

Carlos Gregorio Diuk-Wasser
curriculum vitae

431 S 5th Ave
Highland Park, NJ 08904
cdiuk@cs.rutgers.edu
<http://www.cs.rutgers.edu/~cdiuk>
(732) 648-3042

PROFILE

Over ten years of professional experience combined with an active academic career. I am currently a full-time PhD student doing research on reinforcement learning and cognitive science.

EDUCATION

Rutgers University

Department of Computer Science and Center for Cognitive Science
PhD in Computer Science with a Certificate in Cognitive Science, ABD status. Expected graduation date: September 2009

University of Buenos Aires

School of Science – Department of Computer Science
Licenciatura in Computer Science – Final thesis: “A computational tool for the reconstruction of genealogies”

The “*Licenciatura*” is a 6-year degree with a final thesis. It can be considered equivalent to a M.Sc. at an institution in the United States.

RESEARCH EXPERIENCE

2004 - present

Conducting research towards a PhD degree at the Rutgers Laboratory for Real-Life Reinforcement Learning, supervised by Dr. Michael Littman.

Participant at Randy Gallistel’s Behavioral Genetics of Memory Lab at the Rutgers University Center for Cognitive Science.

2006

Intel Research – summer graduate intern

Worked at the DDI (Distributed Detection and Inference) group on machine learning methods for network intrusion detection.

1998-2002.

Research assistant under the advisory of Prof. Enrique Tándeter, in the development of algorithms and software tools for the reconstruction of historical genealogies based on marital records.

As part of this research, I wrote my senior thesis under the advisory of Dr. Pablo Jacovkis, dean of the School of Science of the Univ. of Buenos Aires.

PUBLICATIONS AND CONFERENCE PRESENTATIONS

2009. "Exploring compact reinforcement-learning representations with linear regression", Thomas Walsh, Istvan Szita, Carlos Diuk and Michael Littman. Proceedings of the 25th Conference in Uncertainty in Artificial Intelligence (UAI 09), Montreal, Canada, 2009.

2009. "The Adaptive k-Meteorologists Problem and Its Application to Structure Learning and Feature Selection in Reinforcement Learning", Carlos Diuk, Lihong Li and Bethany R. Leffler. Proceedings of the Twenty-Sixth International Conference on Machine Learning (ICML-09), Montreal, Canada, 2009.

2008. "An Object-Oriented Representation for Efficient Reinforcement Learning", Carlos Diuk, Andre Cohen and Michael Littman. Proceedings of the Twenty-Fifth International Conference on Machine Learning (ICML 08), Helsinki, Finland, 2008.

2008. "Hierarchical Reinforcement Learning", Carlos Diuk and Michael Littman. Encyclopedia of Artificial Intelligence, IGI Global, July 2008.

2007. "Efficient Structure Learning in Factored-state MDPs", Alexander L. Strehl, Carlos Diuk and Michael L. Littman. Association for the Advancement of Artificial Intelligence, Vancouver, Canada, 2007.

2007. "An adaptive anomaly detector for worm detection", John Mark Agosta, Carlos Diuk, Jaideep Chandrashekar and Carl Livadas. Workshop on Systems and Machine Learning, 2007.

2006. "A Hierarchical Approach to Efficient Reinforcement Learning in Deterministic Domains", Carlos Diuk, Alexander Strehl and Michael Littman. Autonomous Agents and Multi Agent Systems, Hakodate, Japan, 2006.

2002. "Computer tools for reconstructing a genealogy", Carlos Diuk and Enrique Tándeter. *International Journal of History and Computing*. Edinburgh University Press.

2001. "Computer tools for reconstructing a genealogy", Carlos Diuk and Enrique Tándeter. XVth International Conference of the Association for History and Computing, Poznan, Poland.

WORKSHOP PRESENTATIONS

2006. Invited Speaker at AAMAS Hierarchical Autonomous Agents and Multi-Agent Systems: "A Hierarchical Approach to Efficient Reinforcement Learning".

2006. Thomas J. Walsh, Carlos Diuk and Michael Littman. "Using Classifiers to Transfer Knowledge". Presented at the New York Academy of Science Machine Learning Symposium.

2006. Carlos Diuk, Michael L. Littman, Alexander L. Strehl. "Efficient exploration and learning of structure in factored-state MDPs". Presented at NIPS Workshop "Towards a New Reinforcement Learning?".

2005. Carlos Diuk, Michael L. Littman, and Alexander L. Strehl. "A Hierarchical Approach to Efficient Reinforcement Learning in Factored State Spaces". Presented at the 22nd International Conference on Machine Learning (ICML 2005), Workshop on Rich Representations for Reinforcement Learning, Bonn, Germany.

TEACHING EXPERIENCE

Fall 2008. Organizer – Rutgers University
Seminar on "Bayesian Reinforcement Learning".

2003 – 2004. Teaching Assistant – Rutgers University
Teaching undergraduate "Design & Analysis of Algorithms" class, under the Professors Martin Farach-Colton, S. Muthukrishnan and Leonid Khachiyan.

1999 – 2002 Teaching Assistant in the first year course "Algorithms and Data Structures I", for Computer Science students at the University of Buenos Aires. Position obtained through annual contests.

PROFESSIONAL EXPERIENCE

May-August 2007
Google New York – software engineering intern in the Personalized Search group.

July-September 2006
Intel Research – summer graduate intern

July-August 2004
Yale University – development of a database system and web interface for research project in the Dept. of Public Health.

March 2003 – August 2003
IT Project Leader for Tecnonexo, a web development company based in Argentina and the US.

February 2000-March 2003

Independent IT consultant for Unilever, Aguas Argentinas (Argentina's water utility), Banco Río (largest private bank in Argentina), ESSARP and more than 10 other companies.

1998 – February 2000.

Project Leader in Lemma Informática for Movicom/Bellsouth Argentina and the Public Library System of the City of Buenos Aires. I led a group of 5 to 10 programmers in a number of projects within these companies.

1994 - 1997.

Project Leader for Pablo Diuk – Software Development for Telecom Argentina, Aguas Argentinas, Goodyear, Vichy Laboratoires and the Labor Ministry of Argentina.

1992 - 1993.

Technical support and programming tasks for Pablo Diuk – Software Development at different companies, including Goodyear Argentina, System Software Associates (SSA), Telecom Argentina, etc.

SERVICE AND OTHER ACTIVITIES

Advising High-School students of the NJ Governor's Program. Summer 2009.

Chair - Technical Committee of the RL Competition 2009.

Program Committee member: IJCAI 2009, ECML 2009, 2008 and 2009 AAI Video Competition, ECAI 2008 Workshop on Machine Learning and Planning, ICML/UAI/COLT 2009 Workshop on Abstraction in Reinforcement Learning.

Regular reviewer for JAIR, JAAMAS, IJCAI, AAI, ICML and NIPS.

President of the Graduate Student Association at Rutgers University (2006-07 period, re-elected for 2007-08)

Secretary of the Graduate Student Association at Rutgers University (2005-06 period)

President of the Computer Science Graduate Student Society (CSGSS) of Rutgers University. (2004-2005)

Organizing committee of LATIN'04 conference.

Three times elected student member of the Computer Science Council, the governing association of the Computer Science Department of the University of Buenos Aires. (1998-2001)

LANGUAGES SPOKEN

Spanish: Native speaker

English:

TOEFL: 290/300 – 6.0/6.0 essay

GRE Verbal test: 670/800 (94th percentile)

Rutgers SPEAK test: 60 / 60

Cambridge University Certificate of Proficiency in English: grade A

French: excellent reading, good speaking skills.