

CURRICULUM VITAE INVESTIGATOR			
PERSONAL DATA			
Father's name Navarro		Name Gonzalo	
Birth date June 9, 1969	Age (at 15/07/2011) 42	Gender (M o F) M	Nationality(ies) Argentina
Title Licenciate in Informatics MSc in Computer Science		Academic Degree Ph.D. in Computer Science	
Current position Full Professor	Institution (Department, Faculty, Institution) University of Chile, Faculty of Physical and Mathematical Sciences, Department of Computer Science		
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EDUCATION, ACADEMIC AND PROFESSIONAL EXPERIENCE			
<p>Universidad de Chile, Chile PhD. 1995-1998 in Computer Science</p> <p>Universidad de Chile, Chile MSc 1994-1995 in Computer Science</p> <p>Universidad Nacional de La Plata, Argentina 1986-1993, Licenciate in Informatics, Faculty of Exact Sciences</p> <p>Latin American School of Informatics, Argentina, 1989-1992, Licenciate in Informatics</p> <p>Distinctions:</p> <p>2009 Included in the book “70 Stories of success in Innovation and Science”, published by the Ministry of Economy and several government research funding agencies, Chile, 2009. Chapter “Explorers of the virtual universe”, pages 62-63.</p> <p>2008: Award Scopus Chile 2008 in Computer Science, Mathematics and Engineering, awarded by Elsevier to researchers with high scientific productivity, with the support of Conicyt (Chile).</p> <p>2005: Third best paper award in the Mexican International Conference on Artificial Intelligence (MICA I 2005), among 120 papers. With Karina Figueroa and Edgar Chávez.</p> <p>2003-2006: Advisor of four MSc. Theses award in the CLEI-UNESCO Contest of Latin American Computer Science MSc. Theses: Rodrigo Pares (2nd prize, 2003), Nora Reyes (5th prize, 2003), Benjamin Bustos (7th prize, 2003), Roberto Uribe (2nd prize, 2006). Also, advisor of the PhD thesis that obtained the first prize in the Doctoral Consortium of the Mexican Computing Meeting (ENC) 2006 (Karina Figueroa)</p> <p>1997: Coauthor of “Large Text Searching Allowing Errors” (M´arcio Ara´ujo, Gonzalo Navarro, and Nivio Ziviani), awarded the best software tool at SBES’97 (Brazilian Symposium on Software Engineering) and 4th prize at the 4th CLEI-UNESCO Contest of Latin American Computer Science MSc. Theses. The student is M´arcio Ara´ujo and the advisor is Nivio Ziviani.</p> <p>Refereeing, Program Committees, and Editor</p> <p>(2010) Guest editor (with Edgar Chávez) of a Special Issue of ACM SIGSPATIAL dedicated to Metric Space Searching. ACM Press.</p> <p>(2010) Organization of the 5th Workshop on Compression, Text, and Algorithms, satellite of SPIRE 2010, Los Cabos, Mexico.</p> <p>(2009-) Member of the Editorial Board of ACM Journal of Experimental Algorithmics.</p>			

- (2008) Guest editor (with Edgar Chávez) of a Special Issue of the Journal of Discrete Algorithms dedicated to selected papers from SISAP 2008. Elsevier.
- (2008-) Member of the Steering Committee of Latin American Theoretical Informatics (LATIN).
- (2008) PC Chair of the First International Workshop on Similarity Search and Applications (SISAP), with Edgar Chávez. This is a conference we created during 2007 to fill the absence of a conference of this type. We have appointed a PC of 10 worldwide researchers, and the first edition was a satellite workshop of ICDE 2008. The proceedings were published by IEEE Computer Society Press, and a special issue devoted to the best papers of SISAP 2008 appeared in the Journal of Discrete Algorithms (Elsevier). We received 336 submissions, from which we accepted 15, plus 2 invited papers associated to keynote talks that will be given at SISAP. Since 2009 the proceedings are published in the ACM Digital Library. See www.sisap.org.
- (2007) Organization of the second workshop “Compression, Text, and Algorithms” internal to the DCC, with 20 attendants and 12 talks (50% international, 50% from postgraduate students of the DCC). These workshops have continued, organized by other researchers (third edition with SPIRE 2008, Melbourne, Australia).
- (2007-) Member of the Editorial Board of The Open Information Systems Journal, Bentham Science Publishers.
- (2007) PC Chair of track Scalable Pattern Recognition within the 8th Mexican International Conference on Computer Science (ENC 2007).
- (2006) Area Editor of Encyclopedia of Algorithms, Springer. Ming-Yang Kao, editor.
- (2006) PC Chair of 4th IFIP International Conference on Theoretical Computer Science (IFIP TCS 2006), track TC1 of the 19th World Computer Congress (WCC 2006), Santiago, Chile, with Leopoldo Bertossi and Yoshiharu Kohayakawa.
- (2005) Organization of workshop “Compression, Text, and Algorithms” internal to the DCC, with invited talks and others from students.
- (2005) Posters PC Chair of 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, with Diane Kelly and Mounia Lalmas.
- (2005) PC Chair of the 12th International Symposium on String Processing and Information Retrieval (SPIRE) 2005, Buenos Aires, Argentina, with Mariano Consens.
- (2004-) **Member of the Editorial Board of Information Retrieval, Kluwer.**
- (2004) PC Chair of XXIV International Conference of the Chilean Computer Science Society (SCCC), Arica, Chile.
- (2002,2006-2008) Member of the Steering Committee of International Symposium on String Processing and Information Retrieval (SPIRE).
- (2001) PC Chair of 8th International Symposium on String Processing and Information Retrieval (SPIRE), Laguna de San Rafael, Chile; refereeing, Program Committees and Editor
- EXTENSION ACTIVITIES AND ACADEMIC ADMINISTRATION (Professional Societies)**
- **Member of ACM**
 - **Member of IEEE Computer Society**
 - **Member of the Chilean Computer Science Society (SCCC)**

TEACHING:**Theses Advisor**

Currently advising 1 Postdoc, 7 PhD. students, 3 MSc. students, and 2 undergraduate student at Universidad de Chile, Universidad Nacional de San Luis (UNSL, Argentina), and Universidade da Coruña (Spain).

MAIN PUBLICATIONS IN MEDIA WITH EDITORIAL COMMITTEE

Marcos Kiwi, Gonzalo Navarro, and Claudio Telha.
On-line Approximate String Matching with Bounded Errors.
To appear in *Theoretical Computer Science*

Luís Russo, Gonzalo Navarro, and Arlindo Oliveira.
Fully-Compressed Suffix Trees.
To appear in *ACM Transactions on Algorithms*

Francisco Claude, Gonzalo Navarro, Hannu Peltola, Leena Salmela, and Jorma Tarhio.
String Matching with Alphabet Sampling.
To appear in *Journal of Discrete Algorithms*.

Diego Arroyuelo, Gonzalo Navarro, and Kunihiro Sadakane.
Stronger Lempel-Ziv Based Compressed Text Indexing.
To appear in *Algorithmica*

Francisco Claude and Gonzalo Navarro.
Self-Indexed Grammar-Based Compression.
To appear in *Fundamenta Informaticae*.

Gonzalo Navarro, Rodrigo Paredes, Patricio Poblete, and Peter Sanders.
Stronger Quickheaps.
International Journal on Foundations of Computer Science 22(4):945-969, 2011.

Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá.
Improving Semistatic Compression via Phrase-based Modeling.
Information Processing and Management 47(4):545-559, 2011

Diego Arroyuelo and Gonzalo Navarro.
Space-Efficient Construction of Lempel-Ziv Compressed Text Indexes.
Information and Computation 209(7):1070-1102, 2011

Gonzalo Navarro and Roberto Uribe.
Fully Dynamic Metric Access Methods based on Hyperplane Partitioning.
Information Systems 36(4):734-747, 2011

Diego Arroyuelo and Gonzalo Navarro.
Practical Approaches to Reduce the Space Requirement of Lempel-Ziv-Based Compressed Text Indices.

ACM Journal of Experimental Algorithmics 15(1.5), 2010.

Lucian Ilie, Gonzalo Navarro, and Liviu Tinta
The Longest Common Extension Problem Revisited and Applications to Approximate String Searching.

Journal of Discrete Algorithms 8(4):418-428, 2010.

Francisco Claude and Gonzalo Navarro.
Fast and Compact Web Graph Representations.
ACM Transactions on the Web 4(4):article 16, 2010.

Edgar Chávez and Gonzalo Navarro.
Fundamentals of the Problem.
ACM SIGSPATIAL Special 2(2):2-7, 2010.

Gonzalo Navarro and Rodrigo Paredes.
On Sorting, Heaps, and Minimum Spanning Trees.
Algorithmica 57(4):585-620, 2010.

Veli Mäkinen, Gonzalo Navarro, Jouni Sirén, and Niko Välimäki.
Storage and Retrieval of Highly Repetitive Sequence Collections.
Journal of Computational Biology 17(3):281-308, 2010

Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá.
Dynamic Lightweight Text Compression.
ACM Transactions on Information Systems 28(3):article 10, 2010.

Rodrigo González and Gonzalo Navarro.
A Compressed Text Index on Secondary Memory.
Journal of Combinatorial Mathematics and Combinatorial Computing (JCMCC) 71:127-154, 2009.

Johannes Fischer, Veli Mäkinen, and Gonzalo Navarro.
Faster Entropy-Bounded Compressed Suffix Trees.
Theoretical Computer Science (TCS) 410(51):5354-5364, 2009.

Luís Russo, Gonzalo Navarro, Arlindo Oliveira, and Pedro Morales.
Approximate String Matching with Compressed Indexes.
Algorithms 2(3), 1105-1136, 2009.

Rodrigo González and Gonzalo Navarro.
Rank/Select on Dynamic Compressed Sequences and Applications.
Theoretical Computer Science (TCS) 410(43):4414-4422, 2009.

Karina Figueroa, Edgar Chávez, Gonzalo Navarro, and Rodrigo Paredes.
Speeding up Spatial Approximation Search in Metric Spaces.
ACM Journal of Experimental Algorithmics (JEA) 14:article 3.6, 2009. 21 pages.

Amihoud Amir and Gonzalo Navarro.

Parameterized Matching on Non-linear Structures.

Information Processing Letters (IPL) 109(15):864-867, 2009

Paolo Ferragina, Rodrigo González, Gonzalo Navarro, and Rossano Venturini.

Compressed Text Indexes: From Theory to Practice.

ACM Journal of Experimental Algorithmics (JEA) 13:article 12, 2009. 30 pages.

Benjamin Bustos and Gonzalo Navarro.

Improving the Space Cost of k -NN Search in Metric Spaces by Using Distance Estimators.

Multimedia Tools and Applications (MTAP) 41(2):215-233, 2009.

Gonzalo Navarro.

Implementing the LZ-index: Theory versus Practice.

ACM Journal of Experimental Algorithmics (JEA) 13:article 2, 49 pages, 2009.

Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá.

New Adaptive Compressors for Natural Language Text.

Software Practice and Experience (SPE) 38(13):1429-1450, 2008.

Veli Mäkinen and Gonzalo Navarro.

Dynamic Entropy-Compressed Sequences and Full-Text Indexes.

***ACM Transactions on Algorithms (TALG)* 4(3):article 32, 2008. 38 pages.**

Edgar Chávez, Karina Figueroa, and Gonzalo Navarro.

Effective Proximity Retrieval by Ordering Permutations.

***IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)* 30(9):1647-1658, 2008.**

Gonzalo Navarro and Nora Reyes.

Dynamic Spatial Approximation Trees.

ACM Journal of Experimental Algorithmics (JEA) 12, article 1.5, 68 pages, 2008.

Veli Mäkinen and Gonzalo Navarro.

Rank and Select Revisited and Extended.

Theoretical Computer Science 387(3):332-347, 2007.

Gonzalo Navarro, Rodrigo Paredes, and Edgar Chávez.

t -Spanners for Metric Space Searching.

Data and Knowledge Engineering 63(3):820-854, 2007.

Paolo Ferragina, Giovanni Manzini, Veli Mäkinen, and Gonzalo Navarro.

Compressed Representations of Sequences and Full-Text Indexes.

***ACM Transactions on Algorithms (TALG)* 3(2), article 20, 24 pages, 2007.**

Kimmo Fredriksson, Veli Mäkinen, and Gonzalo Navarro.

Rotation and Lighting Invariant Template Matching.

Information and Computation 205(7):1096-1113, 2007.

Gonzalo Navarro and Veli Mäkinen.

Compressed Full-Text Indexes.

ACM Computing Surveys 39(1), article 2, 61 pages, 2007.

Joaquín Adiego, Gonzalo Navarro, and Pablo de la Fuente.

Lempel-Ziv Compression of Highly Structured Documents.

Journal of the American Society for Information Systems and Technology (JASIST) 58(4):461-478, 2007.

Joaquín Adiego, Gonzalo Navarro, and Pablo de la Fuente.

Using Structural Contexts to Compress Semistructured Text Collections.

Information Processing and Management (IPM) 43:769-790, 2007

Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá.

Lightweight Natural Language Text Compression.

Information Retrieval 10:1-33, 2007.

Kimmo Fredriksson, Veli Mäkinen, and Gonzalo Navarro.

Flexible Music Retrieval in Sublinear Time.

International Journal of Foundations of Computer Science (IJFCS) 17(6):1345-1364, 2006.

Heikki Hyyrö and Gonzalo Navarro.

Bit-Parallel Computation of Local Similarity Score Matrices with Unitary Weights.

International Journal of Foundations of Computer Science (IJFCS) 17(6):1325-1344, 2006.

Szymon Grabowski, Gonzalo Navarro, Rafal Przywarski, Alejandro Salinger, and Veli Mäkinen.
A Simple Alphabet-Independent FM-Index.

International Journal of Foundations of Computer Science (IJFCS) 17(6):1365-1384, 2006.

Gonzalo Navarro and Edgar Chávez.

A Metric Index for Approximate String Matching.

Theoretical Computer Science (TCS) 352 (1-3):266-279, 2006.