

Curriculum Vitæ

Damián Barsotti

Personal Data

First and Last Name: Damián Barsotti
Date of Birth: September 20, 1969
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Education

- **1993-1999** Degree of “Licenciado en Computación” at the Faculty of Mathematics, Astronomy and Physics (Fa.M.A.F.), National University of Córdoba (U.N.C), Argentina. Average mark 9.59 over 10.
- **1989-1992** Student of “Degree Program in Physics” at the Faculty of Mathematics, Astronomy and Physics, National University of Córdoba, Argentina.
- **1981-1988** Degree of “Expert Mercantile-Commercial with Social Economy orientation” at the Secondary School of Commerce Manuel Belgrano, Universidad Nacional de Córdoba, Argentina.

Publications and Seminars

- Damián Barsotti and Nicolas Wolovick. Automatic Probabilistic Program Verification through Random Variable Abstraction. Proceedings del *Eighth Workshop on Quantitative Aspects of Programming Languages (QAPL 2010)*. Año 2010.
- Damián Barsotti, Javier O. Blanco and Silvina Smith. Book *Cálculo de Programas*. Universidad Nacional de Córdoba. ISBN 978-950-33-0642-0. Año 2009.

- Damián Barsotti and Javier O. Blanco. Automatic Refinement of Split Binary Semaphore. In *Theoretical Aspects of Computing, ICTAC 2007*, number 4711 in Lecture Notes in Computer Science, pag. 64-78. 4th International Colloquium Macao, China, Springer, September 2007.
- Damián Barsotti y Javier O. Blanco. Generación de invariantes para implementar eficientemente Regiones Críticas Condicionales. In *Proceedings of CACIC 2007*, pag. 1690-1701. XIII Argentinian Congress on Computer Science, 2007.
- Damian Barsotti, Leonor Prensa Nieto and Alwen Tiu. Verification of Clock Synchronization Algorithms: Experiments on a combination of deductive tools. *Formal Aspects of Computing*. Springer London. Volume 19, Number 3 / August, 2007.
- Damian Barsotti, Leonor Prensa Nieto and Alwen Tiu. Verification of Clock Synchronization Algorithms: Experiments on a combination of deductive tools. Fifth International Workshop on Automated Verification of Critical Systems (AVOCS 2005), Volume 145 of ENTCS, pages 63-78, Elsevier, 2005.
- Damian Barsotti. Instances of Schneider’s generalized protocol of clock synchronization. The Archive of Formal Proofs, Gerwin Klein and Tobias Nipkow and Lawrence Paulson, <http://afp.sourceforge.net/entries/ClockSynchInst.shtml>, 2006.
- Dissertation “Generación de invariantes para implementar eficientemente Regiones Críticas Condicionales”. Workshop on Formal Methods in Security ReSeCo. Montevideo, Uruguay, november 2007.
- Dissertation “(Im)proving Split Binary Semaphores”, Universidad de Rio IV, Departamento de Computación, June 2006.
- Dissertation “Automatic Generation of Invariants to implement Conditional Critics Regions Efficiently”, 4tas. Jornadas de Ciencias de la Computación, Universidad Nacional de Rosario, Facultad de Ciencias Exactas Ingeniería y Agrimensura, October 2006.
- “Introducción a Linux” User guide and tutorial. Didactic material of the course Algorithms and Data Structures. Fa.M.A.F., U.N.C. 2003. <http://www.cs.famaf.unc.edu.ar/~damian/algoritmos1/introlinux.pdf>.
- “Analysis of the timetabling problem and e solution using Simulated Annealing”. Damián Barsotti, Sergio A. Cannas. Fa.M.A.F., U.N.C. 1999.

Scholarships and Grants

- **March 2005 - June 2005** International Internship Program INRIA - France. Research team: MOSEL - INRIA Lorraine. Topic of the work: Combination of deductive tools. Project QSL.
- **June 2000 - May 2001** Scholarship of Initiation renewed by the Council of Scientific researches and Technological of Córdoba (CONICOR), Argentina. Topic of the work: Program Calculus (Theory of Categories). Coordinator PhD. Javier Blanco.
- **June 1999 - May 2000** Scholarship of Initiation granted by the Council of Scientific Researches and Technological of Córdoba (CONICOR), Argentina. Topic of the work: Program Calculus (Theory of Categories). Coordinator PhD. Javier Blanco.

Research Experience

- **2006**, Auxiliary member of project, *Formal Techniques for Verification and the Development of Reactive Programs*. Financed by the Secretary of Science and Technology, Universidad Nacional de Córdoba.
- **2005**, Auxiliary member of project, *Formal Techniques for Analysis and Verification of Concurrent and Reactive Programs*. Financed by the Secretary of Science and Technology, Universidad Nacional de Córdoba.
- **2001-2004**, Auxiliary member of project *Programs Transformations*. Coordinator PhD. Javier Blanco. Financed by the Science Agency of Córdoba, Government of the Province of Córdoba.
- **2001-2003** Auxiliary member of project PICT 11-05272, *Formal Specifications and Program Construction Using Fork Algebras*. Coordinator PhD. Marcelo Frias. Financed by the National Agency of Technological an Scientist Promotion.
- **1998-2003**, Auxiliary member of project *Programs Transformations*. Coordinator PhD. Javier Blanco. Financed by the Secretary of Science and Technology, Universidad Nacional de Córdoba.
- **1998-2000** Auxiliary member of project *Representation by Sheaves of Algebras*. Coordinator PhD. Diego Vaggione. Financed by CONICOR, Government of the Province of Córdoba.

Teaching Experience

- **From June 2001 on**, full time graduate teaching assistant at Fa.M.A.F (U.N.C.).

- **July 1999 - May 2001** Part time graduate teaching assistant at Fa.M.A.F (U.N.C.).
- **1994-1998** Undergraduate teaching assistant at Fa.M.A.F. (U.N.C.).

Taught topics include:

Algorithms and Data Structures (1995-2006), Programming Methodology (1995-1997), Theory of Computation (1997), Computer Organization (1994), Discrete Mathematics (1994).

Graduate Courses Attend

- “Process Algebra”, PhD. Jos Batten, National University of Córdoba, Argentina, 2006, 30 hours, obtaining a mark of 9 over 10.
- “Critical Systems Verification”, PhD. Pedro D’Argenio, Fa.M.A.F., Universidad Nacional de Córdoba. Second semester 2001, 60 hours, obtaining a mark of 9 over 10.
- “Program Calculus”, PhD. Javier Blanco, Fa.M.A.F., National University of Córdoba, Argentina. First semester 2000, 60 hours, obtaining a mark of 10 over 10.
- “Seminary on the education of the programming: Still I did not learn to teach programming”, PhD. Jean Pierre Peyrin, University Jhosep Fourier, Grenoble (France) RIO2006, National University of de Rio Cuarto, 15 hours.
- “Demonstrating theorems with Isabelle/HOL”, PhD. Leonor Prensa-Nieto, INRIA Lorraine (France), RIO2005, National University of de Rio Cuarto, 15 hours.
- “Modelling and Developing Systems Using TLA+”, PhD. Stephan Merz, INRIA Lorraine (France), RIO2005, National University of de Rio Cuarto, 15 hours.
- “Formal Methods for Smartcards”, Phd. Gilles Barthe, INRIA, Sophia-Antipolis (France), RIO2005, National University of de Rio Cuarto, 15 hours.
- “From Philosophy to the Length of the Programs”, PhD. Gregorio Chaitin, IBM Watson Research Center (EE.UU.), RIO2004, National University of de Rio Cuarto, 15 hours.
- “Computer Applications of Automatic Demonstration of Theorems using Coq”, PhD. Nora Szasz, Carlos Luna, INCO (Uruguay), RIO2004, National University of de Rio Cuarto, 15 hours.

- “Verification of Sequential and Concurrent Programs”, PhD. Leonor Prensa Nieto, RIO2003, National University of de Rio Cuarto, Argentina, 15 hours.
- “Tool-based Verification of Java Programs”, PhD. Marieke Huisman, Computing Science Department (InCo) of the Engineering School, Universidad de la República, Montevideo, Uruguay. November 2001, 20 hours.
- “Seminar State-of-the-Art on Program. Design Using Logic - WG 2.3 - IFIP”, Seminar and School, Tandil, Argentina, 6-13 September 2000.

Undergraduate Courses Attend

- “Multidimensional and Spatial Data Structures”, ECI’96, Buenos Aires, July 1996, 15 hours.
- “Real Complexity”, ECI’96, Buenos Aires, July 1996, 15 hours.
- “Computational Molecular Biology”, ECI’96, Buenos Aires, July 1996, 15 hours.
- “Theory of Codes”, UMA’97, Córdoba Argentina, 1997, 5 hours.
- “Models and Assignment Games”, UMA’97, Córdoba Argentina, 1997, 5 hours.
- “Software Correction in Functional Languages and Types for Advanced Programming”, ECI’95, Buenos Aires, August 1995, 15 hours.
- “Heuristics in Combinatorial Problems and Applications”, ECI’95, Buenos Aires, August 1995, 15 hours.

Working Experience

- **2000-2003** System administration of a local network, Fa.M.A.F., Universidad Nacional de Córdoba.
- **2000-2003** System administration of the Computer Laboratory for undergraduate teaching, Fa.M.A.F., Universidad Nacional de Córdoba.
- **2001** Installation and set up of a sixteen node Intel Beowulf cluster, Fa.M.A.F., National University of Cordoba.
- **August 1996 - December 1999** Internship at the Prosecretaría de Informática, Universidad Nacional de Córdoba, working on TCP/IP networks, development of web-based applications and Linux and Windows systems administration and support.

Managerial Experience

- **From 1995 on**, Member of the Advising Commission on the Computing Curricula of Fa.M.A.F. (U.N.C.).
- **2004** Member of the Advising Committee of the 33 JAIIO (Jornada Argentina de Informática e Investigación Operativa), Fa.M.A.F. (U.N.C.).
- **2002 - 2003** Secretary of Studentship Matters to the Dean of Fa.M.A.F. (U.N.C.).
- **2000 - 2003** Member of the Administration Commission for the Computer Network of Fa.M.A.F. (U.N.C.).
- **March 2000 - February 2002** Member of the Evaluation Board for Teaching Assistants in Computer Science.
- **1997** Collaborator of the Advising Committee of the XLVII UMA, U.N.C.

Other Information

- Reviewer for the following conferences CLEI2004 (Arequipa, Perú), CLEI2002 (Montevideo, Uruguay), WAIT2002 (Argentina).
- **October 2002** Member of the Electoral Commission Fa.M.A.F. (U.N.C.).
- **2000 - 2001** Professor and assistant of the project “University in the Prison” organized by the Faculty of Philosophy and Humanities (U.N.C.) for the penitentiary of Bower (Córdoba - Argentina).