# Curriculum Vitae


## Maximiliano Cristiá


## Contacts and Personal References

## Education

- Licenciado[1] en Matemática – 1993 – Universidad Nacional de Rosario – Argentina.
- M.Sc. in Computer Science – 2002 – Universidad de la República – Uruguay.
- PhD. in Informatics – 2012 – Aix-Marseille Université – France.

## Current Positions

**Director** of the Software Engineering Group at CIFASIS (French Argentine International Center for Information Systems and Sciences), Rosario, Argentina.

**Professor** at the Computer Science Department of the Facultad de Ciencias Exactas, Ingeniería y Agrimensura, Universidad Nacional de Rosario (Argentina) in charge of the following courses:

- Software Engineering I (previously called System Analysis) since 1998 (1st semester, 4th year of LCC[2]).
- Software Engineering II (previously called Software Engineering) since 1999 (2nd semester, 4th year of LCC).
- Computer Security since 2014 (1st semester, 5th year of LCC).

**Researcher level 2** according to the National Universities Council of Argentina.

Faculty member at Universidad Nacional de Rosario since 1986.

## Research Interests

Software verification, model-based testing, formal notations for software development, formal methods, set constraint solving, software architecture and design, tools to automate software development.

## Research Projects

Constraint logic programming applied to software validation and verification – PICT 2014-2200 – FONCyT – 2015 to 2018.

[1] In Argentina, a 'licenciatura' is a five year degree including a final research thesis; it is equivalent to a MSc. in Europe.
[2] Licenciatura en Ciencias de la Computación

Fastest: a tool for testing automation – CONICET – 2014 to 2018.

Refinement and program annotation in the Test Template Framework – PICT 2011-1002 – FONCyT – 2012 to 2014

## Advisory Boards and Technological Services

Member of CONICET's Advisory Board on CONICET's Web Voting System from 2012 to present.

Member of CONICET's Advisory Board on Electronic Voting Systems for Argentina's National Election, 2017.

Advisory service on information security and software engineering to the Tax Administration Service of the Entre Ríos Province (Argentina), 2017.

Advisory service on information security to the Supreme Court of the Entre Ríos Province, 2015.

Advisory service on information security and software engineering to several Rosario-based IT companies.

## Supervision of Postdoc Positions and Phd. and MSc. Students

### PhD. Students

Ariel González – Universidad de la República (Uruguay) – 2017 to present.

Diego Hollmann – Universidad Nacional de Rosario (Argentina) – Graduated in 2015.

### Others

I have supervised three postdoc positions at CIFASIS (Argentina) from 2014 to 2016.

Twenty four MSc. students on Computer Science supervised in the span of fifteen years, most of them at Universidad Nacional de Rosario (Argentina).

## Program Committees

- Co-chair of the 3rd International Workshop on Sets and Tools.
- Software Verification and Testing, a track of the ACM/SIGAPP Symposium On Applied Computing, 2015-2017.
- Symposium On Theory of Modeling and Simulation, 2010 to present.
- Simposio Argentino de Ingeniería de Software, 2015-2016.

## Invited Seminars

- Programs as formulas (not as proofs) – Logic et Méthode formelle – Aix-Marseille Université – 2018
- Programas como fórmulas (no como pruebas) – 15 Jornadas de Ciencias de la Computación – Universidad Nacional de Rosario – 2017.
- Adding Partial Functions to Constraint Logic Programming with Sets – Workshop on Formal Verification of Proofs and Programs – Instituto de Computación (InCo) – Universidad de la República – Montevideo (Uruguay) – 2015.
- Seguridad Informática para la Defensa – Ministerio de Defensa de la República Argentina – 2014.
- Fastest: Test Case Generation from Z Specifications – Institut für Informatik-Systeme – Alpen-Adria Universität (Austria) – 2012.
- Test Automation from Z Specifications – Altran Praxis – Gran Bretaña – 2011.
- Practical Uses of Formal Methods in Software Verification and Validation – Critical Software – Portugal – 2008.

- Practical Uses of Formal Methods in Software Verification and Validation – Instituto Nacional de Pesquisas Espaciais (INPE) – Brasil – 2008.
- Enforcing Noninterference by Running one Version of the Program per Level – Formal Methods in Security - ReSeCo Workshop – Montevideo (Uruguay) – 2007
- GTL: a semiformally developed secure Linux – Laboratory of Advanced Software Systems (LASSY) – University of Luxembourg (Luxemburgo) – 2006.
- Adding Multi-level Security to the Linux Kernel - Theory and Practice – Laboratoire des Sciences de l'Information et des Systèmes – Aix-Marseille Université (Francia) – 2005.
- 5 problemas y 5 soluciones de seguridad informática – Escuela de verano de Río IV – Universidad Nacional de Río IV – 2001.
- GIDIS Trusted Linux: a multi-level secure Linux prototype – Université Paris 7-Paris Diderot (Francia) – Preuves, Programmes & Systèmes (PPS) – 2004.

## Contribution to Society

I'm running a YouTube channel since April, 2017.

`www.youtube.com/c/maximilianocristiais`

The channel is dedicated to the dissemination of Software Engineering best practices. Each video takes the form of a short lecture.

Currently, the channel's numbers are the following:

- 30 videos totaling 514 minutes
- 415 subscribers from all over Latin America and Spain
- +54K watch minutes
- 10k views

## Former Positions

**Academic Director** of the Master Program on Engineering of Information Systems at Universidad Tecnológica Nacional (Argentina) from 2012 to 2017.

**Professor** at the Postgraduate School on Economics at Universidad Nacional de Rosario (Argentina) from 2006 to 2016.

Independent consultant on computer security and software engineering for more than 10 years.

# Ten Most Relevant Publications


[1] Maximiliano Cristiá and Gianfranco Rossi. A decision procedure for restricted intensional sets. In Leonardo de Moura, editor, *Automated Deduction - CADE 26 - 26th International Conference on Automated Deduction, Gothenburg, Sweden, August 6-11, 2017, Proceedings*, volume 10395 of *Lecture Notes in Computer Science*, pages 185–201. Springer, 2017.

[2] Maximiliano Cristiá and Gianfranco Rossi. A decision procedure for sets, binary relations and partial functions. In Swarat Chaudhuri and Azadeh Farzan, editors, *Computer Aided Verification - 28th International Conference, CAV 2016, Toronto, ON, Canada, July 17-23, 2016, Proceedings, Part I*, volume 9779 of *Lecture Notes in Computer Science*, pages 179–198. Springer, 2016.

[3] Maximiliano Cristiá, Diego Hollmann, and Claudia Frydman. A multi-target compiler for CML-DEVS. *Simulation*, 2018. to appear.

[4] Maximiliano Cristiá, Gianfranco Rossi, and Claudia S. Frydman. Adding partial functions to constraint logic programming with sets. *TPLP*, 15(4-5):651–665, 2015.

[5] Diego A. Hollmann, Maximiliano Cristiá, and Claudia Frydman. CML-DEVS: A specification language for DEVS conceptual models. *Simulation Modelling Practice and Theory*, 57:100 – 117, 2015.

[6] Diego A. Hollmann, Maximiliano Cristiá, and Claudia Frydman. A family of simulation criteria to guide DEVS models validation rigorously, systematically and semi-automatically. *Simulation Modelling Practice and Theory*, 49(0):1 – 26, 2014.

[7] Maximiliano Cristiá, Pablo Albertengo, Claudia S. Frydman, Brian Plüss, and Pablo Rodríguez Monetti. Tool support for the Test Template Framework. *Softw. Test., Verif. Reliab.*, 24(1):3–37, 2014.

[8] Maximiliano Cristiá, Joaquín Mesuro, and Claudia S. Frydman. Integration testing in the Test Template Framework. In Stefania Gnesi and Arend Rensink, editors, *FASE*, volume 8411 of *Lecture Notes in Computer Science*, pages 400–414. Springer, 2014.

[9] Maximiliano Cristiá, Gianfranco Rossi, and Claudia S. Frydman. {log} as a test case generator for the Test Template Framework. In Robert M. Hierons, Mercedes G. Merayo, and Mario Bravetti, editors, *SEFM*, volume 8137 of *Lecture Notes in Computer Science*, pages 229–243. Springer, 2013.

[10] Maximiliano Cristiá and Pablo Rodríguez Monetti. Implementing and applying the Stocks-Carrington framework for model-based testing. In Karin Breitman and Ana Cavalcanti, editors, *ICFEM*, volume 5885 of *Lecture Notes in Computer Science*, pages 167–185. Springer, 2009.