

UNIVERSITÀ DEGLI STUDI DI MILANO

selezione pubblica per n. 1 posto/i di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera a) della Legge 240/2010 nell'ambito del Piano Nazionale di Ripresa e Resilienza (PNRR), per il settore concorsuale 01/B1 - Informatica, settore scientifico-disciplinare INF/01 - Informatica presso il Dipartimento di INFORMATICA "GIOVANNI DEGLI ANTONI" (avviso bando pubblicato sulla G.U. n. 191 del 18.8.2006) Codice concorso 5113

Mauricio Abel Soto Gomez

CURRICULUM VITAE

Personal Information

Cognome	Soto Gomez
Nome	Mauricio Abel
Data di Nascita	12/04/1980

Qualifications

02/12/2011	Ph.D. in Computer Science. Institute of Fundamental Research in Informatics - IRIF(ex LIAFA), Université Paris Diderot. <i>"On topological properties of graphs and application to communication networks"</i> . Advisors : Laurent Viennot and Fabien de Montgolfier Jury: Michel Habib, Jean-Loup Guillaume, Nicolas Hanusse, Sébastien Tixeuil.
03/03/2008	M.S. in Computer Science , Parisian Master of Research in Computer Science LIAFA, Université Paris Diderot. <i>"Protocols and algorithms on communication networks"</i> . Advisor : Adi Rosén
16/19/2005	Mathematical Engineering Department of Mathematical Engineering, Universidad de Chile. <i>"Adversarial queueing theory with setups"</i> . Advisor : Marcos Kiwi

Professional Experience

13/01/2020-12/01/2023	RTDa - Politecnico di Milano . Department of Management , Economics and Industrial Engineering.
01/06/2019-12/01/2020	Assegno Ricerca - Università degli Studi di Milano-Bicocca . Department of Informatics, Systems and Communication. "On semantic embedding techniques for tabular data reconciliation".
01/03/2018-28/02/2019	Assegno Ricerca - Università degli Studi di Milano-Bicocca . Department of Informatics, Systems and Communication. "Algorithms and tools for linked data profiling".
01/03/2017-28/02/2018	Assegno Ricerca - Università degli Studi di Milano-Bicocca . Department of Informatics, Systems and Communication. "Quality profiles of open data on the Lombardy region".
01/03/2017-30/04/2017	Occasional collaboration - Università degli Studi di Milano-Bicocca . Department of Informatics, Systems and Communication. "Phylogenetic reconstruction for tumoral evolution".

2013 – 2015	Research project manager - Universidad de Chile . Department of Mathematical Engineering. “Graph topological properties and application to communication networks”.
2011 / 2012	Teaching Assistant (Attaché Temporaire d’Enseignement et de Recherche) – full time Université d’Orléans . Graphs, Algorithms and Models of Computation, LIFO.
2010 / 2011	Teaching Assistant – partial time. Université Paris Diderot . LIAFA.

Teaching Experience

Politecnico Milano – Professor	
Optimization (L2 Management)	: Fall 2022 ,Fall 2021 ,Fall 2020, Fall 2019, Fall 2018.
Politecnico Milano – Teaching Assistant	
Machine Learning (M1 Management)	: Fall 2022, Fall 2021, Fall 2020, Fall 2019.
Università degli Studi di Milano-Bicocca – Professor	
Optimization (L3 Info)	: Fall 2019.
Università degli Studi di Milano-Bicocca – Teaching Assistant	
Optimization (L3 Info)	: Fall 2017, Fall 2018.
Decision models (M1 Info)	: Spring 2018.
Universidad de Chile – Professor	
Multivariate calculus (L2 Maths)	: Spring 2015, Fall 2015.
Advanced calculus (L2 Maths)	: Spring 2015, Fall 2015.
Optimization (L2 Maths)	: Spring 2015, Summer 2014, Spring 2014, Fall 2014.
Université d’Orléans – Professor	
Functional programming (L2 Maths-CS)	: Spring 2012.
Mathematics for Computer Science (L2 Maths-CS)	: Spring 2012.
Université d’Orléans – Teaching assistant	
Informatics tools (L1)	: Fall 2011.
Introduction to programming (L1 Math-CS)	: Fall 2011.
Linear Programming (L3 Math-CS)	: Fall 2011.
Université Paris Diderot – Teaching assistant	
Introduction to Java programming (L3 Math-CS)	: Spring 2011.
HTML/CSS, PHP/SQL (L3 Math-CS)	: Spring 2011.
Algorithmic (L3 Bio-CS)	: Fall 2011.
Universidad de Chile – Teaching assistant	
Algebra (L1 Math)	: Spring 2002.
Calculus (L1 Math)	: Fall 2004.
Advanced calculus (L2 Math)	: Spring 2003, Spring 2002.
Multivariate calculus (L2 Math)	: Fall 2004.
Probability (L3 Math)	: Spring 2004, Summer 2003, Fall 2003.
Statistics (L3 Math)	: Summer 2003, Spring 2003.

Publications

Journal Papers

1. Araño, K.A., Orsenigo, C., Soto, M., Vercellis, C.. **Multimodal sentiment and emotion recognition in hyperbolic space** Expert Systems with Applications, 2021.
DOI 10.1016/j.eswa.2021.115507
2. Simone Ciccolella, Camir, Ricketts, Mauricio Soto Gomez, Murray Patterson, Danae, Silverbush, Paola Bonizzoni, Iman Hajirasouliha, Gianluca Della Vedova. **Inferring cancer progression from Single-Cell Sequencing while allowing mutation losses** Bioinformatics, 2021.
DOI 10.1093/bioinformatics/btaa722

3. Simone Ciccolella, Mauricio Soto Gomez, Murray Patterson, Gianluca Della Vedova, Iman Hajirasouliha, Paola Bonizzoni. **gpps: an ILP-based approach for inferring cancer progression with mutation losses from single cell data**. BMC Bioinformatics, 2020.
DOI 10.1186/s12859-020-03736-7
4. Paola Bonizzoni, Simone Ciccolella, Gianluca Della Vedova, Mauricio Soto Gomez. **Does Relaxing the Infinite Sites Assumption Give Better Tumor Phylogenies? An ILP-Based Comparative Approach**. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2019.
DOI 10.1109/TCBB.2018.2865729
5. David Coudert , Guillaume Ducoffe , Nicolas Nisse and M.S. **On distance-preserving elimination orderings in graphs: complexity and algorithms**. *Discrete Applied Mathematics*, 2018.
DOI 10.1016/j.dam.2018.02.007
6. M.S. and Christopher Thraves. **(p -)Box(1): A new graph model**. *Discrete Mathematics and Theoretical Computer Science*, 2015. ISSN 14627264
7. Eduardo G. Pardo, M.S. and Christopher Thraves. **Embedding signed graphs in the line**. *Journal of Combinatorial Optimization*, 2015. DOI 10.1007/s10878-013-9604-1
8. Marcos Kiwi, M.S. and Christopher Thraves. **Adversarial queuing theory with setups**. *Theoretical Computer Science*, 2009. DOI 10.1016/j.tcs.2008.09.064

Conference Papers

9. Paola Bonizzoni, Gianluca Della Vedova, Simone Ciccolella, and M.S. **Beyond Perfect Phylogeny: Multisample Phylogeny Reconstruction via ILP**. In: *Proceedings of the 8th ACM Conference on Bioinformatics, Computational Biology and Health Informatics (AMC-BCB '17)*, Boston, MA, August 2017.
DOI 10.1145/3107411.3107441
10. Gianluca Della Vedova, Murray Patterson, Raffaella Rizzi and M.S. **Character-Based Phylogeny Construction and Its Application to Tumor Evolution**. In: *Proceedings of 13th Conference on Computability in Europe (CiE 2017)*, Turku, Finland, June, 2017. DOI 10.1007/978-3-319-58741-7_1
11. Manuel Vimercati, Federico Bianchi, M.S. and Matteo Palmonari. **Mapping Lexical Knowledge to Distributed Representations for Ontology Concept Invention**. *8th International Conference of the Italian Association for Artificial Intelligence (AIIA 2019)*, Rende, Italy, November 2019.
DOI 10.1007/978-3-030-35166-3_40
12. Federico Bianchi, M.S., Matteo Palmonari and Vincenzo Cutrona. **Type Vector Representations from Text: An Empirical Analysis**. In : *Proceedings of the Workshop on Deep Learning for Knowledge Graphs and Semantic Technologies*. 2018. (DL4KGS18), Crete, Greece, June 2018. ISSN 16130073
13. Laurent Viennot, M.S. and Fabien de Montgolfier. **Asymptotic Modularity of Some Graph Classes**. In: *Proceedings of 22nd International Symposium on Algorithms and Computation (ISAAC 2011)*, Yokohama Japan, December 2011. DOI 10.1007/978-3-642-25591-5_45
14. Laurent Viennot, M.S. and Fabien de Montgolfier. **Treewidth and Hyperbolicity of the Internet**. In: *Proceedings of 10th IEEE International Symposium on Network Computing and Applications (NCA 2011)*, Cambridge, MA, USA, August 2011. DOI 10.1109/NCA.2011.11
15. Laurent Viennot, M.S. and Fabien de Montgolfier. **Modularité asymptotique de quelques classes de graphes**. In: *Actes du 14èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel 2012)*, La Grande Motte, Hérault, France, May 2012.
16. Laurent Viennot, M.S. and Fabien de Montgolfier. **Clustering de métrique et clustering de graphe**. In: *Actes du 13es Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel 2011)*, Cap Estérel, France, May 2011.
17. Laurent Viennot, M.S. and Fabien de Montgolfier. **Autour du caractère arborescent d'Internet**. In: *Actes du Majestic 2010*, Bordeaux, France, October 2010.

Skills

Languages	Spanish (mother tongue), English (fluent), French (fluent) Italian (fluent).
Programming	PYTHON, R, MATLAB, JAVA, OCAML, PHP/SQL, HTML/CSS, UNIX shell scripting.

Awards & Fellowships

Jun 2013 – Jun 2015	Scientific project grant (72K euros) – CONICYT.
Sept 2006 – Aug 2009	Fellowship Master research and Doctorate Embassy of France – CONICYT (university, social security and monthly expenses).
1998, '99, '00	Faculty excellent academic student (top 5% of Faculty of Physics and Mathematics, Universidad de Chile).
1998	Academic excellence grant (Admission position 6/542, Faculty of Physics and Mathematics, Universidad de Chile).

Date: 26/10/2022

Milano