CURRICULUM VITAE

PERSONAL INFORMATION

Name:	Diego Alberto Maldonado Montiel
Date of Birth:	June 16th, 1988.
ID:	17.041.120-k.
Citizenship:	Chilean.
Address:	Londres 2227, Hualpén, Región del Biobío, Chile.
Cell Phone:	+56949440861
Email:	dmaldonadomontiel@gmail.com
Salary Epectations:	2.300.000 clp.

ACADEMICAL HISTORY

Post doctoral position: at Universidad Adolfo Ibañez, under supervision of Prof. Eric Goles, 2019.
PhD Degree: at Université d'Orléans, Discipline: Informatique, November 2018.
Professional Degree: Ingeniero Civil Matemático, Universidad de Concepción, September 2015.
Degree: Graduated in Ciencias de la Ingeniería Matemática, Universidad de Concepción, July 2013.

LANGUAGES

Native Language: Spanish   **Fluent in:** French, English

COMPUTER SKILLS

Programming languages:	PYTHON, MATLAB, FORTRAN, C/C++, CUDA, JAVA, PHP.
Data base:	mySQL.

TEACHING EXPERIENCE

02/11/2020 - 22/01/2024	**Full-time Professor** at Departamento de Ingeniería Informática of Universidad Católica de la Santisima Concepción.
01/08/2020 - 31/01/2021	**Part-time professor** at Departamento de Ingeniería Matemática of Universidad de Concepción.
01/03/2020 - 31/07/2020	**Part-time professor** at Facultad de Ingeniería y Ciencias of Universidad Adolfo Ibáñez.
01/11/2015 - 31/07/2018	**Instructor** in EDIFICE project, Université d'Orléans.
09/06/2014 - 31/01/2015	**Part-time professor** at Departamento de Ingeniería Matemática of Universidad de Concepción.
06/04/2009 - 07/12/2013	**Teaching assistant** in several mathematical subjects at Universidad de Concepción.

LECTURES

Math:	Differential Calculus, Integral Calculus, Algebra, Linear Algebra, Discrete Mathematics, Logic.
Computer Science:	Programming, Object-oriented Programming, Advance Topic in Computational Complexity and Graph, Advance Topic in Parallel Computing.

Administrative positions

2022 - 2024	Member of the career committee at Departamento de Ingeniería Informática of Universidad Católica de la Santisima Concepción.
2023 - 2024	Member of the curriculum renewal committee at Departamento de Ingeniería Informática of Universidad Católica de la Santisima Concepción.

Researching Experience

01/03/2019 - 31/01/2020	**Postdoctoral researcher** at Facultad de Ingeniería y Ciencias, Universidad Adolfo Ibáñez.
01/06/2013 - 31/12/2013	**Research assistant** in programming numerical simulations of stochastic processes in FORTRAN-MATLAB, for Instituto de Sistemas Complejos.

Non-academic Work Experience

01/01/2018 - 01/06/2019	**Co founder and chief research officer** at Hibring SpA.

Indexed Journals publications (Web of Science, Scopus, etc)

[1] E. Goles, D. Maldonado, P. Montealegre, and M. Ríos-Wilson, "On the complexity of asynchronous freezing cellular automata," *Information and Computation*, p. 104764, 2021.

[2] E. Goles, D. Maldonado, P. Montealegre, and N. Ollinger, "On the complexity of the stability problem of binary freezing totalistic cellular automata," *Information and Computation*, p. 104535, 03 2020.

[3] D. Maldonado, A. Gajardo, B. H. de Menibus, and A. Moreira, "Nontrivial turmites are turing-universal," *J. Cellular Automata*, vol. 13, no. 5-6, pp. 373–392, 2018.

Conference with peer-reviewed publication

[1] C. Martinez-Araneda, M. Gutiérrez, D. Maldonado, P. Gómez, A. Segura, and C. Vidal-Castro, "Designing a chatbot to support problem-solving in a programming course," in *INTED2024 Proceedings*, 18th International Technology, Education and Development Conference, pp. 966–975, IATED, 4-6 March 2024.

[2] D. Maldonado, P. Montealegre, and M. Ríos-Wilson, "The hardness of local certification of finite-state dynamics," in *LATIN 2024: Theoretical Informatics* (J. A. Soto and A. Wiese, eds.), (Cham), pp. 51–65, Springer Nature Switzerland, 2024.

[3] D. Maldonado, P. Montealegre, M. Ríos-Wilson, and G. Theyssier, "Local certification of majority dynamics," in *SOFSEM 2024: Theory and Practice of Computer Science* (H. Fernau, S. Gaspers, and R. Klasing, eds.), (Cham), pp. 369–382, Springer Nature Switzerland, 2024.

[4] C. Martinez-Araneda, M. G. Valenzuela, P. Gómez-Meneses, D. M. Montiel, A. A. S. Navarrete, and C. Vidal-Castro, "How useful tutorbot+ is for teaching and learning in programming courses: a preliminary study," in *42nd IEEE International Conference of the Chilean Computer Science Society, SCCC 2023, Concepcion, Chile, October 23-26, 2023*, pp. 1–7, IEEE, 2023.

[5] E. Goles, D. Maldonado, P. Montealegre-Barba, and N. Ollinger, "Fast-parallel algorithms for freezing totalistic asynchronous cellular automata," in *Cellular Automata - 13th International Conference on Cellular Automata for Research and Industry, ACRI 2018, Como, Italy, September 17-21, 2018, Proceedings*, pp. 406–415, 2018.

[6] F. Becker, D. Maldonado, N. Ollinger, and G. Theyssier, "Universality in freezing cellular automata," in *Sailing Routes in the World of Computation - 14th Conference on Computability in Europe, CiE 2018, Kiel, Germany, July 30 - August 3, 2018, Proceedings*, pp. 50–59, 2018.

[7] E. Goles, D. Maldonado, P. Montealegre, and N. Ollinger, "On the computational complexity of the freezing non-strict majority automata," in *Cellular Automata and Discrete Complex Systems - 23rd IFIP WG 1.5 International Workshop, AUTOMATA 2017, Milan, Italy, June 7-9, 2017, Proceedings*, pp. 109–119, 2017.

[8] D. Maldonado, A. Moreira, and A. Gajardo, "Universal time-symmetric number-conserving cellular automaton," in *Cellular Automata and Discrete Complex Systems - 21st IFIP WG 1.5 International Workshop, AUTOMATA 2015, Turku, Finland, June 8-10, 2015. Proceedings*, pp. 155–168, 2015.

CONFERENCES

19/02/2024 Speaker	*Local Certification of Majority Dynamics*, SOFSEM 2024: Theory and Practice of Computer Science, Trier University, Cochem, Germany.	
26/10/2023 Speaker	*How Useful TutorBot+ is for Teaching and Learning in Programming Courses: a Preliminary Study*, 42nd IEEE International Conference of the Chilean Computer Science Society, SCCC 2023, Universidad Católica de la Santísima Concepción, Concepción, Chile.	
27/04/2022 Speaker	*Sobre el número de cambios de las redes umbral en grafos infinitos*, XXXIV Jornada de Matemática de la Zona Sur, Universidad de Los Lagos, Osorno, Chile.	
13/07/2021 Speaker	*A Landscape of Interval Life-like Freezing Cellular Automata*, AUTOMATA 2020, Université d'Aix-Marseille, Marseille, France.	
7-9/09/2018 Speaker	*Fast-parallel algorithms for freezing totalistic asynchronous cellular automata*, ACRI 2018, University of Milano-Bicocca, Como, Italy.	
30/07-3/08/2018 Speaker	*Universality in Freezing Cellular Automata*, ACRI 2018, Kiel University, Kiel, Germany.	
4-6/07/2018 Attendance	Journées annuelles du groupe de travail SDA2, Université Jean Monnet Saint-Étienne, Saint-Étienn, France.	
26-30/03/2018 Attendance	École Jeunes Chercheurs en Informatique Mathématique, Université de Lorraine, Nancy, France.	
3-5/07/2017 Attendance	Journées annuelles du groupe de travail SDA2, Université d'Aix-Marseille, Marseille, France.	
7-9/06/2017 Speaker	*On the computational complexity of the freezing non-strict majority automata*, AUTOMATA 2017, University of Milano-Bicocca, Milan, Italy.	
12-14/04/2017 Attendance	New Worlds of Computation 2017 and Journées Calculabilités, Université d'Orléans, Orléans, France.	
23-27/01/2017 Attendance	École Jeunes Chercheurs en Informatique Mathématique, École normale supérieure de Lyon, Lyon, France.	
4-6/07/2016 Attendance	Journées annuelles du groupe de travail SDA2, École normale supérieure de Lyon, Lyon, France.	
17/06/2016 Speaker	*Two State Totalistic Freezing Cellular Automata and their Complexity*, AUTOMATA 2016, University of Zurich, Zurich, Switzerland.	
17-20/02/2016 Organizing team	33rd International Symposium on Theoretical Aspects of Computer Science (STACS 2016), Université d'Orléans, Orléans, France.	
09/06/2015 Speaker	*Universal Time-Symmetric Number-Conserving Cellular Automaton*, AUTOMATA 2015, University of Turku, Turku, Finland.	
23/04/2015 Speaker	*Complejidad en Autómatas Celulares Reversibles*, XXVIII Jornada de Matemática de la Zona Sur, Universidad del Bío-Bío, Chillán, Chile.	
17/12/2014 Poster	*Universality of conservative and time-symmetric cellular automata*, Workshop on Symbolic Dynamics on finitely presented Groups, Center for Mathematical Modeling, Santiago de Chile, Chile.	
23/04/2014 Speaker	*Complejidad de sistemas de agentes discretos*, XXVII Jornada de Matemática de la Zona Sur, Universidad Católica de Temuco, Temuco, Chile.	
01/12/2010 Speaker	*Sistemas computacionales en la creación de escenarios de urbanización en el área metropolitana de Concepción*, Facultad de Arquitectura, Geografía y Urbanismo, Universidad de Concepcíon, Concepcíon, Chile.	

OTHERS

2022 - 2024	Coach of UCSC competitive programming teams for ICPC competitions.
2013 - 2014	Member of the university taekwondo team at Universidad de Concepcíon.
2012 - 2013	Vice president of Centro de Alumnos de Ingeniería Civil Matemática (Student Union of the career Ingeniería Civil Matemática), Universidad de Concepcíon.
19/11/2006	7º GUP at taekwondo, World Taekwondo Federation.