Facultad de Ingenieria, Universidad de Tarapaca, Chile*, 5:59–68, December 1998.
- [23] A. Ferreira and J. Atkinson. Motivating spanish acquisition as a foreign language through a multimedia system. *World Conference on Computer-Assisted Language Learning, Melbourne, Australia*, July 1998.
- [24] J. Atkinson and A. Ferreira. Parsing natural language in gilena. *CLEI-97: Latinamerican Conference on Informatics, Valparaiso, Chile*, November 1997.
- [25] J. Atkinson and A. Ferreira. A practical algorithm for parsing non deterministic atn-based natural language. *IASTED International Conference on Artificial Intelligence and Soft Computing, Calgary, Canada*, July 1997.
- [26] A. Ferreira and J. Atkinson. Using a multimedia system for improving the teaching-learning of latin. *International Conference on Theory and Practice of Multimedia CALL, University of Exeter, England*, September 1997.
- [27] J. Atkinson and et al. *VISION 2020: An International View of Future*. KTH Tryck Kopiering, Royal Institute of Technology (Sweden), 1995.

- [28] J. Atkinson. A flexible new language for specifying and generating natural-language systems. *The Third Natural Language Processing Pacific Rim Symposium, Seoul, Korea*, pages 612–615, December 1995.
- [29] J. Atkinson, J. Canas, and M. Solar. Experimental platform for hypercube networks programming. *Proceedings of the III Chilean Computing Meeting, Concepcion, Chile*, pages 95–102, November 1994.
- [30] J. Atkinson and H. von Brand. Teaching formal and natural languages processing using gilena. *Proceedings of the III Iberoamerican Conference of Higher Education in Computing, Concepcion, Chile*, pages 96–105, October 1994.
- [31] J. Atkinson, J. Canas, and M. Solar. Communicating support for multi-computers programming on hypercube networks. *Proceedings of the XX Latin American Conference on Informatics, Monterrey, Mexico*, pages 1395–1404, September 1994.
- [32] J. Atkinson. Hypercube multicomputers on transputer networks. *M. Eng (Informatics) thesis, Universidad Tecnica Federico Santa Maria, Valparaiso, Chile*, November 1994.
- [33] C. Moraga, J. Atkinson, and J. Canas. Parallel architectures to compute fuzzy inferences based on the goedel implication. *Proceedings of the XX Latinamerican Conference on Informatics, Monterrey, Mexico*, pages 681–691, September 1994.
- [34] J. Atkinson. Designing natural-language interfaces using an automatic tool (in spanish). *Proceedings of the II International Conference on Informatics, Mendoza, Argentina*, pages 441–449, June 1994.
- [35] J. Atkinson. Automatic generation of natural-language interfaces. *Proceedings of the World Conference on Artificial Intelligence in Education (AIED'93), Edinburgh (UK)*, August 1993.
- [36] J. Atkinson. Designing an object-oriented model for controlling changes in software configurations. *Proceedings of the XIII National Congress on Systems Engineering Methodologies, Santiago, Chile*, pages 32–40, July 1993.
- [37] J. Atkinson and J. Canas. Gilena: A natural-language interfaces generator. *Proceedings of the XVIII Latin American Conference on Informatics, Spain*, pages 106–117, September 1992.

6 Awards

- 2005 Understanding Faculty Award, Universidad de Concepción, Concepción, Chile.
- 2002 One of four best graduate research at the ACM Graduate Research International Competition, SIGSCE, Cincinnati, USA.
- 1999-2003 *“Presidente de la República” Scholarship*, Ministerio de Planificación, Chile.
- 1997 *Grant from the American Association for Artificial Intelligence*, Visiting Professor, Stanford University (USA).
- 1996 *Scholarship*. CIMPA Summer School on Object-based Systems and Models, Nice (France). Funding institution: INRIA (France).
- 1995 *Scholarship*. 1995 International Space University Summer Session, Royal Institute of Technology (KTH), Stockholm, Sweden. Grant: SAAB Military Aircraft.
- 1993 *Outstanding Participation*. UTFSM, Chile.
- 1992-1993 *Research Assistantship*. Dept. de Informática, UTFSM, Chile.
- 1991-1993 *Graduate Scholarship*. Graduate School, UTFSM, Chile.
- 1991 *Outstanding Student*. UTFSM, Chile.
- 1988-1991 *Teaching Assistantship*. Dept. de Informática, UTFSM, Chile.

7 Scientific Affiliations and Memberships

- 2001- Member of the *Isaac Newton Institute for Mathematical Sciences*, Cambridge, England.
- 1998- Member of European Association for Programming Languages and Systems (EAPLS), Luxembourg.
- 1995- Member of European Alumni Association of the International Space University, England (UK).

- 1993- Member of the American Association for Artificial Intelligence (AAAI), USA.
- 1993- Member of the Canadian Society for Computational Studies of Intelligence (CSCSI), Canadá.
- 1992- Member of the Association for Computational Linguistics (ACL), USA.
- 1991- Member of the Association for Computing Machinery (ACM), USA.
- 1989-1992 Member of the Institute of Electrical and Electronics Engineers (IEEE), USA.
- 1991-1993 Member of the Chilean Computer Science Society, Santiago, Chile.
- 1991-1992 Founder and Chair of the ACM Student Chapter, UTFSM, Valparaiso, Chile (first latinamerican chapter).

8 Invited Talks and Seminars

- 2004 Postgraduate course on *Fundamentals of Natural Language Processing: Symbolic versus Empirical Methods*, Universidad Católica de Valparaiso, Valparaiso, Chile (Noviembre).
- 2004 *Data and Text Mining*. I International Conference on Artificial Intelligence Applications, Cucuta, Colombia (September).
- 2004 *The Role of Natural-Language Processing in Text Mining*. Facultad de Ingeniería, Universidad de la República, Uruguay (November).
- 2004 Tutorial on *Language Technologies and Applications*, Universidad de Tarapacá, Chilean Computing Week, Arica (Noviembre).
- 2004 Invited Conference on *Intelligent Agents: From Theory to Practice*, Jornadas de Informatica, Universidad Mayor, Temuco, Chile (Septiembre).
- 2003 Invited Conference on *Text Mining and Knowledge Discovery from Texts*, Universidad del Bio Bio, Chilean Computing Week, Chillán (Noviembre).

9 Teaching Experience

- 2003-2005 Head of Department, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 1997- Associate Professor, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 1993-1997 Full-time Faculty, Departamento de Informática, Universidad Técnica Federico Santa María (UTFSM), Valparaiso, Chile.
- 1991-1993 Lecturer, Departamento de Informática, UTFSM, Valparaiso, Chile.
- 1993-1994 Part-time Lecturer, School of Informatics, Universidad Católica de Valparaíso, Valparaiso, Chile.
- 1993-1994 Lecturer, German Professional Institute, Valparaíso.
- 1992-1993 Lecturer of training courses, CODELCO Mining Company, Chile.
- 1988-1991 Teaching assistant at UTFSM Departamento de Informática.

10 Recent Supervised Thesis

- 2005 External Advisor, PhD thesis in Informatics, *Applying Negotiation Techniques in the ARTIS Architecture*, Patricia Maldonado, Universidad Politecnica de Madrid, Spain.
- 2005 External Advisor, M.A in Linguistics thesis: *Designing and implementing a Computer Prototype for Supporting the learning of English Abstract-style Structures in the Context of CALL*, Cristian Martinez, Facultad de Humanidades y Artes, Universidad de Concepcion, Concepcion, Chile.
- 2005 M.Sc thesis: *The Learning House: Towards an Autonomous Model for Intelligent Rooms based on Multi-Agent Systems and Data Mining Techniques*, Andrés Puente, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.

- 2005 M.Sc thesis: *Modelling a Natural-Language Text Shallow Parser using Evolutionary Computation Techniques*, Juan Matamala, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 2005 B. Eng. thesis: *Designing an Anti-spam Text Classifier based on Latent Semantic Analysis*- Julio Godoy, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 2004 External Advisor, M.Sc thesis: *Reglas Contextuales y Modelos de Estados Finitos*, Guillermo Moncecchi, Instituto de Computación, Facultad de Ingeniería, Universidad de la República, Montevideo, Uruguay (Noviembre).
- 1998 B. Eng. thesis: *Designing and Implementing a Subsumption-like Architecture to Perform Behaviors in a Physical Autonomous Agent*. Mrs. Sandra Salgado and Mrs. Bruria Castro, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 1998 B. Eng. thesis: *Evolutionary Modeling of a Behavior Nets System for Intelligent Agents using Emergence Mechanisms*. Mr. Julio Carrasco, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 1998 B. Eng. thesis: *Modeling a Coordination and Cooperation System for a Multi-Agent Architecture*. Mr. Sergio Muñoz, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 1998 B. Eng. thesis: *Designing, Implementing and Evaluating a POS tagger for Statistical Learning of Language*. Mrs. Erika Moreira, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 1998 B. Eng. thesis: *Modeling a Language Acquisition/Learning System based on Multi-Agent System Interactions*. Mr. Victor Riquelme, Departamento de Ingeniería Informática, Universidad de Concepción, Concepción, Chile.
- 1997 B. Eng. thesis: *Designing and Implementing a System for Searching on WWW by using Natural Language Queries*. Mr. Eduardo Zorrilla, Departamento de Informática, UTFSM, Chile.

- 1996 B. Eng. thesis: *AINET: An Intelligent Agent Prototype for Internet Applications*. Mrs. Carolina Alarcón, School of Informatics, Catholic University of Valparaiso, Valparaiso, CHILE.
- 1996 B. Eng thesis: *A front-end Compiler Prototype for Implicit Paralelizing of Sequential Algorithms*. Mrs. Carolina Ibarra, School of Informatics, Catholic University of Valparaiso, Valparaiso, CHILE.
- 1995 B. Eng. thesis: *Natural-Language Interaction Support for Querying on SQL-based Servers*. Mr. Daniel Castillo & Claudio Osorio, Departamento de Informática, UTFSM, Chile.
- 1994 B. Eng. thesis: *Implementing and Integrating a Natural-Language Interface to an Information System*. Mrs. Erika Palma, Departamento de Informática, UTFSM, Chile.

11 Professional Experience

- 1998-present Arbitrator/Consultant (e-commerce), “E-Global ADR Tribunal” (<http://www.e-global.es/tribunal.htm>), Spain.
- 1995-1998 Consultant Engineer, CONAFE Ltd. (National Company for Power Supply), Valparaiso, Chile.
- 1995-1997 Consultant Engineer, TUXPAN Engineering Ltd., Viña del Mar, Chile.
- 1991-1991 Informatics Advisor, PASSOL Chemical Ltd., Viña del Mar, Chile.
- 1989-1989 System Engineer, Process Automation Section, Exxon Minerals-Chile (Disputada de las Condes), Santiago, Chile.
- 1987-1989 System Engineer, Electrical Power Chilean Company (Chilectra), Valparaíso, Chile.

12 Participation as Referee

- 2006 Reviewer, Iberoamerican Conference on Artificial Intelligence (IBERAMIA), Brazil.

- 2005 Reviewer, Journal of Theoretical and Applied Electronic Commerce Research.
- 2005 Reviewer, Revista Signos-scielo. Pontificia Universidad Catolica de Valparaiso, Chile.
- 2005 Reviewer, International Journal of Intelligent Systems, USA.
- 2005 Reviewer, International Journal of Multi-Valued Logic and Soft Computing, USA.
- 2005 Reviewer, IEEE Transactions on Systems, Man, and Cybernetics, USA.
- 2004 Reviewer, ACM Computing Reviews, USA.
- 2004-2005 Academic Referee for FONDECYT Research Proposals, Chile.

13 Participation in Program Committees

- 2005-2006 Vice chair, World Computer Congress (WCC) 2006 of the IFIP, Santiago, Chile.
- 2005 Member of the Program Committee of ACL 2005 Poster and Demo Session, International Conference of the Association for Computational Linguistics, Michigan, USA.
- 2005 Chair of the Chilean Workshop on Artificial Intelligence, National Computing Week, Valdivia, Chile.
- 2004 Member of the Program Committee of SBIA2004: The seventeenth Brazilian Symposium on Artificial Intelligence, September.
- 2004 Chair of Workshop on Artificial Intelligence, The International Conference of the Chilean Computer Science Society, November, 2004, Arica, Chile.
- 2003 Member of the Program Committee of the Workshop on Artificial Intelligence, November, 2003, Chillan, Chile.
- 2001 Member of the Program Committee of IC-AI'2001: *The International Conference on Artificial Intelligence*, Las Vegas, USA (June).

1998 Member of the Program Committee of GP-98: *“Third Annual Genetic Programming Conference”*, University of Wisconsin-Madison, Wisconsin, USA (July).