

CURRICULUM VITÆ

DR. VALENTÍN CASSANO

PERSONAL INFORMATION

Full Name: Valentín Cassano
Citizenship: Argentina
Afilación: Logics, Interaction, and Intelligent Systems (LIIS), Sección de Computación, FaMAF, UNC
Córdoba Capital, Córdoba, Argentina
Departamento de Matemática, FCEFQyN, UNRC
Río Cuarto, Córdoba, Argentina
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EDUCATION

05/2008–08/2015 Ph.D. in Computer Science
McMaster University, Canada
Thesis: *A Logical Basis for Reasoning with Default Rules*
Supervisors: Dr. Thomas S. E. Maibaum, Dr. Carlos G. Lopez Pombo
03/2002–02/2008 Licenciado en Ciencias de la Computación (Bachelor degree in Computer Science)
University of Rio Cuarto, Argentina
Thesis: *Automated Verification of Temporal Properties of CommUnity Designs*
Supervisors: Dr. Nazareno Aguirre, Dr. Germán Regis

INTERESTS

– Logic and Formal Systems – Logic in Computer Science – Nonmonotonic Reasoning
– Logic via Algebra – Modal Logic – Deontic Logic – Dynamic Logic.

APPOINTMENTS

TEACHING

10/2019–to date Tenured Professor (Adjunto). Department of Mathematics. University of Rio Cuarto, Arg.
06/2019–08/2019 Sessional Faculty. Department of Mathematics. University of Rio Cuarto, Argentina.
09/2016–12/2016 Sessional Faculty. Department of Computing & Software. McMaster University, Canada.
03/2018–02/2019 Teaching Assistant. Department of Computing. University of Rio Cuarto, Argentina.
05/2014–12/2014 Teaching Assistant. Department of Computing. University of Rio Cuarto, Argentina.
09/2008–08/2012 Teaching Assistant. Department of Computing & Software. McMaster University, Canada.
05/2007–04/2008 Teaching Assistant. Department of Computing. University of Rio Cuarto, Argentina.
07/2005–04/2007 Student Teaching Assistant. Department of Computing. University of Rio Cuarto, Argentina.

RESEARCH

- 06/2021 Assistant Researcher (supervisor: Dr. Carlos Areces); Carrera del Investigador Científico y Tecnológico; Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Arg.
- 09/2017–03/2020 Postdoctoral Fellow (supervisor: Dr. Carlos Areces); Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina.
- 05/2019–05/2019 Visiting Researcher; Individual and Collective Reasoning Research Group; University of Luxembourg, Luxembourg.
- 07/2018–08/2018
- 09/2015–08/2017 Postdoctoral Fellow (supervisor: Dr. Thomas S.E. Maibaum); Department of Computing & Software; McMaster University, Canada.
- 09/2010–12/2013 Research Assistant; Department of Computing & Software; McMaster University, Canada.
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EXPERIENCE

TEACHING

- Professor University of Rio Cuarto, Argentina. In the following courses
- 1927: Informatics (2nd term, 2020)
 - 1948: Calculus I (2nd term, 2020)
 - 1934: Mathematical Logic (1st term, 2020, 2021)
 - 1934: Mathematical Logic (Jun.–Jul., 2019)
- Sessional Faculty McMaster University, Canada. In the following courses:
- SE 3BB4: Concurrent System Design (Winter Term, 2016)
- T. Assistant University of Rio Cuarto, Argentina. In the following courses:
- 3303: Introduction to Algorithms (1st term y 2nd term, 2018)
 - 1956: Programming Paradigms (2nd term, 2014)
 - 1947: Algebra (1st term, 2014)
 - 1948: Advanced Programming (1st term, 2014)
 - 3303: Introduction to Programming (1st term, 2008)
 - 3301/3325: Data Structures and Algorithms (2nd term, 2008)
 - 1948: Advanced Programming (1st term, 2007)
- Volunteer McMaster University, Canada. In the following courses:
- CS 3SD3/SE 3BB4: Concurrent System Design (Fall Term, Winter Term, 2015)
- T. Assistant McMaster University, Canada. In the following courses:
- SE 3BB4: Concurrent Systems Design (Winter Term, 2009–2012)
- Student T. A. University of Rio Cuarto, Argentina. In the following courses:
- 1948: Advanced Programming (1st term, 2006, 2007)
 - 3301/3325: Data Structures and Algorithms (2nd term, 2006)
 - 3303: Introduction to Algorithms (2nd term, 2005)

RESEARCH

- 2021 Position: Director. Project name: Matemática y Ciencias de la Computación (Cornucopia de Posibilidades). Funding: SCyT-UNRC – Proyectos Asociativos de Investigación (PPI-A). University of Rio Cuarto, Argentina.
- 2018-2020 Position: Researcher. Project name: Formalization and Interactive Verification of Dynamic Modal Logics. Director: Dr. Raul Fervari. Funding: GRFT – MinCyT de Córdoba. University of Cordoba, Argentina.

- 2018-2020 Position: Researcher. Project name: Complexity and Inference on Dynamic Languages. Director: Dr. Raul Fervari. Funding: PICT-MINCYT-2017-1130 B – ANPCyT. University of Cordoba, Argentina.
- 2018, 2019 Position: Visiting Researcher. Project name: “Mining and Reasoning with Legal Texts (MIREL)”. Director: Dr. Leon van der Torre. Funding: MIREL. University of Cordoba, Argentina, and University of Luxembourg, Luxembourg.
- 2018 Postdoc. “Theory of Structured Data Group”. Director (Argentina): Dr. Sergio Abriola. Laboratoire International Associé SINFIN (langageS, logIque, et vérificatioN pour l’inFormatIque fondameNtale).
- 2017 Position: Researcher. Project name: “Proyecto Integrador Ciudad de los Niños, Universidad y Computación (PICUCo)”. Director: Lic. María Marta Novaira. Funding: UNRC. University of Rio Cuarto, Argentina.
- 2016–2017 Position: Research Assistant. Project name: “Certification of Automotive Road Vehicles: Safety”. Director: Dr. Thomas S.E. Maibaum, Dr. Alan Wassying, Dr. Mark Lawford. Funding: Toyota ITC. McMaster University, Canada.
- 2013–2016 Position: Research Assistant. Project name: “Network for the Engineering of Complex Software-Intensive Systems for Automotive Systems”. Director: Dr. Thomas S.E. Maibaum. Funding: Ontario Research Fund. McMaster University, Canada.
- 2008–2013 Position: Research Assistant. Project name: “Software Architecture, Model Driven Development, and Fault Tolerance”. Director: Dr. Thomas S.E. Maibaum. Funding: Natural Sciences and Engineering Research Council of Canada Discovery Grant. McMaster University, Canada.
- 2008 Position: Junior Researcher. Project name: “Construcción de Software Confiable Mediante Métodos Formales”. Director: Dr. Nazareno Aguirre. University of Rio Cuarto, Argentina.
- 2008 Position: Member. Project name: Creación de observatorios de “Oferta y Demanda TICs” y de “Recursos Humanos del Sector de Software”. Funding: ANPCyT (FONOSOFT). University of Rio Cuarto, Argentina.
- 2006–2007 Position: Young Researcher. Project name: “Fundamentos Lógico-matemáticos en la Enseñanza de la Algorítmica y Representación de Datos”. Proyecto de Innovación e Investigación para el mejoramiento de la enseñanza de grado (PIIMEG). Director: Dr. Javier Blanco, Dr. Nazareno Aguirre, A.C. Maria Marta Novaira, A.C. Sonia Permigiani. Funding: SCyT-UNRC. University of Rio Cuarto, Argentina.
- 2005–2006 Position: Young Researcher. Project name: “Fundamentos Lógico-matemáticos en la Enseñanza de la Algorítmica y Representación de Datos”. Director: Dr. Javier Blanco, Dr. Nazareno Aguirre, A.C. Maria Marta Novaira, A.C. Sonia Permigiani, A.C. Damián Nadales. Funding: SCyT-UNRC. University of Rio Cuarto, Argentina.

PUBLICATIONS AND OTHER ACADEMIC CONTRIBUTIONS

PEER REVIEWED

- INT. CNF. PROC. [P9] Pablo Castro, Valentin Cassano, Raul Fervari, and Carlos Areces. *Deontic Action Logics via Algebra*. In: 15th International Conference on Deontic Logic and Normative Systems (DEON 2020/21). Ed.: Fenrong Liu, Alessandra Marra, Paul Portner and Frederik Van De Putte. 17 pages. College Publications. Munich, Germany. July 2021. Calificación: B3 (Qualis).
- [P8] Valentin Cassano, Raul Fervari, Carlos Areces, and Pablo Castro. *Default Modal Systems as Algebraic Updates*. In: 3rd International Workshop on Dynamic Logic: New Trends and Applications (DaLí 2020). Ed.: Manuel Martins and Igor Sedlár. Vol. 12569. LNCS. pp. 103–119. Springer. Prague, Czech Republic. Oct. 2020.

- [P7] Valentin Cassano, Raul Fervari, Guillaume Hoffmann, Carlos Areces, and Pablo F. Castro. *A Tableaux Calculus for Default Intuitionistic Logic*. In: 27th Conference on Automated Deduction (CADE-27). Ed.: Fontaine, P. Vol. 11716. LNCS. pp. 161–177. Springer. Natal, Brazil. Aug. 2019. Calificación: A (ERA).
- [P6] Pablo F. Castro, Valentin Cassano, Raul Fervari, and Carlos Areces. *An Algebraic Approach for Action Based Default Reasoning*. In: 17th Theoretical Aspects of Rationality and Knowledge (TARK 2019). Eds.: Moss, L. Vol. 297. pp. 91–105. EPTCS. Toulouse, France. Jul. 2019. Calificación: A (ERA).
- [P5] Valentin Cassano, Raul Fervari, Carlos Areces, and Pablo F. Castro. *Interpolation and Beth Definability in Default Logics*. In: 16th European Conference on Logics in Artificial Intelligence (JELIA 2019). Eds.: Calimeri, F. and Leone, N. and Manna, M. Vol. 11468. LNCS. pp. 675–691. Springer. Rende, Italy. May. 2019. Calificación: A (ERA).
- [P4] Valentin Cassano, Carlos Areces, and Pablo F. Castro. *Reasoning About Prescription and Description Using Prioritized Default Rules*. In: 22nd International Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR-22). Eds.: Barthe, G. and Sutcliffe, G. and Veanes, M. Vol. 57. pp. 196–213. EPIc Series in Computing. Awassa, Ethiopia. Nov. 2018. Calificación: A (ERA).
- [P3] Valentin Cassano, Thomas S.E. Maibaum, and Silviya Grigorova. *A (Proto) Logical Basis for the Notion of a Structured Argument in a Safety Case*. In: 18th International Conference on Formal Engineering Methods (ICFEM'16). Eds.: Ogata, K. and Lawford, M. and Liu, S. Vol. 9323. LNCS. pp. 1–17. Springer. Tokyo, Japan. Nov. 2016. Calificación: B1 (Qualis).
- [P2] Sahar Kokaly, Rick Salay, Valentin Cassano, Thomas S.E. Maibaum, and Marsha Chechik. *A Model Management Approach for Assurance Case Reuse due to System Evolution*. In: 19th ACM/IEEE International Conference on Model Driven Engineering Languages and Systems (MoDELS'16). Eds: Baudry, B. and Combemale, B. pp. 196-206. ACM. Saint-Malo, France. Oct. 2016. Calificación: A2 (Qualis).
- [P1] Valentin Cassano, Carlos G. Lopez Pombo, and Thomas S.E. Maibaum. *A Propositional Tableaux Based Proof Calculus for Reasoning with Default Rules*. In: International Conference on Automated Reasoning with Analytic Tableaux and Related Methods (TABLEAUX'15). Ed.: de Nivelles, H. Vol. 9323. LNAI. pp. 6–21. Springer. Wrocław, Poland. Sep. 2015. Calificación: A (ERA).

BOOK CHAPTERS [B1] Valentin Cassano, Thomas S.E. Maibaum, and Silviya Grigorova. *Towards Making Safety Case Arguments Explicit, Precise, and Well Founded*. In: Implicit and Explicit Semantics Integration in Proof-Based Developments of Discrete Systems. Communications of NII Shonan Meetings. Eds.: Ait-Ameur, Y., Nakajima, S., and Méry, D. pp. 227-258. Springer. 2021.

WORKSHOPS [W3] Valentin Cassano, Silviya Grigorova, Neeraj K. Singh, Morayo Adedjouma, Mark Lawford, Thomas S.E. Maibaum, and Alan Wassysng. *Is Current Incremental Safety Assurance Sound?* In: 4th International Workshop on Next Generation of System Assurance Approaches for Safety-Critical Systems (SASSUR'15). Part of: 34th International Conference on Computer Safety, Reliability, and Security (SAFECOMP'15) Workshops. Ed.: Floor Koornneef and Coen van Gulijk. Vol. 9338. LNCS. pp. 397–408. Springer. Delft, The Netherlands. Sep. 2015.

[W2] Valentin Cassano and Thomas S.E. Maibaum. *The Definition and Assessment of a Safety Argument*. In: 2nd International Workshop on Assurance Cases for Software-intensive Systems (ASSURE'14). Part of: 25th IEEE Int. Symposium on Software Reliability Engineering (ISSRE'14) Workshops. pp. 180–185. IEEE Comp. Society. Trento, Italy. Nov. 2014.

[W1] Valentin Cassano and Thomas S.E. Maibaum. *Actions and Events in Concurrent Systems*

Design. In: 1st Latin American Workshop on Formal Methods (LAFM'13). Part of: 24th International Conference on Concurrency Theory (CONCUR'13). Ed.: Nazareno Aguirre and Leila Ribeiro. Vol. 139. pp. 31–45. EPTCS. Buenos Aires, Argentina. Aug. 2013.

- SHORT PAPERS [S1] Valentin Cassano, Raul Fervari, Carlos Areces, and Pablo Castro. *Interpolation Results for Default Logic Over Modal Logic*. In: Advances in Modal Logic (AiML 2018). Bern, Switzerland. Aug. 2018.
- ABSTRACTS [A6] Valentin Cassano and Carlos Areces. *A Propositional Davis-Putnam Based Proof Calculus for Reasoning with Default Rules*. In: RSME-UMA 2017. Buenos Aires, Argentina. Dec. 2017.
- [A5] Valentin Cassano and Thomas S.E. Maibaum. *Towards a Formulation of the Modularization Theorem for Presentations in Default Logics*. In: 23rd Int. Workshop on Algebraic Development Techniques (WADT'16). Gregynog, Wales. Sep. 2016.
- [A4] Valentin Cassano and Thomas S.E. Maibaum. *A Reassessment of Toulmin's Argument Scheme in the Context of Assurance Cases*. In: Verification and Assurance (VeriSure'15). Part of: 27th International Conference on Computer-Aided Verification (CAV'15) Workshops. San Francisco, USA. Jul. 2015.
- [A3] Valentin Cassano and Thomas S.E. Maibaum. *Arguing Safety Formally*. In: 22nd Int. Workshop on Algebraic Development Techniques (WADT'14). Sinaia, Romania. Sep. 2014.
- [A2] Valentin Cassano, Carlos G. Lopez Pombo, and Thomas S.E. Maibaum. *Entailment Systems for Default Reasoning*. In: 21st Int. Workshop on Algebraic Development Techniques (WADT'12). Salamanca, Spain. Jun. 2012.
- [A1] Valentin Cassano and Thomas S.E. Maibaum. *On Components & Concurrent Systems*. In: 20th Int. Workshop on Algebraic Development Techniques (WADT'10). Bremen, Germany. Jul. 2010.
- OTHER [M1] Valentin Cassano and D. Nadas. *Hacia la Prueba de Corrección de Clases*. In: XII Congreso Argentino en Ciencias de la Computación (CACIC'06). San Luis, Argentina. Oct. 2006.

EDITORIAL Y REVIEW

PC MEMBER

- 2021 Latin American Symposium on the Theory of Computation. Satellite event of the XLVII Latin American Informatics Conference (CLEI 2021).
- 2020 Latin American Symposium on the Theory of Computation. Satellite event of the XLVI Latin American Informatics Conference (CLEI 2020).
- 2018 Mining and REasoning with Legal texts (MIREL) Workshops.

PROGRAM MANAGER

- 2018 Luxembourg Logic for Artificial Intelligence Summit (LuxLogAI 2018).

SUBREVIEWER

- 2021 4th International Conference on Logic and Argumentation (CLAR 2021).
- 2019 28th International Joint Conference on Artificial Intelligence (IJCAI-2019).

- 2017 20th ACM/IEEE International Conference on Model Driven Engineering Languages and Systems (MoDELS 2017).
- 2010 12th International Conference on Formal Engineering Methods (ICFEM'10).
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MEETINGS AND EVENTS

ORGANIZING COMMITTEE MEMBER

- 2019 International Symposium on the Mathematical Foundations of Software Engineering: In Honor of T.S.E. Maibaum and on the Occasion of his 70th Birthday. Department of Computing. University of Rio Cuarto, Argentina.
- 2018 6th Workshop on the Foundations for the Analysis and the Automatic Construction of Software (FACAS 2018). La Falda, Cordoba, Argentina.
- 2014, 2016
2006–2008 Summer School in Computer Science (RIO)
Department of Computing. University of Rio Cuarto, Argentina.
- 2010–2012 Graduate Students Seminars Series
Department of Computing & Software. McMaster University, Canada.

TALKS

- 06/2019 “Software Engineering: A Cornucopia of Models”. Engineering Week. School of Engineering, University of Villa Mercedes, Villa Mercedes, Argentina.
- 05/2019 16th European Conference on Logics in Artificial Intelligence (JELIA 2019), Rende, Italy.
- 08/2018 Advances in Modal Logic 2018 (AiML 2018), Bern, Switzerland.
- 06/2018 “Logic and Software Engineering”. Engineering Week. School of Engineering, University of Villa Mercedes, Villa Mercedes, Argentina.
- 12/2017 “A Propositional Davis-Putnam Based Proof Calculus for Reasoning with Default Rules”. 1^{er} Encuentro Conjunto de la Real Sociedad Matemática Española y la Unión Matemática Argentina (RSME-UMA 2017), University of Buenos Aires, Argentina.
- 10/2017 “An experience on doing a PhD abroad”. Jornadas de Computación. Sección de Ciencias de la Computación. Facultad de Matemática, Astronomía, y Física (FaMAF), Córdoba, Argentina.
- 05/2016 “Default Logic”. Seminar Series of the Logics, Interaction, and Intelligent Systems (LIIS). Sección de Ciencias de la Computación. Facultad de Matemática, Astronomía, y Física (FaMAF), Córdoba, Argentina.
- 2006–2016 “Tableaux for Default Logic”. Seminar Series of the Department of Computing. Universidad Nacional de Rio Cuarto, Río Cuarto, Argentina.
- 09/2015 24th Int. Conference on Automated Reasoning with Analytic Tableaux and Related Methods (TABLEAUX'15), Wrocław, Poland.
- 06/2015 2015 Network for the Engineering of Complex Software-Intensive Systems for Automotive Systems (NECSIS) Workshop, Vancouver, Canadá.
- 2014–2015 Network for the Engineering of Complex Software-Intensive Systems for Automotive Systems (NECSIS) Workshop Series. McMaster Research Center, Hamilton, Canadá.
- 11/2014 2nd Int. Workshop on Assurance Cases for Software-intensive Systems (ASSURE'14), Trento, Italy.
- 08/2013 1st Latin American Workshop on Formal Methods (LAFM'13), Buenos Aires, Argentina.
- 06/2012 21nd Int. Workshop on Algebraic Development Techniques (WADT 2012), Salamanca, Spain.

- 2010–2012 Graduate Students Seminars Series. Department of Computing & Software. McMaster University, Hamilton, Canadá.
- 07/2010 20th Int. Workshop on Algebraic Development Techniques (WADT 2010), Bremen, Germany.
- 10/2006 XII Congreso Argentino de Ciencias de la Computación (CACIC 2006). Departamento de Informática. Universidad Nacional de San Luis, San Luis, Argentina.

INVITED

- 06/2012 Young Researcher. IFIP WG1.3: Foundations of System Specification, Salamanca, Spain.
- 07/2010 Young Researcher. IFIP WG1.3: Foundations of System Specification, Bremen, Germany.

SUMMER SCHOOLS AND OTHER SCIENTIFIC MEETINGS

- 08/2018 30th European Summer School on Logic, Languages, and Information. Sofia University “St. Kl. Ohridski”, Sofia, Bulgaria.
- 05/2011 1st Summer School on Formal Techniques. Menlo College, Atherton, USA.
- 2004–2008 Summer School in Computer Science (RIO). Department of Computing. University of Rio Cuarto, Río Cuarto, Argentina.
- 04/2006 Escuela de Posgrado PAV (Red Protic). Instituto de Sistemas de Tandil, Tandil, Argentina.
- 10/2005 XI Congreso Argentino de Ciencias de la Computación (CACIC 2005). Facultad de Ciencias de la Administración. Universidad Nacional de Entre Ríos, Concordia, Argentina.

SUPERVISION

GRADUATE LEVEL

- 04/2021– PhD supervisor, with Dr. Raul Fervari, of Bettina Aylen Milanesio. Thesis: *Multi-Agent Reasoning from Incomplete Information*. Sección de Computación, Facultad de Matemática, Astronomía, Física, y Computación (FaMAF). University of Cordoba, Argentina. Start date: 2021. Expected completion date: 2025.
- 04/2021– PhD supervisor, with Dr. Pablo Castro, of Victoria Navarro. Thesis: *Action Based Deontic Logics: Extensions and Applications*. Sección de Computación, Facultad de Matemática, Astronomía, Física, y Computación (FaMAF). University of Cordoba, Argentina. Start date: 2021. Expected completion date: 2025.
- 04/2021– PhD co-supervisor, with Dr. Carlos Areces, of Danae Dutto. Thesis: *Algebraizing Modal Logics with Data*. Sección de Computación, Facultad de Matemática, Astronomía, Física, y Computación (FaMAF). University of Cordoba, Argentina. Start date: 2021. Expected completion date: 2025.
- 01/2016–11/2017 Master Thesis co-supervisor, with Dr. Thomas S.E. Maibaum, of Zahra S. Naqvi. Theses: *Conceptual Models and Their Role in Checking Compliance with ISO 26262*. Department of Computing and Software, McMaster University, Canada. Completed.

UNDERGRADUATE

- 06/2020–04/2021 Supervisor, with Dr. Raul Fervari, of the final degree thesis of Dámaris Beatríz Acevedo Giménez. Thesis: *A Tableaux System for Default Description Logic*. Department of Computing, University of Rio Cuarto, Argentina. Completed.

LANGUAGE KNOWLEDGE

Spanish Mother tongue.
Inglés iBT TOEFL score 96/120.

REFERENCES

Prof. Dr. Carlos Areces

Department of Computing, FaMAF
University of Cordoba, Argentina
Researcher at CONICET, Argentina
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Prof. Dr. Nazareno Aguirre

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