

# Curriculum Vitae

## Personal Information

- **Name:** Gonzalo Navarro
- **Nationality:** Argentina
- **Year of birth:** 1969
- **Address:** Beauchef 851 - Santiago - Chile
- **Phone:** +56-2-9784952
- **Civil status:** Married
- **E-mail:** gnavarro@dcc.uchile.cl
- **Web page:** <http://www.dcc.uchile.cl/gnavarro>
- **Degree:** PhD. in Computer Science
- **Position:** Full Professor, Dept. of Computer Science, Universidad de Chile
- **Areas of interest:** Design and Analysis of Algorithms, Text Databases, Graph Databases, Compression.

## Studies

### Formal Studies

- (1995-1998) PhD. in Computer Science, Faculty of Physics and Mathematical Sciences, Universidad de Chile  
Score: 7.0 (range 1.0 – 7.0)  
Thesis: “Approximate Text Searching”  
Advisor: Prof. Ricardo Baeza-Yates (Universidad de Chile).
- (1994-1995) MSc. in Computer Science,  
Faculty of Physics and Mathematical Sciences, Universidad de Chile  
Score: 6.99 (range 1.0 – 7.0)  
Thesis: “A Language for Queries on Structure and Contents of Textual Databases”  
Advisor: Prof. Ricardo Baeza-Yates (Universidad de Chile).
- (1986-1993) Licenciante in Informatics (5 years plus thesis), Faculty of Exact Sciences, Universidad Nacional de La Plata (UNLP, Argentina)  
Score: 9.76 (range 1 – 10)  
Thesis: “MediaCore: A Multimedia Interface Composition Toolkit”  
Advisor: Prof. Jorge Sanz (IBM Argentina and Almaden Research Center).

- (1989-1992) Licenciante in Informatics (5 years plus thesis), Latin American School of Informatics (ESLAI, Argentina)  
Score: 9.83 (range 1 – 10)  
Thesis: “A Study on Control Structures”  
Advisor: Prof. Jorge Aguirre (ESLAI and Universidad de Buenos Aires, Argentina).

## Scholarships

- (1999) Scholarship given by Fundación Andes (Chile), to make a Post-Doctorate in Helsinki and Paris during the 2nd semester of 1999 (9 projects selected out of 32). Also funded by the Academy of Finland and ECOS/Conicyt Project 99/035.
- (1994) Scholarship given by Universidad de Chile, to take the 2nd semester of the MSc. in Computer Science.
- (1991) Research assistanship given by IBM Argentina, to research in Multimedia and Hypermedia, subject of my Licenciante Thesis at Universidad Nacional de La Plata (UNLP, Argentina).
- (1989-1992) Scholarship given by the Latin American School of Informatics (ESLAI, Argentina) to take the de Lic. in Informatics. Obtained by a curriculum analysis and a selective admission exam (2nd. place among 300 applicants).

## Distinctions

- (1996) First prize in the III CLEI-UNESCO Contest of Latin American Computer Science MSc. Theses (developed during 1995).
- (1992) Best score at the Faculty of Exact Sciences, Universidad Nacional de La Plata (UNLP), Argentina (9.76).

## Research

### Research Stays

- (1999-2000) Postdoctoral stay, University of Helsinki, Finland, and Institut Gaspard Monge (IGM), Université de Marne-la-Vallée, France. Areas: flexible string matching and compression. Inviting professors: Esko Ukkonen (Univ. Helsinki) and Maxime Crochemore (IGM).
- (1996-) Short invited research stays at several research centers: Universitat Politècnica de Catalunya (Spain), Universidade Federal de Minas Gerais (Brazil), Universidad de Valladolid (Spain), Universidad Michoacana (Mexico), Université de Marne-la-Vallée (France), University of Joensuu (Finland), Universidad Nacional de San Luis (UNSL, Argentina), University of Helsinki (Finland), University of Tampere (Finland), Kyushu University (Japan), Universidade da Coruña (Spain), Universidade Técnica de Lisboa (Portugal),

University of Waterloo (Waterloo, Canada), Università di Verona (Italy), and Dalhousie University (Canada).

## Research Projects

- (2026-2029) Main Researcher in the Fondecyt Project 1-260080, *Space/Time Efficient Solutions to Extend Graph Databases*.
- (2023-2026) Main Researcher in the Fondecyt Project 1-230755, *Compact Data Structures for Graph Databases*.
- (2020-2023) Main Researcher in the Fondecyt Project 1-200038, *Practical Indexes for Very Large Repetitive Text Collections*.
- (2018-2028) Associate researcher in the *Millennium Institute for Foundational Research on Data (IMFD)*, from the Millennium Scientific Initiative. Research director since 2021.
- (2017-2020) Main Researcher in the Fondecyt Project 1-170048, *Compressed Data Structures for Highly Repetitive Datasets*.
- (2016-2017, 2019-2022) Advisor member in *Google Research Award Latin America* projects, in association with the students Joshimar Córdova (2016, MSc), Patricio Huepe (2017, MSc), and Dustin Cobas (2019-2022, PhD).
- (2016-2019) Responsible for the University of Chile in the project *Bioinformatics and Information Retrieval Data Structures Analysis and Design (BIRDS)*, with funding from the European Union (RISE projects) and formed by 7 universities.
- (2014-2026) Key researcher of the *Basal Center for Biotechnology and Bioengineering (Ce-BiB)*, with basal funding from Conicyt, Chile.
- (2014-2017) Main Researcher in the Fondecyt Project 1-140796, *Fundamental Data Structures for Managing Large Datasets*.
- (2013-2017) Associate researcher in Millenium Nucleus *Information and Coordination in Networks*, Mideplan, Chile.
- (2011-2014) Main Researcher in the Fondecyt Project 1-110066, *Compact Data Structures for Information Retrieval*.
- (2010) Responsible of the Chilean side of the project “Development of a data integration platform for pathway-analysis that incorporates compressed data structures and approximate pattern matching on biological sequences” of cooperation between the University of Chile and the Katholieke Universiteit Leuven, Belgium.
- (2009-2012) Researcher in Fondecyt Project 1-090037 (Miguel Reyes, head), *The Monoaminergic "Receptophore". Similarities among the Active Sites of Monoaminergic Target Proteins, based on their Crystal Structures: Implications for the Development of Selective and Non-Selective Ligands*.

- (2008-2012) Key researcher in Millenium Institute *Cellular Dynamics and Biotechnology*, Mideplan, Chile.
- (2008-2011) Main Researcher in the Fondecyt Project 1-080019, *Memory-Hierarchy-Aware Data Structures*.
- (2006-2009) Main researcher in project *Compact Data Structures*, funded by Yahoo! Research Latin America. Since 2008 the project depends directly on Yahoo! Research.
- (2003-2009) Director of the research project *Advanced Database Technologies* at Universidad Nacional de San Luis, Argentina.
- (2002-2008) Researcher (alternate director since 2004 and director since 2006) in Millenium Nucleus *Center for Web Research*, Project P01-029-F (2002-2004) and P04-067-F (2005-2007), Mideplan, Chile. See <http://www.cwr.cl>.
- (2005-2008) Main Researcher in the Fondecyt Project 1-050493, *Compressed Text Databases*.
- (2003-2006) Researcher in project *Advanced Tools for the Implementation of Digital Libraries* funded by CICYT (Spain), with Universidade da Coruña and Universidad de Valladolid, Spain.
- (2001-2005) Coordinator of Project CYTED VII.19 RIBIDI (Iberoamerican), *Information Retrieval and Digital Libraries*, where 20 institutions from 7 countries participated. See <http://www.dcc.uchile.cl/gnavarro/ribidi> (in Spanish).
- (2002-2005) Main researcher in the Fondecyt Project 1-020831, *Fast, Flexible and Economical Text Searching*.
- (2002) Director of the research project *Databases and Model Theory* at Universidad Nacional de San Luis, Argentina.
- (1999-2002) Researcher in ECOS/Conicyt (Chile/France) Project 99/035 (Maxime Crochemore and Ricardo Baeza-Yates, heads), *Pattern Matching and Applications*.
- (1997-2002) Researcher in SIAM (Brazil) Project (Nivio Ziviani, head), *Information Systems for Mobile Environments*.
- (2000-2002) Main researcher in the Fondecyt Project 1-000929, *Searching for Similar Objects*.
- (1999-2002) Researcher in Fondecyt (Chile) Project 1-990627 (Ricardo Baeza-Yates, head), *Design and Analysis of Sequential and Parallel Algorithms and their Applications*.
- (1997-2000) Researcher in Project CYTED VII.3 AMYRI (Iberoamerican, Ricardo Baeza-Yates, head), *Environment for Information Manipulation and Retrieval*.
- (1996-1999) Researcher in Fondef (Chile) Project 96-1064 (Eduardo Vera, head), *Infocommunication in High Bandwidth Networks*.

- (1995-1998) Researcher in Fondecyt (Chile) Project 1-950622 (Ricardo Baeza-Yates, head), *Data Structures: Design, Analysis and Applications*.
- (1996-1997) Researcher in Fondecyt (Chile) Project 1-960881 (Patricio Poblete, head), *Exact and Similarity Searching: Algorithms, Analysis Techniques and Visualization*.
- (1993-1995) Researcher in Fondecyt (Chile) Project 1-93-0765 (Ricardo Baeza-Yates, head), *Textual Databases: Algorithms, Interfaces and Applications*.
- (1994) MSc. student in Fondecyt (Chile) Project 1-940271 (Patricio Poblete, head), *Analysis and Visualization of Data Structures*.
- (1991-1993) Resident Researcher at the Computer Research and Advanced Applications Group (CRAAG/GICAA), a research group of IBM Argentina specialized in image processing, parallelism and multimedia, headed by Jorge Sanz (IBM Argentina and University of Illinois at Urbana-Champaign, USA).

## Distinctions

- (2026) ISCB Fellow, the distinction given by the International Society for Computational Biology for exceptional achievements in computational biology and bioinformatics. In particular, “his foundational contributions to sequence search and compressed indexing have quietly powered some of modern bioinformatics’ most important tools”.
- (2026) Imre Simon Test-of-Time Award in the *17th Latin American Theoretical Informatics Symposium*, for the article “Position-Restricted Substring Searching” of 2006, with Veli Mäkinen.
- (2025) Best Paper Award in the *32nd International Symposium on String Processing and Information Retrieval (SPIRE)*, for the paper “Smallest suffixient sets as a repetitiveness measure”, with Giuseppe Romana and Cristian Urbina.
- (2025) Runner-up in the Wilkes Award 2025 for the best papers published in 2024 in *The Computer Journal*, for the paper with the student Luiz Fernando Afra Brito.
- (2025) Best Student Paper Award in the *36th Annual Symposium on Combinatorial Pattern Matching (CPM)*, for the paper with my student Alejandro Pacheco.
- (2024) Listed in the ranking Stanford’s list World Top 2% of most cited scientists in 2023 and in their whole career.
- (2024) ACM SIGMOD Best Demo Honorable Mention for the demo “MillenniumDB: A multi-modal, multi-model graph database engine”.
- (2023–2026) ACM Distinguished Speaker.

- (2022) ACM Fellow, the distinction given by the Association for Computing Machinery to at most 1% of its members for achieving a significant impact on the computing field. In particular, “for theoretical and practical contributions to the fields of text searching and compact data structures”.
- (2022) Presentation text in *Technical Perspective of the Communications of the ACM* 65(6):90, “The Compression Power of the BWT”.
- (2021) Best Student Paper Award in the *28th International Symposium on String Processing and Information Retrieval (SPIRE)*, for the paper with my student Cristian Urbina.
- (2019-2021) *Google Research Award Latin America*, with my student Dustin Cobas.
- (2019) Capocelli Prize in the *29th Data Compression Conference (DCC)*, for the article with students Jarno Alanko and Louisa Seelbach.
- (2018) ACM Distinguished Member, a distinction given by the Association for Computing Machinery to at most 10% of its members for achieving a significant impact on the computing field.
- (2018) Capocelli Prize in the *28th Data Compression Conference (DCC)*, for the article with my student Adrián Gómez-Brandón.
- (2017) *Google Research Award Latin America*, with my student Patricio Huepe.
- (2017) Alberto Apostolico Best Paper Award in the *28th Annual Symposium on Combinatorial Pattern Matching (CPM)*, for the article “Path queries on functions”, with Travis Gagie and Meng He.
- (2016) Article “On compressing and indexing repetitive sequences”, with Sebastian Kreft, included in the Virtual Special Issue “40th Anniversary of Theoretical Computer Science – Top Cited Articles: 1975-2014”, which collects the most cited articles of each year.
- (2016) *Highest Cited Paper Award* de Elsevier, for the articles “On compressing and indexing repetitive sequences” and “Colored range queries and document retrieval”, which are among the 5 most cited 2013 papers in *Theoretical Computer Science* in the 2 following years. Similar award for the article “DACs: Bringing direct access to variable-length codes”, among the 5 most cited in *Information Processing and Management*, and “Improved Compressed Indexes for Full-Text Document Retrieval”, among the 5 most cited in *Journal of Discrete Algorithms*.
- (2016) *Google Research Award Latin America*, with my student Joshimar Córdova.
- (2016) Capocelli Prize in the *26th Data Compression Conference (DCC)*, for the article with my student Héctor Ferrada.
- (2013) Capocelli Prize in the *23rd Data Compression Conference (DCC)*, for the article with my student Roberto Konow.

- (2012) Best Student Paper Award in the *19th International Symposium on String Processing and Information Retrieval (SPIRE)*, for the paper with my student Cecilia Hernández.
- (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).
- (1997) Coauthor of “Large Text Searching Allowing Errors” (Márcio Araújo, 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 Márcio Araújo and the advisor is Nivio Ziviani.

### Invited Talks and Tutorials

- (2025) Keynote talk at the *SIAM Conference on Applied and Computational Discrete Algorithms (ACDA)*, Montreal, Canada. Title: “Adaptive Dynamic Bitvectors”.
- (2024) Mini-course of 6 hours at the *Università di Verona*, Italy. Title: “Compressed Text Indexes”.
- (2023) Invited talk at the *Data Storage Technologies Forum* of Huawei, Saint Petersburg, Russia (remote participation). Title: “Compact Data Structures”.
- (2023) Joint keynote talk at the *26th International Conference on Database Theory (ICDT)* and the *26th International Conference on Extending Database Technology (EDBT)*, Ioannina, Greece. Title: “Compact Data Structures meet Databases”.
- (2022) Invited talk in the *Workshop on the 20 years after the FM-index*, part of the *Lipari School Computational on Complex and Social Systems*, Lipari, Italy. Title: “The Ring: Worst-Case Optimal Graph Joins in Compressed Space”.
- (2022) Keynote talk at the *33rd International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA)*, Philadelphia, PA. Title: “Achieving Worst-Case-Optimal Multijoins on Databases through Geometric Data Structures”.
- (2022) Keynote talk at the *32nd Data Compression Conference (DCC)*, Snowbird, AZ. Title: “On the Compressibility of Highly Repetitive Sequences”.
- (2022) Invited talk at the *Workshop on Compression + Computation*, online. Title: “The Ring: Worst-Case Optimal Graph Joins in Compressed Space”.
- (2021) Invited talk at the *Stanford Compression Workshop*, online. Title: “Repetitiveness and Indexability”.
- (2019) Keynote talk at the *26th International Conference on String Processing and Information Retrieval (SPIRE)*, Segovia, Spain. Title: “Repetitiveness and Indexability”.

- (2016) Tutorial “Compact Data Structures”, in the *12th Latin American Theoretical Informatics Symposium (LATIN)*, Ensenada, Mexico.
- (2015) Keynote talk at the *XLI Latin American Conference on Informatics (CLEI)*, Arequipa, Peru. Title: “Compact Data Structures”.
- (2014) Keynote talk at the *21st International Symposium on String Processing and Information Retrieval (SPIRE)*, Ouro Preto, Brazil. Title: “Doing SP & IR on Repetitive Collections”.
- (2014) Keynote talk at the *11th Latin American Theoretical Informatics Symposium (LATIN)*, Montevideo, Uruguay. Title: “Encoding Data Structures”.
- (2012) Tutorial “Space-Efficient Data Structures II”, with Francisco Claude, at the *19th International Conference on String Processing and Information Retrieval (SPIRE)*, Cartagena, Colombia.
- (2012) Keynote talk at the *23rd International Workshop on Combinatorial Algorithms (IWOCA)*, Tamil Nadu, India. Title: “Indexing Highly Repetitive Collections”.
- (2012) Joint keynote talk at the *23rd Annual Symposium on Combinatorial Pattern Matching (CPM)* and the *13th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT)*, Helsinki, Finland. Title: “Wavelet Trees for All”.
- (2011) Tutorial “Space-Efficient Data Structures”, with Francisco Claude, at the *18th International Conference on String Processing and Information Retrieval (SPIRE)*, Pisa, Italy.
- (2011) Tutorial “The Miracle of Self-Indexing”, in the *1st Research Workshop and Thematic School of RedTIC, CONACyT*, Puebla, Mexico. Videoconference.
- (2010) Keynote talk at the *17th International Symposium on String Processing and Information Retrieval (SPIRE)*, Los Cabos, Mexico. Title: “Compact Data Structures for IR: The Time Has Come”.
- (2010) Tutorial “Self-Indexing XML” invited at the *IV Alberto Mendelzon Workshop on Foundations of Data Management (AMW)*, Buenos Aires, Argentina.
- (2009) Keynote talk at the *Prague Stringology Conference (PSC)*, Prague, Czech Republic. Title: “Combining Text Compression and String Matching: The Miracle of Self-Indexing”.
- (2009) Keynote talk at the *2nd International Workshop on Similarity Search and Applications (SISAP)*, Prague, Czech Republic. Title: “Analyzing Metric Space Indexes: What For?”.
- (2009) Keynote talk at the *14th International Conference on Implementation and Application of Automata (CIAA)*, Sydney, Australia. Title: “Implementation and application of automata in string processing”.

- (2008) Keynote talk at the *Third Workshop on Compression, Text, and Algorithms*, satellite event of *SPIRE 2008*. Title: “Indexing LZ77: The Next Step in Self-Indexing”.
- (2008) Invited survey talk at *Dagstuhl Seminar on Structure-Based Compression of Complex and Massive Data*, Germany. Title: “Practical Search on Compressed Text”.
- (2007) Tutorial “Compact Data Structures”, invited at the *Mexican Computing Meeting (ENC)*, Morelia, Mexico.
- (2006) Invited talk at the *Bertinoro Meeting on Space-Conscious Algorithms*, Bertinoro, Italy. Title: “Dynamic Compressed Sequences and Applications”. Event constituted by invited talks.
- (2006) Invited talk at the Workshop *The Web as a Database*, Santiago, Chile, organized by the Center for Web Research and Yahoo! Research Center Latin America. Title: “Succinct Data Structures”. Event constituted by invited talks.
- (2005) Keynote talk at the *12th International Symposium on String Processing and Information Retrieval (SPIRE 2005)*, Buenos Aires, Argentina (invited by the Steering Committee). Title: “When music meets geometry: on algorithmic aspects of music retrieval”.
- (2003) Keynote talk at the *Mexican International Conference on Computer Science*, Tlaxcala, Mexico. Title: “Current challenges in textual databases”.
- (2001) Keynote talk at the *Chilean Computing Week*, Punta Arenas, Chile. Title: “Towards the new textual database: small, fast and flexible”.
- (1992-) Invited talks in several research centers: Dalhousie University (Canada), Stanford University (USA), Universidad Nacional de La Plata (UNLP, Argentina), Universidad Austral de Chile (Valdivia, Chile), Universidade Federal de Minas Gerais (UFMG, Belo Horizonte, Brazil), Universidad de Valladolid (Spain), Universidad Michoacana (Morelia, Mexico), Center for Research in Mathematics (CIMAT, Guanajuato, Mexico), Gaspard Monge Institute (IGM, Université de Marne-la-Vallée, France), Laboratory of Research in Informatics (LRI, Université de Paris Sud, France), University of Helsinki (Finland), University of Joensuu (Finland), University of Tampere (Finland), Helsinki University of Technology (Finland), Laboratory of Algorithmic Informatics : Fundamentals and Applications (LIAFA, Université de Paris 7, Paris, France), Kyushu University (Fukuoka, Japan), Universidade da Coruña (A Coruña, Spain), Universidad Nacional de San Luis (UNSL, Argentina), Universidad Católica de Chile, Universidad de Playa Ancha (Valparaíso, Chile), Universidad de Concepción (Concepción, Chile), Yahoo! Research Center Barcelona (Spain), Universidade Técnica de Lisboa (Portugal), University of Waterloo (Canada), and Universidad de Chile.

## Editorial Boards and Steering Committees

- (2025) Chair of the Search Committee for the new Editor in Chief of *ACM Transactions on Algorithms*.

- (2022-) Member of the Editorial Board of *ACM Transactions on Algorithms*.
- (2022-2024) Member at large of the Steering Committee of the *International Symposium on Experimental Algorithms (SEA)*.
- (2022-2024) Member of the Steering Committee of the *European Symposium on Algorithms (ESA)*.
- (2016-2023) Editor in Chief of *ACM Journal of Experimental Algorithmics*.
- (2012-) Member of the Editorial Advisory Board of *Information Systems*.
- (2009-2016) Member of the Editorial Board of *ACM Journal of Experimental Algorithmics*.
- (2008-2013) Member of the Steering Committee of the *Latin American Theoretical Informatics (LATIN)*.
- (2008-2014) Co-founder and member of the Steering Committee of the *International Conference on Similarity Search and Applications (SISAP)*, with Edgar Chávez. See [www.sisap.org](http://www.sisap.org).
- (2004-2019) Member of the Editorial Board of *Information Retrieval*.
- (2002,2006-2008,2019-2021) Member of the Steering Committee of *International Symposium on String Processing and Information Retrieval (SPIRE)*.

### **Program Committee Chair and Guest Editor**

- (2027) PC Co-chair of the *6th SIAM Conference on Applied and Computational Discrete Algorithms (ACDA)*.
- (2026) Associate Chair of the *19th ACM International Conference on Web Search and Data Mining (WSDM)*.
- (2023) PC Chair of the *25th Workshop on Algorithm Engineering and Experiments (ALENEX)*, Florence, Italy.
- (2022) PC Chair of the *22nd Annual European Symposium on Algorithms (ESA B)*, Berlin/Postdam, Germany.
- (2020) Guest editor (with Travis Gagie) of a Special Issue in *Information and Computation* dedicated to “Computation over Compressed Data”.
- (2018) PC Co-chair of the *25th International Symposium on String Processing and Information Retrieval (SPIRE)*, Lima, Peru.
- (2018) PC Co-chair of the *29th Annual Symposium on Combinatorial Pattern Matching (CPM)*, Qingdao, China.
- (2018) Special Session Chair of the *28th Data Compression Conference (DCC)*, Snowbird, Utah. Subject: “Computation over Compressed Data”.

- (2018) Guest editor (with Travis Gagie) of a Special Issue in *Algorithmica* dedicated to selected papers from recent *DCC* and *SPIRE* conferences. Springer.
- (2018) Guest editor (with Evangelos Kranakis) of a Special Issue in *Algorithmica* dedicated to selected papers from *LATIN 2016*. Springer.
- (2016) Special Session Chair of the *26th Data Compression Conference (DCC)*, Snowbird, Utah. Subject: “Compressed Data Structures”.
- (2016) PC Co-chair of the *12th Latin American Theoretical Informatics Symposium (LATIN)*, Ensenada, Mexico.
- (2015) Area Editor of *Encyclopedia of Algorithms*, 2nd edition, Springer. Ming-Yang Kao, editor.
- (2014) Guest editor (with Vladimir Pestov) of a Special Issue in *Information Systems* dedicated to selected papers from *SISAP 2012*. Elsevier.
- (2014) Special Session Chair of the *24th Data Compression Conference (DCC)*, Snowbird, Utah. Subject: “Compressed Data Structures”.
- (2012) PC Co-chair of the *5th International Workshop on Similarity Search and Applications (SISAP)*, Toronto, Canada.
- (2010) Guest editor (with Edgar Chávez) of a Special Issue of *ACM SIGSPATIAL* dedicated to *Metric Space Searching*. ACM Press.
- (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) PC Co-chair of the *1st International Workshop on Similarity Search and Applications (SISAP)*, Cancun, Mexico.
- (2007) PC Chair of track *Scalable Pattern Recognition* within the *8th Mexican International Conference on Computer Science (ENC 2007)*, Puebla, Mexico.
- (2006) Area Editor of *Encyclopedia of Algorithms*, Springer. Ming-Yang Kao, editor.
- (2006) PC Co-chair of *4th IFIP International Conference on Theoretical Computer Science (IFIP TCS)*, track TC1 of the *19th World Computer Congress (WCC 2006)*, Santiago, Chile.
- (2005) Posters PC Co-chair of *28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, Salvador, Brazil.
- (2005) PC Co-chair of the *12th International Symposium on String Processing and Information Retrieval (SPIRE)*, Buenos Aires, Argentina.
- (2004) PC Chair of *XXIV International Conference of the Chilean Computer Science Society (SCCC)*, Arica, Chile.

- (2001) PC Chair of *8th International Symposium on String Processing and Information Retrieval (SPIRE)*, Laguna de San Rafael, Chile.

## Organization of and Attendance to International Seminars

- (2025) Attendance to the *Dagstuhl Seminar 25191*, “*Adaptive and Scalable Data Structures*”, Saarbrücken, Germany.
- (2024) Co-organizer of the *Dagstuhl Seminar 24472*, “*Regular Expressions: Matching and Indexing*”, Saarbrücken, Germany.
- (2024) Attendance to the *Shonan Meeting 187*, “*Theoretical Foundations of Nonvolatile Memory*”, Tokyo, Japan.
- (2019) Co-organizer of the *Dagstuhl Seminar 19241*, “*25 Years of the Burrows-Wheeler Transform*”, Saarbrücken, Germany.
- (2017) Co-organizer of the *Shonan Meeting 126*, “*Computation over over Compressed Structured Data*”, Tokyo, Japan.
- (2016) Co-organizer of the *Dagstuhl Seminar 16431*, “*Computation over Compressed Structured Data*”, Saarbrücken, Germany.
- (2013) Co-organizer of the *Dagstuhl Seminar 13232*, “*Indexes and Computation over Compressed Structured Data*”, Saarbrücken, Germany.
- (2013) Attendance to the *Shonan Meeting 029*, “*Compact Data Structures for Big Data*”, Tokyo, Japan.
- (2012) Workshops Chair of SPIRE 2012, Cartagena de Indias, Colombia.
- (2012) Organization of the *7th Workshop on Compression, Text, and Algorithms*, satellite of SPIRE 2012, Cartagena, Colombia.
- (2011) Organization of the *6th Workshop on Compression, Text, and Algorithms*, satellite of SPIRE 2011, Pisa, Italy.
- (2010) Organization of the *5th Workshop on Compression, Text, and Algorithms*, satellite of SPIRE 2010, Los Cabos, Mexico.
- (2010) Attendance to the *Dagstuhl Seminar 10261*, “*Algorithm Engineering*”, Saarbrücken, Germany.
- (2008) Attendance to the *Dagstuhl Seminar 08261*, “*Structure-Based Compression of Complex Massive Data*”, Saarbrücken, Germany.
- (2007) Organization of the *2nd Workshop on Compression, Text, and Algorithms*, internal to the DCC, with 50% of international participation.
- (2005) Creation and organization of the *1st Workshop on Compression, Text, and Algorithms*, internal to the DCC, including international invited talks.

## Refereeing and Program Committees

- (1996-) Program Committee member of the *7th, 9th, 10th, 13th–24th, 27th–29th, and 32nd–33rd International Symposium on String Processing and Information Retrieval (SPIRE)* 2000, 2002, 2003, 2006–2017, 2020–2022, and 2025; *International Database Engineering and Applications Symposium (IDEAS)* 2002 and 2003; *13th, 14th, 18th, 21st, 24th–26th, 28th, 30th, and 33rd–35th Combinatorial Pattern Matching (CPM)* 2002, 2003, 2007, 2010, 2013–2015, 2017, 2019, and 2022–2025; *26th, 27th, 31th, 34th–36th, and 38th–39th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* 2002, 2003, 2007, 2010–2012, and 2014–2015; *3rd and 5th Conference of Fun With Algorithms* 2004 and 2010; *7th and 14th–17th Latin American Theoretical Informatics (LATIN)* 2006 and 2020–2026; *5th International Workshop on Efficient and Experimental Algorithms (WEA)* 2006; *15th, 23rd and 24th ACM Conference on Information and Knowledge Management (CIKM)* 2006, 2014 and 2015 (Seniors PC); *9th, 15th, 22nd and 29th Workshop on Algorithm Engineering and Experiments (ALENEX)* 2007, 2013, 2020 and 2027; *16th and 17th International World Wide Web Conference (WWW)*, Search Track, 2007 and 2008; *18th, 19th, 26th and 29th International Workshop on Combinatorial Algorithms (IWOCA)* 2007, 2008, 2015 and 2018; *24th IEEE International Conference on Data Engineering (ICDE)* 2008; *18th to 33rd Data Compression Conference (DCC)* 2008–2023; *2nd to 4th and 6th to 9th International Workshop on Similarity Search and Applications (SISAP)* 2009–2011 and 2013–2016; *38th International Colloquium on Automata, Languages and Programming (ICALP)*, track A 2011; *5th Alberto Mendelzon International Workshop on Foundations of Data Management (AMW)* 2011; *5th International Conference on Language and Automata Theory and Applications (LATA)* 2011; *17th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)* 2011; *20th, 26th, and 29th Annual European Symposium on Algorithms (ESA)* 2012 (track B), 2018 (track B), 2021 (track A), and 2026 (track E); *18th Annual International Computing and Combinatorics Conference (COCOON)* 2012; *31st International Symposium on Theoretical Aspects of Computer Science (STACS)* 2014; *14th Algorithms and Data Structures Symposium (WADS)* 2015; *15th Scandinavian Workshop on Algorithm Theory (SWAT)* 2016; *16th and 19th–21st International Symposium on Experimental Algorithms (SEA)* 2017 and 2020–2022; *12th International Conference and Workshops on Algorithms and Computation (WALCOM)* 2018; *23rd Workshop on Algorithms in Bioinformatics (WABI)* 2023; *35th ACM-SIAM Symposium on Discrete Algorithms (SODA)* 2024; *49th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)* (Seniors PC Member) 2025; *SIAM Symposium on Simplicity in Algorithms (SOSA)* 2026; *46th Symposium on Principles of Database Systems (PODS)* 2027; and several other national and regional ones.
- (1998-) Reviewer for journals (around 15–20 per year): *Journal of Computational Biology (JCB)*, *Journal of Discrete Algorithms (JDA)*, *Journal of Automata, Complexity and Languages (JACL)*, *Information Processing Letters (IPL)*, *Journal of Algorithms*, *Acta Informatica*, *ACM Transactions on Database Systems (TODS)*, *ACM Transactions on Information Systems (TOIS)*, *ACM Computing Surveys*, *Discrete and Applied Mathematics*

(DAM), *Fundamenta Informaticae (FI)*, *Theoretical Computer Science (TCS)*, *Pattern Recognition Letters (PRL)*, *Bioinformatics*, *IEEE Transactions on Multimedia*, *Transactions on Data and Knowledge Engineering (TKDE)*, *Information Sciences*, *Information Retrieval*, *IEEE Systems, Man and Cybernetics*, *IEEE Transactions on Information Theory*, *Pattern Recognition (PR)*, *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, *International Journal on Foundations of Computer Science (IJFCS)*, *ACM Journal of Experimental Algorithmics (JEA)*, *Algorithmica*, *ACM Transactions on Algorithms (TALG)*, *Information Systems*, *The International Journal on Very Large Data Bases (VLDBJ)*, *Information and Computation (I&C)*, *Journal of Computer Systems Science & Engineering (JCSSE)*, *IEEE Computer Graphics and Applications (CGA)*, *Mathematics in Computer Science (MCA)*, *Algorithms*, *SIAM Journal on Computing*, *IET Image Processing*, *Journal of Computational Geometry (JoCG)*, *IEEE Transactions on Computational Biology and Bioinformatics (TBB)*, *Journal of the ACM (JACM)*, *Communications of the ACM (CACM)*, *Networks*, *Journal of Supercomputing*, *Knowledge and Information Systems (KAIS)*, and other minor ones.

## Publications

A list of publications sorted by category and year follows (abbreviations of conferences at the end of the curriculum). To give an idea of their impact, I give some statistics valid at August 2022.

- In the *Web of Science Core Collection (WoS)*, there are over 4,400 citations to my WoS papers (excluding self-citations), and over 27,000 in *Google Scholar (GS)* (<http://scholar.google.com>). My two most cited articles have 1,160 and 625 citations in WoS (3,453 and 1,757 in GS). My WoS papers received on average 30.9 citations from WoS.
- My  $h$ -number (maximum value such that a researcher has  $h$  papers cited at least  $h$  times) is 38 within WoS and 76 in GS. This puts me in position 574 worldwide in Computer Science, according to Guide2Research (<http://www.guide2research.com/scientists>), and first in Chile (<https://research.com/scientists-rankings/computer-science/cl>).
- I am among the 300 most prolific authors in DBLP ([dblp.org/statistics/prolific6.html](http://dblp.org/statistics/prolific6.html)).

## Books

1. Gonzalo Navarro. *Compact Data Structures*. Cambridge University Press, 2016. 570 pages. ISBN 978-1-107-15238-0. (See site in [www.dcc.uchile.cl/gnavarro/CDSbook](http://www.dcc.uchile.cl/gnavarro/CDSbook).) A Japanese version of this book appeared in 2024.
2. Gonzalo Navarro and Mathieu Raffinot. *Flexible Pattern Matching in Strings*. (Practical on-line search algorithms for texts and biological sequences.) Cambridge University Press, 2002. 280 pages. ISBN 0-521-81307-7. (See site and reviews at [www.dcc.uchile.cl/gnavarro/FPMbook](http://www.dcc.uchile.cl/gnavarro/FPMbook).) A Chinese version of this book appeared in 2007, as well as the softcover version of the original edition.

## Conference Proceedings and Edited Books

1. Paolo Ferragina, Travis Gagie, and Gonzalo Navarro (editors). *The Expanding World of Compressed Data: A Festschrift for Giovanni Manzini's 60th Birthday*, 2025. Schloss Dagstuhl - Leibniz Center for Informatics, OASICS Series vol. 131. ISBN 978-3-95977-390-4.
2. Gonzalo Navarro and Julian Shun (editors). *Proceedings of the 25th Symposium on Algorithm Engineering and Experiments (ALENEX)*, Florence, Italy, January 2023. SIAM.
3. Shiri Chechik, Gonzalo Navarro, Eva Rotenberg, and Grzegorz Herman (editors). *Proceedings of the 30th Annual European Symposium on Algorithms (ESA 2022)*, Postdam, Germany, September 2022. LIPIcs Series, volume 244.
4. Travis Gagie, Alistair Moffat, Gonzalo Navarro, and Ernesto Cuadros (editors). *Proceedings of the 25th International Symposium on String Processing and Information Retrieval (SPIRE 2018)*, Lima, Peru, October 2018. Springer-Verlag LNCS Series, volume 11147.
5. Gonzalo Navarro, David Sankoff, and Binhai Zhu (editors). *Proceedings of the 29th Annual Symposium on Combinatorial Pattern Matching (CPM 2018)*, Qingdao, China, July 2018. LIPIcs Series, volume 105.
6. Evangelos Kranakis, Gonzalo Navarro, and Edgar Chávez (editors). *Proceedings of the 12th Latin American Symposium on Theoretical Informatics (LATIN 2016)*, Ensenada, Mexico, April 2016. Springer-Verlag LNCS Series, volume 9644.
7. Gonzalo Navarro and Vladimir Pestov (editors). *Proceedings of the 5th International Conference on Similarity Search and Applications (SISAP 2012)*, Toronto, Canada, August 2012. Springer-Verlag LNCS Series, volume 7404.
8. Edgar Chávez and Gonzalo Navarro (editors). *Proceedings of the 1st International Workshop on Similarity Search and Applications (SISAP 2008)*, Cancún, Mexico, April 2008. IEEE Computer Society Press. ISBN 978-0-7695-3454-1.
9. Martin Farach-Colton, Jesus Favela, Genoveva Vargas, Vibhu Mittal, and Gonzalo Navarro (editors). *Proceedings of the 8th Mexican International Conference on Computer Science (ENC 2007)*, Morelia, Mexico, September 2007. IEEE Computer Society Press.
10. Gonzalo Navarro, Leopoldo Bertossi, and Yoshiharu Kohayakawa (editors). *Proceedings of the 4th IFIP International Conference on Theoretical Computer Science (TCS 2006)*, Santiago, Chile, August 2006. Springer.
11. Mariano Consens and Gonzalo Navarro (editors). *Proceedings of the 12th International Symposium on String Processing and Information Retrieval (SPIRE 2005)*, Buenos Aires, Argentina, November 2005. Springer Lecture Notes in Computer Science, volume 3772.
12. Gonzalo Navarro (editor). *Proceedings of the XXIV International Conference of the Chilean Computer Science Society (SCCC 2004)*, Arica, Chile, November 2004. IEEE Computer Society Press.

13. Gonzalo Navarro (editor). *Proceedings of the 8th International Symposium on String Processing and Information Retrieval (SPIRE 2001)*, Laguna de San Rafael, Chile, October 2001. IEEE Computer Society Press.

### Chapters in Books with International Publisher

1. Diego Arroyuelo and Gonzalo Navarro. BWT Indexes for Optimal Joins in Graph Databases. In *The Expanding World of Compressed Data: A Festschrift for Giovanni Manzini's 60th Birthday*, article 14, 2025, Dagstuhl OASICS Series vol. 131. ISBN 978-3-95977-390-4.
2. Jarno N. Alanko, Philip Bille, Inge Li Gortz, Gonzalo Navarro, and Simon J. Puglisi. Compact Data Structures for Collections of Sets. In *From Strings to Graphs, and Back Again: A Festschrift for Roberto Grossi's 60th Birthday*, article 6, 2025, Dagstuhl Series OASICS vol. 132. ISBN 978-3-95977-391-1.
3. Nathaniel K. Brown, Travis Gagie, Giovanni Manzini, Gonzalo Navarro, and Marinella Sciortino. Faster Run-Length Compressed Suffix Arrays. In *From Strings to Graphs, and Back Again: A Festschrift for Roberto Grossi's 60th Birthday*, article 10, 2025, Dagstuhl Series OASICS vol. 132. ISBN 978-3-95977-391-1.
4. Travis Gagie and Gonzalo Navarro. Compressed Indexes for Repetitive Textual Datasets. In *Encyclopedia of Big Data Technologies*, 2019, Springer. ISBN 978-3-319-77524-1.
5. Nieves Brisaboa, Ana Cerdeira, and Gonzalo Navarro, Managing Compressed Structured Text. In *Encyclopedia of Database Systems*, 2nd edition, 2018. Springer. ISBN 978-1-4614-8266-6.
6. Roberto Konow and Gonzalo Navarro. Text Index Compression. In *Encyclopedia of Database Systems*, 2nd edition, 2018. Springer. ISBN 978-1-4614-8266-6.
7. Gonzalo Navarro and Kuniyiko Sadakane. Compressed Tree Representations. In M. Kao (editor), *Encyclopedia of Algorithms*, 2nd edition, pages 397–401, 2016. Springer. ISBN 978-3-642-27848-8.
8. Gonzalo Navarro. Approximate String Matching. In M. Kao (editor), *Encyclopedia of Algorithms*, 2nd edition, pages 102–106, 2016. Springer. ISBN 978-3-642-27848-8.
9. Gonzalo Navarro. Approximate Regular Expression Matching. In M. Kao (editor), *Encyclopedia of Algorithms*, 2nd edition, pages 99–102, 2016. Springer. ISBN 978-3-642-27848-8.
10. Veli Mäkinen and Gonzalo Navarro. Compressed Text Indexing. In M. Kao (editor), *Encyclopedia of Algorithms*, pages 394–397, 2016. Springer. ISBN 978-3-642-27848-8.
11. Ricardo Baeza-Yates, Gonzalo Navarro, and Nivio Ziviani. Documents: Languages and Properties. In Ricardo Baeza-Yates and Berthier Ribeiro-Neto, *Modern Information Retrieval* (2nd edition), chapter 6, pages 203–254. Addison-Wesley, 2011.

12. Ricardo Baeza-Yates and Gonzalo Navarro. Queries: Languages and Properties. In Ricardo Baeza-Yates and Berthier Ribeiro-Neto, *Modern Information Retrieval* (2nd edition), chapter 7, pages 255–280. Addison-Wesley, 2011.
13. Ricardo Baeza-Yates and Gonzalo Navarro. Indexing and Searching. In Ricardo Baeza-Yates and Berthier Ribeiro-Neto, *Modern Information Retrieval* (2nd edition), chapter 9, pages 337–398. Addison-Wesley, 2011.
14. Francisco Claude and Gonzalo Navarro. Extended Compact Web Graph Representations. In Tapio Elomaa, Heikki Mannila, and Pekka Orponen (editors) *Algorithms and Applications (Ukkonen Festschrift)*, pages 77–91, 2010. Springer, LNCS 6060.
15. Gonzalo Navarro. Text Index Compression. In Ling Liu and M. Tamer Özsü (editors) *Encyclopedia of Database Systems*, pages 3051–3055, 2009. Springer. ISBN 978-0-387-49616-0.
16. Gonzalo Navarro. Managing Compressed Structured Text. In Ling Liu and M. Tamer Özsü (editors) *Encyclopedia of Database Systems*, pages 1679–1684, 2009. Springer. ISBN 978-0-387-49616-0.
17. Gonzalo Navarro. Approximate Regular Expression Matching. In M. Kao (editor), *Encyclopedia of Algorithms*, pages 46–48, 2008. Springer. ISBN 978-0-387-30162-4.
18. Veli Mäkinen and Gonzalo Navarro. Compressed Text Indexing. In M. Kao (editor), *Encyclopedia of Algorithms*, pages 176–178, 2008. Springer. ISBN 978-0-387-30162-4.
19. Gonzalo Navarro. Sequential Approximate String Matching In M. Kao (editor), *Encyclopedia of Algorithms*, pages 818–820, 2008. Springer. ISBN 978-0-387-30162-4.
20. Gonzalo Navarro. Text Databases. In L. Rivero, J. Doorn, and V. Ferragine (editors), *Encyclopedia of Database Technologies and Applications*, pages 688–694, 2005. Idea Group Inc., Pennsylvania, USA. ISBN 1-59140-560-2.
21. Edgar Chávez and Gonzalo Navarro. Metric Databases. In L. Rivero, J. Doorn, and V. Ferragine (editors), *Encyclopedia of Database Technologies and Applications*, pages 367–372, 2005. Idea Group Inc., Pennsylvania, USA. ISBN 1-59140-560-2.
22. Ricardo Baeza-Yates and Gonzalo Navarro. Modeling Text Databases. In R. Baeza-Yates, J. Glaz, H. Gzyl, J. Hüsler, and J.L. Palacios (editors), *Recent Advances in Applied Probability*, pages 1–25, 2004. Springer.
23. Lucian Ilie, Gonzalo Navarro and Sheng Yu. On NFA Reductions. In J. Karhumaki, H. Maurer, G. Paun, G. Rozenberg (editors), *Theory is Forever (Salomaa Festschrift)*. Lecture Notes in Computer Science 3113, Springer-Verlag, Berlin, Heidelberg, 2004, pages 112–124.
24. Ricardo Baeza-Yates and Gonzalo Navarro. Text Searching: Theory and Practice. In C. Martin-Vide, V. Mitrana and G. Paun (editors), *Formal Languages and Applications*. Springer, Berlin, 2004, pages 565–597. ISBN 3-540-20907-7.

25. Ricardo Baeza-Yates, Benjamin Bustos, Edgar Chávez, Norma Herrera and Gonzalo Navarro. Clustering in Metric Spaces with Applications to Information Retrieval. In W. Wu, H. Xiong and S. Shekhar (editors), *Clustering and Information Retrieval*. Kluwer Academic Publishers, 2003, pages 1–34. ISBN 1-4020-7682-7.
26. Kimmo Fredriksson, Gonzalo Navarro and Esko Ukkonen. Faster than FFT: Rotation Invariant Combinatorial Template Matching. In S. Pandalai (editor), *Recent Research Developments in Pattern Recognition*, vol. II. Transworld Research Network, 2002, pages 75–112. ISBN 81-7895-050-2.
27. Ricardo Baeza-Yates, Alistair Moffat and Gonzalo Navarro. Searching Large Text Collections. In J. Abello, P. Pardalos and M. Resende (editors), *Handbook of Massive Data Sets*, Kluwer Academic Publishers, 2002, pages 195–244. ISBN 1-4020-0489-3.
28. Ricardo Baeza-Yates and Gonzalo Navarro. Query Languages. In *Modern Information Retrieval*, Addison-Wesley, 1999, pages 99–116. ISBN 0-201-39829-X.
29. Ricardo Baeza-Yates and Gonzalo Navarro. Indexing and Searching. In *Modern Information Retrieval*, Addison-Wesley, 1999, pages 191–227. ISBN 0-201-39829-X.

### Journal Special Issue Editor

1. Virgilio Almeida, Gonzalo Navarro, and Sergio Rajsbaum, editors. Latin America Regional Special Section. *Communications of the ACM* 63(11):42–107, 2020.
2. Travis Gagie and Gonzalo Navarro, editores. Special Issue on Computation over Compressed Data. *Information and Computation* 273, 2020.
3. Travis Gagie and Gonzalo Navarro, editors. Special Issue on Compact Data Structures. *Algorithmica* 80(7), 2018.
4. Evangelos Kranakis and Gonzalo Navarro, editors. Special Issue on Selected Papers from *LATIN 2016*, *Algorithmica* 80(3), 2018.
5. Gonzalo Navarro and Vladimir Pestov, editors. Special Issue on Selected Papers from *SISAP 2012*. *Information Systems* 45:35–68, 2014.
6. Edgar Chávez and Gonzalo Navarro, editors. Letters on Similarity Search in Metric Spaces. *ACM SIGSPATIAL Special* 2(2):1–39, 2010.
7. Edgar Chávez and Gonzalo Navarro, editors. Special Issue on Selected Papers from *SISAP 2008*. *Journal of Discrete Algorithms* 7(1):1–77, 2009.

### International Journals

1. Zsuzsanna Lipták, Francesco Masillo, and Gonzalo Navarro. A Textbook Solution for Dynamic Strings. *Theoretical Computer Science* 1066:article 115746, 2026.

2. Diego Arroyuelo, Fabrizio Barisione, Antonio Fariña, Adrián Gómez-Brandón, and Gonzalo Navarro. New Compressed Indices for Multijoins on Graph Databases. *Information Systems* 137:article 102647, 2026.
3. Diego Arroyuelo, Daniela Campos, Adrián Gómez-Brandón, Yuval Linker, Gonzalo Navarro, Carlos Rojas, and Domagoj Vrgoc. CompactLTJ: Space & Time Efficient Leapfrog Triejoin on Graph Databases. *The VLDB Journal* 34:article 67, 2025.
4. Dustin Cobas, Travis Gagie, and Gonzalo Navarro. Fast and Small Subsampled R-indexes. *ACM Transactions on Algorithms* 21(1):article 7, 2025.
5. Gonzalo Navarro. Practical Adaptive Dynamic Bitvectors. *Software Practice and Experience* 55(9):1539–1559, 2025.
6. Gonzalo Navarro. (Worst-Case) Optimal Adaptive Dynamic Bitvectors. *Theory of Computing Systems* 69:article 30, 2025.
7. Adrián Gómez-Brandón, Gonzalo Navarro, José Paramá, Nieves Brisaboa, and Travis Gagie. Stronger Compact Representations of Object Trajectories. *Geo-spatial Information Science* 28(2):685–721, 2025.
8. Gonzalo Navarro and Cristian Urbina. Repetitiveness Measures Based on String Morphisms. *Theoretical Computer Science* 1043:article 115259, 2025.
9. Gonzalo Navarro, Francisco Olivares, and Cristian Urbina. Generalized Straight-Line Programs. *Acta Informatica* 62:article 14, 2025.
10. Martita Muñoz, José Fuentes-Sepúlveda, Cecilia Hernández, Gonzalo Navarro, Diego Seco, and Fernando Silva-Coira. Clustering-based Compression for Raster Time Series. *The Computer Journal* 68(1):32–46, 2025.
11. José Fuentes-Sepúlveda, Diego Gatica, Gonzalo Navarro, M. Andrea Rodríguez, and Diego Seco. Space-Efficient Data Structures for the Inference of Subsumption and Disjointness Relations. *Software Practice and Experience* 55(2):195–219, 2025.
12. Gonzalo Navarro. Computing MEMs and Relatives on Repetitive Text Collections. *ACM Transactions on Algorithms* 21(1):article 12, 2025.
13. Diego Arroyuelo, Adrián Gómez-Brandón, and Gonzalo Navarro. Evaluating Regular Path Queries on Compressed Adjacency Matrices. *The VLDB Journal* 34:article 2, 2025.
14. Luiz Fernando Afra Brito, Marcelo Keese Albertini, Bruno Augusto Nassif Travençolo, and Gonzalo Navarro. Dynamic Compact Data Structure for Temporal Reachability with Unsorted Contact Insertions. *The Computer Journal* 67(10):2984–2994, 2024.
15. Diego Arroyuelo, Aidan Hogan, Gonzalo Navarro, Juan Reutter, and Domagoj Vrgoc. Tackling Challenges in Implementing Large-Scale Graph Databases. *Communications of the ACM* 67(8):40–44, 2024.

16. Diego Arroyuelo, Adrián Gómez-Brandón, Aidan Hogan, Gonzalo Navarro, Juan Reutter, Javiel Rojas-Ledesma, and Adrián Soto. The Ring: Worst-Case Optimal Joins in Graph Databases using (Almost) No Extra Space. *ACM Transactions on Database Systems* 49(2):article 5, 2024.
17. Tomasz Kociumaka, Gonzalo Navarro, and Francisco Olivares. Near-Optimal Search Time in  $\delta$ -Optimal Space, and Vice Versa. *Algorithmica* 86:1031–1056, 2024.
18. Diego Arroyuelo, Adrián Gómez-Brandón, Aidan Hogan, Gonzalo Navarro, and Javiel Rojas-Ledesma. Optimizing RPQs over a Compact Graph Representation. *The VLDB Journal* 33:349–374, 2024.
19. Nieves Brisaboa, Travis Gagie, Adrián Gómez-Brandón, and Gonzalo Navarro. Two-Dimensional Block Trees. *The Computer Journal* 67(1):391–406, 2024.
20. Domagoj Vrgoc, Carlos Rojas, Renzo Angles, Marcelo Arenas, Diego Arroyuelo, Carlos Buil-Aranda, Aidan Hogan, Gonzalo Navarro, Cristian Riveros, and Juan Romero. MillenniumDB: An Open-Source Graph Database System. *Data Intelligence* 5(3):560–610, 2023.
21. Diego Díaz-Domínguez and Gonzalo Navarro. Efficient Construction of the BWT for Repetitive Text using String Compression. *Information and Computation* 294:article 105088, 2023.
22. José Fuentes-Sepúlveda, Diego Gatica, Gonzalo Navarro, Andrea Rodríguez, and Diego Seco. Compact Representations of Spatial Hierarchical Structures with Support for Topological Queries. *Information and Computation* 292:article 105029, 2023.
23. Tomasz Kociumaka, Gonzalo Navarro, and Nicola Prezza. Toward a Definitive Compressibility Measure for Repetitive Sequences. *IEEE Transactions on Information Theory* 69(4):2074–2092, 2023.
24. Nieves Brisaboa, Ana Cerdeira-Pena, Guillermo de Bernardo, Antonio Fariña, and Gonzalo Navarro. Space/time-Efficient RDF Stores based on Circular Suffix Sorting. *The Journal of Supercomputing* 79:5643–5683, 2023.
25. Guillermo de Bernardo, Travis Gagie, Susana Ladra, Gonzalo Navarro, and Diego Seco. Faster Compressed Quadrees. *Journal of Computer and System Sciences* 131:86–104, 2023.
26. José Fuentes-Sepúlveda, Gonzalo Navarro, and Diego Seco. Navigating Planar Topologies in Near-Optimal Space and Time. *Computational Geometry Theory and Applications* 109:101922, 2023.
27. Gonzalo Navarro. The Compression Power of the BWT. *Communications of the ACM* 65(6):90, 2022.

28. Daniel Nunes, Felipe Louza, Simon Gog, Mauricio Ayala-Rincón, and Gonzalo Navarro. Grammar Compression by Induced Suffix Sorting. *ACM Journal of Experimental Algorithmics* 27:article 1.1, 2022.
29. Karen Y. Oróstica, Juan Saez Hidalgo, Pamela R. de Santiago, Solange Rivas, Sebastian Contreras, Gonzalo Navarro, Juan A. Asenjo, Álvaro Olivera-Nappa, and Ricardo Armisen. Total Mutational Load and Clinical Features as Predictors of the Metastatic Status in Lung Adenocarcinoma and Squamous Cell Carcinoma Patients. *Journal of Translational Medicine* 20:373, 2022.
30. Manuel Cáceres and Gonzalo Navarro. Faster Repetition-Aware Compressed Suffix Trees based on Block Trees. *Information and Computation* 285B, article 104749, 2022.
31. Miguel E. Coimbra, Joana Hrotkó, Alexandre P. Francisco, Luís M. S. Russo, Guillermo de Bernardo, Susana Ladra, and Gonzalo Navarro. A Practical Succinct Dynamic Graph Representation. *Information and Computation* 285B, article 104862, 2022.
32. Diego Arroyuelo, Gonzalo Navarro, Juan L. Reutter, and Javiel Rojas-Ledesma. Optimal Joins using Compressed Quadrees. *ACM Transactions on Database Systems* 47(2):article 8, 2022.
33. Alexandre P. Francisco, Travis Gagie, Dominik Köppl, Susana Ladra, and Gonzalo Navarro. Graph Compression for Adjacency-Matrix Multiplication. *SN Computer Science* 3:article 193, 2022.
34. Antonio Fariña, Travis Gagie, Szymon Grabowski, Giovanni Manzini, Gonzalo Navarro, and Alberto Ordóñez. Efficient and Compact Representations of Some Non-Canonical Prefix-Free Codes. *Theoretical Computer Science* 907:11–25, 2022.
35. Diego Arroyuelo, Rodrigo Cánovas, Johannes Fischer, Dominik Köppl, Marvin Löbel, Gonzalo Navarro, and Rajeev Raman. Engineering Practical Lempel-Ziv Tries. *ACM Journal of Experimental Algorithmics*, 26(1):article 14, 2021.
36. Nieves Brisaboa, Travis Gagie, Adrián Gómez-Brandón, Gonzalo Navarro, and José Paramá. An Index for Moving Objects with Constant-Time Access to their Compressed Trajectories. *International Journal of Geographical Information Science* 35(7):1392–1424, 2021.
37. Djamel Belazzougui, Travis Gagie, Ian Munro, Gonzalo Navarro, and Yakov Nekrich. Range Majorities and Minorities in Arrays. *Algorithmica* 83:1707–1733, 2021.
38. Gonzalo Navarro. Indexing Highly Repetitive String Collections, Part I: Repetitiveness Measures. *ACM Computing Surveys* 54(2):article 29, 2021.
39. Gonzalo Navarro. Indexing Highly Repetitive String Collections, Part II: Compressed Indexes. *ACM Computing Surveys* 54(2):article 26, 2021.
40. Gonzalo Navarro, Carlos Ochoa, and Nicola Prezza. On the Approximation Ratio of Ordered Parsings. *IEEE Transactions on Information Theory* 67(2):1008–1026, 2021.

41. Francisco Claude, Gonzalo Navarro, and Alejandro Pacheco. Grammar-Compressed Indexes with Logarithmic Search Time. *Journal of Computer and System Sciences* 118:53–74, 2021.
42. Djamal Belazzougui, Manuel Cáceres, Travis Gagie, Paweł Gawrychowski, Juha Kärkkäinen, Gonzalo Navarro, Alberto Ordóñez, Simon J. Puglisi, and Yasuo Tabei. Block Trees. *Journal of Computer and System Sciences* 117:1–22, 2021.
43. Felipe Gllaria, Cecilia Hernandez, Susana Ladra, Gonzalo Navarro, and Lilian Salinas. Compact Structure for Sparse Undirected Graphs based on a Clique Graph Partition. *Information Sciences* 544:485–499, 2021.
44. Anders Roy Christiansen, Mikko Berggren Ettiienne, Tomasz Kociumaka, Gonzalo Navarro, and Nicola Prezza. Optimal-Time Dictionary-Compressed Indexes. *ACM Transactions on Algorithms* 17(1):article 8, 2020.
45. Daniel Valenzuela, Dmitry Kosolobov, Gonzalo Navarro, and Simon J. Puglisi. Lempel-Ziv-like Parsing in Small Space. *Algorithmica* 82(11):3195–3215, 2020.
46. Gonzalo Navarro and Javiel Rojas. Predecessor Search. *ACM Computing Surveys* 53(5):article 105, 2020.
47. Travis Gagie, Meng He, Gonzalo Navarro, and Carlos Ochoa. Tree Path Majority Data Structures. *Theoretical Computer Science* 833:107–119, 2020.
48. Travis Gagie, Meng He, and Gonzalo Navarro. Compressed Dynamic Range Majority and Minority Data Structures. *Algorithmica* 82(7):2063–2086, 2020.
49. Leo Ferres, José Fuentes-Sepúlveda, Travis Gagie, Meng He, and Gonzalo Navarro. Fast and Compact Planar Embeddings. *Computational Geometry Theory and Applications* 89, article 101630, 2020.
50. Ian Munro, Gonzalo Navarro, Rahul Shah, and Sharma Thankachan. Ranked Document Selection. *Theoretical Computer Science* 812:149–159, 2020.
51. José Fuentes-Sepúlveda, Gonzalo Navarro, and Yakov Nekrich. Parallel Computation of the Burrows Wheeler Transform in Compact Space. *Theoretical Computer Science* 812:123–136, 2020.
52. Ian Munro, Gonzalo Navarro, and Yakov Nekrich. Fast Compressed Self-Indexes with Deterministic Linear-Time Construction. *Algorithmica* 82(2):316–337, 2020.
53. Travis Gagie, Gonzalo Navarro, and Nicola Prezza. Fully-Functional Suffix Trees and Optimal Text Searching in BWT-runs Bounded Space. *Journal of the ACM* 67(1):article 2, 2020.
54. Gonzalo Navarro, Víctor Sepúlveda, Mauricio Marín, and Senén González. Compressed Filesystem for Managing Large Genome Collections. *Bioinformatics* 35(20):4120–4128, 2020.

55. Nieves Brisaboa, Ana Cerdeira, Guillermo de Bernardo, Gonzalo Navarro, and Oscar Pe-dreira. Extending General Compact Queriable Representations to GIS Applications. *Information Sciences* 506:196–216, 2020.
56. Carlos Ochoa and Gonzalo Navarro. RePair and All Irreducible Grammars are Upper Bounded by High-Order Empirical Entropy. *IEEE Transactions on Information Theory* 65(5):3160–3164, 2019.
57. Gonzalo Navarro. Document Listing on Repetitive Collections with Guaranteed Performance. *Theoretical Computer Science* 777:58–72, 2019.
58. Travis Gagie, Meng He, and Gonzalo Navarro. Path Queries on Functions. *Theoretical Computer Science* 770:34–50, 2019.
59. Antonio Fariña, Miguel Martínez-Prieto, Francisco Claude, Gonzalo Navarro, Juan Lastra-Díaz, Nicola Prezza, and Diego Seco. On the Reproducibility of Experiments of Indexing Repetitive Document Collections. *Information Systems* 83:181–194, 2019.
60. Daniel Inostroza, Cecilia Hernández, Diego Seco, Gonzalo Navarro, and Alvaro Olivera. Cell Cycle and Protein Complex Dynamics in Discovering Signaling Pathways. *Journal of Bioinformatics and Computational Biology* 17(3):1950011, 2019.
61. Héctor Ferrada and Gonzalo Navarro. Lempel-Ziv Compressed Structures for Document Retrieval. *Information and Computation* 265:1–25, 2019.
62. Gonzalo Navarro and Nicola Prezza. Universal Compressed Text Indexing. *Theoretical Computer Science* 762, 41–50, 2019.
63. Nieves Brisaboa, Adrián Gómez-Brandón, Gonzalo Navarro, and José Paramá. GraCT: A Grammar-based Compressed Index for Trajectory Data. *Information Sciences* 483:106–135, 2019.
64. Andrea Farruggia, Travis Gagie, Gonzalo Navarro, Simon J. Puglisi, and Jouni Sirén. Relative Suffix Trees. *The Computer Journal* 61(5), 773–788, 2018.
65. Cecilia Hernandez, Carlos Mella, Gonzalo Navarro, Alvaro Olivera-Napa, and Jaime Araya. Protein Complex Prediction via Dense Subgraphs and False Positive Analysis. *Plos ONE* 12(9):e0183460, 2017.
66. Nieves Brisaboa, Ana Cerdeira-Pena, Guillermo de Bernardo, and Gonzalo Navarro. Compressed Representation of Dynamic Binary Relations with Applications. *Information Systems* 69:106–123, 2017.
67. Travis Gagie, Aleksi Hartikainen, Kalle Karhu, Juha Kärkkäinen, Gonzalo Navarro, Simon J. Puglisi, and Jouni Sirén. Document Retrieval on Repetitive Collections. *Information Retrieval* 20:253–291, 2017.
68. Ian Munro, Gonzalo Navarro, Jesper Sindahl Nielsen, Rahul Shah, and Sharma Thankachan. Top- $k$  Term-Proximity in Succinct Space. *Algorithmica* 78(2):379–393, 2017.

69. Sandra Alvarez-Garcia, Guillermo de Bernardo, Nieves Brisaboa, and Gonzalo Navarro. A Succinct Data Structure for Self-indexing Ternary Relations. *Journal of Discrete Algorithms* 43:38–53, 2017.
70. Alberto Ordóñez, Gonzalo Navarro, and Nieves Brisaboa. Grammar Compressed Sequences with Rank/Select Support. *Journal of Discrete Algorithms* 43:54–71, 2017.
71. Héctor Ferrada and Gonzalo Navarro. Improved Range Minimum Queries. *Journal of Discrete Algorithms* 43:72–80, 2017.
72. Simon Gog, Roberto Konow, and Gonzalo Navarro. Practical Compact Indexes for Top- $k$  Document Retrieval. *ACM Journal of Experimental Algorithmics* 22(1):article 1.2, 2017.
73. Roberto Grossi, John Iacono, Gonzalo Navarro, Rajeev Raman, and S. Rao Satti. Asymptotically Optimal Encodings of Range Data Structures for Selection and Top- $k$  Queries. *ACM Transactions on Algorithms* 13(2):article 28, 2017.
74. Gonzalo Navarro and Yakov Nekrich. Time-Optimal Top- $k$  Document Retrieval. *SIAM Journal on Computing* 46(1):89–113, 2017.
75. Gonzalo Navarro, Rodrigo Paredes, Nora Reyes, and Cristian Bustos. An Empirical Evaluation of Intrinsic Dimension Estimators. *Information Systems* 64:206–218, 2017.
76. Roberto Konow, Gonzalo Navarro, Charles Clarke, and Alejandro López-Ortíz. Inverted Treaps. *ACM Transactions on Information Systems* 35(3):article 22, 2017.
77. Joshimar Córdova and Gonzalo Navarro. Simple and Efficient Fully-Functional Succinct Trees. *Theoretical Computer Science* 656PB:135–145, 2016.
78. Gonzalo Navarro and Sharma Thankachan. Reporting Consecutive Substring Occurrences Under Bounded Gap Constraints. *Theoretical Computer Science* 638:108–111, 2016.
79. Gonzalo Navarro and Nora Reyes. New Dynamic Metric Indices for Secondary Memory. *Information Systems* 59:48–78, 2016.
80. Francisco Claude, Antonio Fariña, Miguel A. Martínez, and Gonzalo Navarro. Universal Indexes for Highly Repetitive Document Collections. *Information Systems* 61:1–23, 2016.
81. Nieves Brisaboa, Guillermo de Bernardo, Roberto Konow, Gonzalo Navarro, and Diego Seco. Aggregated 2D Range Queries on Clustered Points. *Information Systems* 60:34–49, 2016.
82. Gonzalo Navarro and Sharma Thankachan. Optimal Encodings for Range Majority Queries. *Algorithmica* 74(3):1082–1098, 2016.
83. Gonzalo Navarro and Alberto Ordóñez. Faster Compressed Suffix Trees for Repetitive Collections. *ACM Journal of Experimental Algorithmics* 21(1):article 1.8, 2016.

84. Miguel A. Martínez-Prieto, Nieves Brisaboa, Rodrigo Cánovas, Francisco Claude, and Gonzalo Navarro. Practical Compressed String Dictionaries. *Information Systems* 56:73–108, 2016.
85. Travis Gagie, Gonzalo Navarro, Yakov Nekrich, and Alberto Ordóñez. Efficient and Compact Representations of Prefix Codes. *IEEE Transactions on Information Theory* 61(9):4999–5011, 2015.
86. Sandra Álvarez-García, Nieves Brisaboa, Javier Fernández, Miguel Ángel Martínez-Prieto, and Gonzalo Navarro. Compressed Vertical Partitioning for Efficient RDF Management. *Knowledge and Information Systems* 44(2):439–474, 2015.
87. Djamel Belazzougui and Gonzalo Navarro. Optimal Lower and Upper Bounds for Representing Sequences. *ACM Transactions on Algorithms* 11(4):article 31, 2015.
88. Simon Gog, Gonzalo Navarro, and Matthias Petri. Improved and Extended Locating Functionality on Compressed Suffix Arrays. *Journal of Discrete Algorithms* 32:53–63, 2015.
89. Gonzalo Navarro and Sharma Thankachan. Bottom- $k$  Document Retrieval. *Journal of Discrete Algorithms* 32:69–74, 2015.
90. Edgar Chávez, Mario Graff, Gonzalo Navarro, and Eric Sadit Téllez. Near Neighbor Searching with  $K$  Nearest References. *Information Systems* 51:43–61, 2015.
91. Young-Hwan Kim, Roberto Konow, Diego Dujovne, Thierry Turetletti, Walid Dabbous, and Gonzalo Navarro, PcapWT: An Efficient Packet Extraction Tool for Large Volume Network Traces. *Computer Networks* 79:91–102, 2015.
92. Diego Arroyuelo, Francisco Claude, Sebastian Maneth, Veli Mäkinen, Gonzalo Navarro, Kim Nguyễn, Jouni Sirén, and Niko Välimäki. Fast In-Memory XPath Search using Compressed Indexes. *Software Practice and Experience* 45(3):399-434, 2015.
93. Cristobal Navarro, Fabrizio Canfora, Nancy Hitschfeld, and Gonzalo Navarro. Parallel Family Trees for Transfer Matrices in the Potts Model. *Computer Physics Communications* 187:55–71, 2015.
94. Francisco Claude, Gonzalo Navarro, and Alberto Ordóñez. The Wavelet Matrix: An Efficient Wavelet Tree for Large Alphabets. *Information Systems* 47:15–32, 2015.
95. Gonzalo Navarro, Simon Puglisi, and Daniel Valenzuela. General Document Retrieval in Compact Space. *ACM Journal of Experimental Algorithmics* 46(2):article 3, 2014. 46 pages.
96. Gonzalo Navarro and Yakov Nekrich. Optimal Dynamic Sequence Representations. *SIAM Journal on Computing* 43(5):1781–1806, 2014.

97. Diego Arroyuelo, Carolina Bonacic, Veronica Gil-Costa, Mauricio Marin, and Gonzalo Navarro. Distributed Text Search using Suffix Arrays. *Parallel Computing* 40(9):471–495, 2014.
98. Djamel Belazzougui and Gonzalo Navarro. Alphabet-Independent Compressed Text Indexing. *ACM Transactions on Algorithms* 10(4):article 23, 2014.
99. Gonzalo Navarro and Sharma Thankachan. New Space/Time Tradeoffs for Top- $k$  Document Retrieval on Sequences. *Theoretical Computer Science* 542:83–97, 2014.
100. Nieves Brisaboa, Ana Cerdeira-Pena, and Gonzalo Navarro. XXS: Efficient XPath Evaluation on Compressed XML Documents. *ACM Transactions on Information Systems* 32(3):article 13, 2014.
101. Cecilia Hernández and Gonzalo Navarro. Compressed Representations for Web and Social Graphs. *Knowledge and Information Systems* 40(2):279–313, 2014.
102. Jérémy Barbay, Timothy Chan, Gonzalo Navarro, and Pablo Pérez-Lantero. Maximum-Weight Planar Boxes in  $O(n^2)$  Time (and Better). *Information Processing Letters* 114(8):437–445, 2014.
103. Rodrigo González, Gonzalo Navarro, and Héctor Ferrada. Locally Compressed Suffix Arrays. *ACM Journal of Experimental Algorithmics* 19(1):article 1, 2014.
104. Gonzalo Navarro and Kuniyiko Sadakane. Fully-Functional Static and Dynamic Succinct Trees. *ACM Transactions on Algorithms* 10(3):article 16, 2014.
105. Pooya Davoodi, Gonzalo Navarro, Rajeev Raman, and S. Srinivasa Rao. Encoding Range Minima and Range Top-2 Queries. *Philosophical Transactions of the Royal Society A* 372:20130131, 2014.
106. Gonzalo Navarro. Spaces, Trees and Colors: The Algorithmic Landscape of Document Retrieval on Sequences. *ACM Computing Surveys* 46(4):article 52, 2014.
107. Jérémy Barbay, Francisco Claude, Travis Gagie, Gonzalo Navarro, and Yakov Nekrich. Efficient Fully-Compressed Sequence Representations. *Algorithmica* 69(1):232–268, 2014.
108. Gonzalo Navarro. Wavelet Trees for All. *Journal of Discrete Algorithms* 25:2–20, 2014.
109. Nieves Brisaboa, Susana Ladra, and Gonzalo Navarro. Compact Representation of Web Graphs with Extended Functionality. *Information Systems* 39(1):152–174, 2014.
110. Arash Farzan, Travis Gagie, and Gonzalo Navarro. Entropy-Bounded Representation of Point Grids. *Computational Geometry: Theory and Applications* 47(1):1–14, 2014.
111. Jérémy Barbay and Gonzalo Navarro. On Compressing Permutations and Adaptive Sorting. *Theoretical Computer Science* 513:109–123, 2013.

112. J r my Barbay, Francisco Claude, and Gonzalo Navarro. Compact Binary Relation Representations with Rich Functionality. *Information and Computation* 232:19–37, 2013.
113. Andr s Abeliuk, Rodrigo C novas, and Gonzalo Navarro. Practical Compressed Suffix Trees. *Algorithms* 6(2):319–351, 2013.
114. Eric Sadit Tellez, Edgar Chavez, and Gonzalo Navarro. Succinct Nearest Neighbor Search. *Information Systems* 38(7):1019–1030, 2013.
115. Sebastian Krefl and Gonzalo Navarro. On Compressing and Indexing Repetitive Sequences. *Theoretical Computer Science* 483:115–133, 2013.
116. Travis Gagie, Juha K rkk inen, Gonzalo Navarro, and Simon Puglisi. Colored Range Queries and Document Retrieval. *Theoretical Computer Science* 483:36–50, 2013.
117. Gonzalo Navarro, Yakov Nekrich, and Lu s Russo. Space-Efficient Data-Analysis Queries on Grids. *Theoretical Computer Science* 482:60–72, 2013.
118. Nieves Brisaboa, Miguel Luaces, Gonzalo Navarro, and Diego Seco. Space-Efficient Representations of Rectangle Datasets Supporting Orthogonal Range Querying. *Information Systems* 38(5):635–655, 2013.
119. Djamal Belazzougui, Gonzalo Navarro, and Daniel Valenzuela. Improved Compressed Indexes for Full-Text Document Retrieval. *Journal of Discrete Algorithms* 18:3–13, 2013.
120. Nieves Brisaboa, Susana Ladra, and Gonzalo Navarro. DACs: Bringing Direct Access to Variable-Length Codes. *Information Processing and Management* 49(1):392–404, 2013.
121. Nieves Brisaboa, Antonio Fari na, Susana Ladra, and Gonzalo Navarro. Implicit Indexing of Natural Language Text by Reorganizing Bytecodes. *Information Retrieval* 15(6):527–557, 2012.
122. J r my Barbay, Johannes Fischer, and Gonzalo Navarro. LRM-Trees: Compressed Indices, Adaptive Sorting, and Compressed Permutations. *Theoretical Computer Science* 459:26–41, 2012.
123. Travis Gagie, Gonzalo Navarro, and Simon Puglisi. New Algorithms on Wavelet Trees and Applications to Information Retrieval. *Theoretical Computer Science* 426-427:25–41, 2012.
124. Antonio Fari na, Nieves Brisaboa, Gonzalo Navarro, Francisco Claude,  ngeles Places, and Eduardo Rodr guez. Word-based Self-Indexes for Natural Language Text. *ACM Transactions on Information Systems (TOIS)* 30(1):article 1, 2012.
125. Francisco Claude, Gonzalo Navarro, Hannu Peltola, Leena Salmela, and Jorma Tarhio. String Matching with Alphabet Sampling. *Journal of Discrete Algorithms* 11:37–50, 2012.
126. Antonio Fari na, Gonzalo Navarro, and Jos  Param . Boosting Text Compression with Word-Based Statistical Encoding. *The Computer Journal* 55(1):111–131, 2012.

127. Diego Arroyuelo, Gonzalo Navarro, and Kunihiko Sadakane. Stronger Lempel-Ziv Based Compressed Text Indexing. *Algorithmica* 62(1-2):54–101, 2012.
128. Francisco Claude and Gonzalo Navarro. Self-Indexed Grammar-Based Compression. *Fundamenta Informaticae* 111(3):313–337, 2011.
129. Marcos Kiwi, Gonzalo Navarro, and Claudio Telha. On-line Approximate String Matching with Bounded Errors. *Theoretical Computer Science* 412(45):6359–6370, 2011.
130. Luís Russo, Gonzalo Navarro, and Arlindo Oliveira. Fully-Compressed Suffix Trees. *ACM Transactions on Algorithms* 7(4): article 53, 2011.
131. Gonzalo Navarro, Rodrigo Paredes, Patricio Poblete, and Peter Sanders. Stronger Quickheaps. *International Journal on Foundations of Computer Science* 22(4):945–969, 2011.
132. 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.
133. Diego Arroyuelo and Gonzalo Navarro. Space-Efficient Construction of Lempel-Ziv Compressed Text Indexes. *Information and Computation* 209(7):1070–1102, 2011.
134. Gonzalo Navarro and Roberto Uribe. Fully Dynamic Metric Access Methods based on Hyperplane Partitioning. *Information Systems* 36(4):734–747, 2011.
135. 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.
136. 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.
137. Francisco Claude and Gonzalo Navarro. Fast and Compact Web Graph Representations. *ACM Transactions on the Web* 4(4):article 16, 2010.
138. Edgar Chávez and Gonzalo Navarro. Fundamentals of the Problem. *ACM SIGSPATIAL Special* 2(2):2–7, 2010.
139. Gonzalo Navarro and Rodrigo Paredes. On Sorting, Heaps, and Minimum Spanning Trees. *Algorithmica* 57(4):585–620, 2010.
140. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá. Dynamic Lightweight Text Compression. *ACM Transactions on Information Systems* 28(3):article 1, 2010.
141. 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.

142. Rodrigo González and Gonzalo Navarro. A Compressed Text Index on Secondary Memory. *Journal of Combinatorial Mathematics and Combinatorial Computing (JCMCC)* 71:127–154, 2009.
143. Johannes Fischer, Veli Mäkinen, and Gonzalo Navarro. Faster Entropy-Bounded Compressed Suffix Trees. *Theoretical Computer Science* 410(51):5354–5364, 2009.
144. Luís Russo, Gonzalo Navarro, Arlindo Oliveira, and Pedro Morales. Approximate String Matching with Compressed Indexes. *Algorithms* 2(3), 1105–1136, 2009.
145. Rodrigo González and Gonzalo Navarro. Rank/Select on Dynamic Compressed Sequences and Applications. *Theoretical Computer Science* 410(43):4414–4422, 2009.
146. Karina Figueroa, Edgar Chávez, Gonzalo Navarro, and Rodrigo Paredes. Speeding up Spatial Approximation Search in Metric Spaces. *ACM Journal of Experimental Algorithmics* 14:article 3.6, 2009. 21 pages.
147. 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, 30 pages, 2009.
148. Amihoud Amir and Gonzalo Navarro. Parameterized Matching on Non-linear Structures. *Information Processing Letters* 109(15):864–867, 2009.
149. 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.
150. Gonzalo Navarro. Implementing the LZ-index: Theory versus Practice. *ACM Journal of Experimental Algorithmics (JEA)*, 13:article 2, 49 pages, 2009.
151. Joaquín Adiego, Gonzalo Navarro, and Pablo de la Fuente. A Prototype for Querying LZCS Transformed Documents. *IEEE Latin America Transactions* 7(3):353–360, 2009. In Spanish.
152. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá. New Adaptive Compressors for Natural Language Text. *Software Practice and Experience* 38(13):1429–1450, 2008.
153. Veli Mäkinen and Gonzalo Navarro. Dynamic Entropy-Compressed Sequences and Full-Text Indexes. *ACM Transactions on Algorithms (TALG)* 4(3):article 32, 38 pages, 2008.
154. 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.
155. Gonzalo Navarro and Nora Reyes. Dynamic Spatial Approximation Trees. *ACM Journal of Experimental Algorithmics (JEA)* 12, article 1.5, 68 pages, 2008.

156. Veli Mäkinen and Gonzalo Navarro. Rank and Select Revisited and Extended. *Theoretical Computer Science* 387(3):332–347, 2007. Special issue on “The Burrows-Wheeler Transform and its Applications”.
157. Gonzalo Navarro, Rodrigo Paredes, and Edgar Chávez.  $t$ -Spanners for Metric Space Searching. *Data and Knowledge Engineering (DKE)* 63(3):820–854, 2007.
158. 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.
159. Kimmo Fredriksson, Veli Mäkinen, and Gonzalo Navarro. Rotation and Lighting Invariant Template Matching. *Information and Computation* 205(7):1096–1113, 2007.
160. Gonzalo Navarro and Veli Mäkinen. Compressed Full-Text Indexes. *ACM Computing Surveys* 39(1), article 2, 61 pages, 2007.
161. 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.
162. 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.
163. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá. Lightweight Natural Language Text Compression. *Information Retrieval* 10:1–33, 2007.
164. 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.
165. Heikki Hyvrö 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.
166. Szymon Grabowski, Gonzalo Navarro, Rafał 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.
167. Gonzalo Navarro and Edgar Chávez. A Metric Index for Approximate String Matching. *Theoretical Computer Science (TCS)* 352 (1–3):266–279, 2006.
168. Heikki Hyvrö, Kimmo Fredriksson, and Gonzalo Navarro. Increased Bit-Parallelism for Approximate and Multiple String Matching. *ACM Journal of Experimental Algorithmics (JEA)* 10, article 2.6, 27 pages, 2005.

169. Kimmo Fredriksson, Gonzalo Navarro, and Esko Ukkonen. Sequential and Indexed Two-Dimensional Combinatorial Template Matching Allowing Rotations. *Theoretical Computer Science (TCS)* 347(1–2):239–275, 2005.
170. Gonzalo Navarro and Jorma Tarhio. LZgrep: A Boyer-Moore String Matching Tool for Ziv-Lempel Compressed Text. *Software Practice and Experience (SPE)* 35(12):1107–1130, 2005.
171. Gonzalo Navarro and Nieves Brisaboa. New Bounds on  $D$ -ary Optimal Codes. *Information Processing Letters (IPL)* 96(5):178–184, 2005.
172. Veli Mäkinen and Gonzalo Navarro. Succinct Suffix Arrays based on Run-Length Encoding. *Nordic Journal of Computing (NJC)* 12(1):40–66, 2005.
173. Veli Mäkinen, Gonzalo Navarro and Esko Ukkonen. Transposition Invariant String Matching. *Journal of Algorithms* 56(2):124–153, 2005.
174. Kjell Lemström, Gonzalo Navarro and Yoan Pinzon. Practical Algorithms for Transposition-Invariant String-Matching. *Journal of Discrete Algorithms (JDA)* 3(2–4):267–292, 2005.
175. Gonzalo Navarro, Erkki Sutinen and Jorma Tarhio. Indexing Text with Approximate  $q$ -grams. *Journal of Discrete Algorithms (JDA)* 3(2–4):157–175, 2005.
176. Maxime Crochemore, Costas Iliopoulos, Gonzalo Navarro, Yoan Pinzon and Alejandro Salinger. Bit-parallel  $(\delta, \gamma)$ -Matching Suffix Automata. *Journal of Discrete Algorithms (JDA)* 3(2–4):198–214, 2005.
177. Edgar Chávez and Gonzalo Navarro. A Compact Space Decomposition for Effective Metric Indexing. *Pattern Recognition Letters*, 26(9):1363–1376, 2005.
178. Heikki Hyvrö and Gonzalo Navarro. Bit-Parallel Witnesses and their Applications to Approximate String Matching. *Algorithmica* 41(3):203–231, 2005.
179. Gonzalo Navarro. Approximate Regular Expression Searching with Arbitrary Integer Weights. *Nordic Journal of Computing* 11(4): 356–373, 2004.
180. Gonzalo Navarro and Mathieu Raffinot. New Techniques for Regular Expression Searching. *Algorithmica* 41(2):89–116, 2004.
181. Kimmo Fredriksson and Gonzalo Navarro. Average-Optimal Single and Multiple Approximate String Matching. *ACM Journal of Experimental Algorithmics (JEA)* 9, article 1.4, 45 pages, 2004.
182. Gonzalo Navarro. Pattern Matching. *Journal of Applied Statistics*. 31(8):925–949, 2004. Special Issue on “Pattern Discovery”. Invited paper.
183. Gonzalo Navarro and Mathieu Raffinot. Practical and Flexible Pattern Matching over Ziv-Lempel Compressed Text. *Journal of Discrete Algorithms (JDA)* 2(3):347–371, 2004.

184. Gonzalo Navarro and Kimmo Fredriksson. Average Complexity of Exact and Approximate Multiple String Matching. *Theoretical Computer Science (TCS)* 321(2–3):283–290, 2004.
185. Benjamin Bustos and Gonzalo Navarro. Probabilistic Proximity Search Algorithms Based on Compact Partitions. *Journal of Discrete Algorithms (JDA)* 2(1):115–134, 2004.
186. Gonzalo Navarro. Indexing Text using the Ziv-Lempel Trie. *Journal of Discrete Algorithms (JDA)* 2(1):87–114, 2004.
187. Gonzalo Navarro, Ricardo Baeza-Yates and João Marcelo Arcoverde. Matchsimile: A Flexible Approximate Matching Tool for Searching Proper Names. *Journal of the American Society for Information Systems and Technology (JASIST)* 54(1):3–15, 2003.
188. Gonzalo Navarro. Regular Expression Searching on Compressed Text. *Journal of Discrete Algorithms (JDA)* 1(5/6):423–443, 2003.
189. Gonzalo Navarro and Mathieu Raffinot. Fast and Simple Character Classes and Bounded Gaps Pattern Matching, with Applications to Protein Searching. *Journal of Computational Biology* 10(6):903–923, 2003.
190. Juha Kärkkäinen, Gonzalo Navarro and Esko Ukkonen. Approximate String Matching on Ziv-Lempel Compressed Text. *Journal of Discrete Algorithms (JDA)* 1(3/4): 313–338, 2003.
191. Josué Kuri, Gonzalo Navarro and Ludovic Mé. Fast Multipattern Search Algorithms for Intrusion Detection. *Fundamenta Informaticae* 56(1–2): 23–49, 2003.
192. Benjamin Bustos, Gonzalo Navarro and Edgar Chávez. Pivot Selection Techniques for Proximity Searching in Metric Spaces. *Pattern Recognition Letters (PRL)* 24(14):2357–2366, 2003.
193. Veli Mäkinen, Gonzalo Navarro and Esko Ukkonen. Approximate Matching of Run-Length Compressed Strings. *Algorithmica* 35:347–369, 2003.
194. Edgar Chávez and Gonzalo Navarro. Probabilistic Proximity Search: Fighting the Curse of Dimensionality in Metric Spaces. *Information Processing Letters (IPL)* 85:39–46, 2003.
195. Jayme Szwarcfiter, Gonzalo Navarro, Ricardo Baeza-Yates, Joísa de S. Oliveira, Walter Cunto and Nivio Ziviani. Optimal Binary Search Trees with Costs Depending on the Access Paths. *Theoretical Computer Science (TCS A)* 290(3):1799–1814, 2003.
196. Gonzalo Navarro. Searching in Metric Spaces by Spatial Approximation. *The VLDB Journal* 11(1):28–46, 2002.
197. Ricardo Baeza-Yates and Gonzalo Navarro. XQL and Proximal Noves. *Journal of the American Society for Information Systems and Technology (JASIST)* 53(6):504–514, 2002. Special issue on “XML and Information Retrieval”.

198. Ricardo Baeza-Yates and Gonzalo Navarro. New and Faster Filters for Multiple Approximate String Matching. *Random Structures and Algorithms (RSA)* 20:23–49, 2002.
199. Edgar Chávez, Gonzalo Navarro, Ricardo Baeza-Yates and José Luis Marroquín. Searching in Metric Spaces. *ACM Computing Surveys* 33(3):273–321, 2001.
200. Gonzalo Navarro, Ricardo Baeza-Yates, Erkki Sutinen and Jorma Tarhio. Indexing Methods for Approximate String Matching. *IEEE Data Engineering Bulletin* 24(4):19–27, 2001. Special issue on “Text and Databases”. Invited paper.
201. Gonzalo Navarro. NR-grep: a Fast and Flexible Pattern Matching Tool. *Software Practice and Experience (SPE)* 31:1265–1312, 2001.
202. Gonzalo Navarro. A Guided Tour to Approximate String Matching. *ACM Computing Surveys* 33(1):31–88, 2001. (See a review in <http://portal.acm.org>).
203. Gonzalo Navarro and Ricardo Baeza-Yates. Improving an Algorithm for Approximate Pattern Matching. *Algorithmica* 30(4):473–502, 2001.
204. Edgar Chávez, José Luis Marroquín and Gonzalo Navarro. Fixed Queries Array: A Fast and Economical Data Structure for Proximity Searching. *Multimedia Tools and Applications (MTAP)*, 14(2):113–135, 2001. Kluwer.
205. Gonzalo Navarro and Ricardo Baeza-Yates. A Hybrid Indexing Method for Approximate String Matching. *Journal of Discrete Algorithms (JDA)* 1(1):205–239, 2000.
206. Ricardo Baeza-Yates and Gonzalo Navarro. New Models and Algorithms for Multidimensional Approximate Pattern Matching. *Journal of Discrete Algorithms (JDA)* 1(1):21–49, 2000.
207. Gonzalo Navarro and Mathieu Raffinot. Fast and Flexible String Matching by Combining Bit-Parallelism and Suffix Automata. *ACM Journal of Experimental Algorithmics (JEA)* 5, article 4, 36 pages, 2000.
208. Nivio Ziviani, Edleno de Moura, Gonzalo Navarro and Ricardo Baeza-Yates. Compression: A Key for Next-Generation Text Retrieval Systems. *IEEE Computer* 33(11):37–44 (cover feature), November 2000.
209. Gonzalo Navarro, Edleno de Moura, Marden Neubert, Nivio Ziviani and Ricardo Baeza-Yates. Adding Compression to Block Addressing Inverted Indexes. *Information Retrieval* 3(1):49–77, 2000. Kluwer.
210. Edleno de Moura, Gonzalo Navarro, Nivio Ziviani and Ricardo Baeza-Yates. Fast and Flexible Word Searching on Compressed Text *ACM Transactions on Information Systems (TOIS)* 18(2):113–139, 2000. (See a review in <http://portal.acm.org>).
211. Gonzalo Navarro. Improved Approximate Pattern Matching on Hypertext. *Theoretical Computer Science (TCS)* 237:455–463, 2000.

212. Gonzalo Navarro, Ricardo Baeza-Yates, Eduardo Barbosa, Nivio Ziviani and Walter Cunto. Binary Searching with Non-uniform Costs and Its Application to Text Retrieval. *Algorithmica* 27(2):145–169, 2000.
213. Ricardo Baeza-Yates and Gonzalo Navarro. Block Addressing Indices for Approximate Text Retrieval. *Journal of the American Society for Information Science (JASIS)* 51(1):69–82, 2000.
214. Gonzalo Navarro and Ricardo Baeza-Yates. Very Fast and Simple Approximate String Matching. *Information Processing Letters (IPL)* 72: 65–70, 1999.
215. Ricardo Baeza-Yates, Ricard Gavaldá, Gonzalo Navarro and Rodrigo Scheihing. Bounding the Expected Length of Longest Common Subsequences and Forests. *Theory of Computing Systems (TOCS)* 32(4):435–452, 1999.
216. Ricardo Baeza-Yates and Gonzalo Navarro. Faster Approximate String Matching. *Algorithmica* 23(2):127–158, 1999.
217. Gonzalo Navarro and Ricardo Baeza-Yates. A Practical  $q$ -Gram Index for Text Retrieval Allowing Errors. *CLEI Electronic Journal*, 1(2), 1998 ([www.clei.cl](http://www.clei.cl)).
218. Gonzalo Navarro and Ricardo Baeza-Yates. Proximal Nodes: A Model to Query Document Databases by Content and Structure. *ACM Transactions on Information Systems (TOIS)* 15(4):400–435, Oct 1997. (See a review in <http://www.reviews.com>).
219. Ricardo Baeza-Yates and Gonzalo Navarro. Integrating Contents and Structure in Text Retrieval. *ACM SIGMOD Record* 25(1):67–79, Mar 1996. Not refereed.

### Outstanding International Conferences

1. Vicente Calisto, Sebastián Ferrada, Gonzalo Navarro, Juan Reutter, Juan Pablo Sánchez, and Domagoj Vrgoc. Graph Querying or Similarity Search? Both! *Proc. ISWC'25*, pages 349–368.
2. José Fuentes-Sepúlveda, Adrián Gómez-Brandón, Aidan Hogan, Ayleen Iribarra-Cortés, Gonzalo Navarro, and Juan Reutter. Worst-Case-Optimal Joins on Graphs with Topological Relations. *Proc. WWW'25*, pages 59–71.
3. Gonzalo Navarro and Yakov Nekrich. Top- $k$  Document Retrieval in Compressed Space. *Proc. SODA '25*, pages 4009–4030.
4. Diego Arroyuelo, Benjamin Bustos, Adrián Gómez-Brandón, Aidan Hogan, Gonzalo Navarro, and Juan Reutter. Worst-Case Optimal Similarity Joins on Graph Databases. *Proc. SIGMOD'24*, published as *Proceedings of the ACM on Management of Data* 2(1):article 5, 2024.
5. Gonzalo Navarro. Compact Data Structures Meet Databases. *Proc. ICDT'23*, pages 2:1–2:16.

6. Paolo Ferragina, Giovanni Manzini, Travis Gagie, Dominik Köppl, Gonzalo Navarro, Manuel Striani, and Francesco Tosoni. Improving Matrix-vector Multiplication via Lossless Grammar-Compressed Matrices. *Proc. VLDB'22*, published as *Proceedings of the VLDB Endowment* 15(10):2175–2187, 2022.
7. Diego Arroyuelo, Aidan Hogan, Gonzalo Navarro, and Javier Rojas-Ledesma. Time- and Space-Efficient Regular Path Queries. *Proc. ICDE'22*, pages 3091–3105.
8. Diego Arroyuelo, Aidan Hogan, Gonzalo Navarro, Juan Reutter, Javiel Rojas-Ledesma, and Adrián Soto. Worst-Case Optimal Graph Joins in Almost No Space. *Proc. SIGMOD'21*, pages 102–114.
9. Gonzalo Navarro, Juan Reutter, and Javiel Rojas. Optimal Joins using Compact Data Structures. *Proc. ICDT'20*, pages 21:1–21:21.
10. Travis Gagie, Gonzalo Navarro, and Nicola Prezza. Optimal-Time Text Indexing in BWT-runs Bounded Space. *Proc. SODA'18*, pages 1459–1477.
11. Ian Munro, Gonzalo Navarro, and Yakov Nekrich. Space-Efficient Construction of Compressed Indexes in Deterministic Linear Time. *Proc. SODA'17*, pages 408–424.
12. Roberto Konow, Gonzalo Navarro, Charles Clarke, and Alejandro López-Ortíz. Faster and Smaller Inverted Indices with Treaps. *Proc. SIGIR'13*, pages 193–202.
13. Gonzalo Navarro and Yakov Nekrich. Optimal Dynamic Sequence Representations. *Proc. SODA'13*, pages 865–876.
14. Gonzalo Navarro and Yakov Nekrich. Top- $k$  Document Retrieval in Optimal Time and Linear Space. *Proc. SODA'12*, pages 1066–1078.
15. Diego Arroyuelo, Francisco Claude, Sebastian Maneth, Veli Mäkinen, Gonzalo Navarro, Kim Nguyễn, Jouni Sirén, and Niko Välimäki. Fast In-Memory XPath Search over Compressed Text and Tree Indexes. *Proc. ICDE'10*, pages 417–428.
16. Kunihiro Sadakane and Gonzalo Navarro. Fully-Functional Succinct Trees. *Proc. SODA'10*, pages 134–149.
17. Jérémy Barbay and Gonzalo Navarro. Compressed Representations of Permutations, and Applications. *Proc. STACS'09*, pages 111–122.
18. Nieves Brisaboa, Antonio Fariña, Susana Ladra, and Gonzalo Navarro. Reorganizing Compressed Text. *Proc. SIGIR'08*, pages 139–146.
19. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá. Efficiently Decodable and Searchable Natural Language Adaptive Compression. *Proc. SIGIR'05*, pages 234–241.
20. Veli Mäkinen, Gonzalo Navarro and Esko Ukkonen. Algorithms for Transposition Invariant String Matching. *Proc. STACS'03*, pages 191–202. LNCS 2607.

21. Edleno de Moura, Gonzalo Navarro, Nivio Ziviani and Ricardo Baeza-Yates. Fast Searching on Compressed Text Allowing Errors. *Proc. SIGIR'98*, pages 298–306, 1998.
22. Gonzalo Navarro and Ricardo Baeza-Yates. A Language for Queries on Structure and Content of Textual Databases. *Proc. SIGIR'95*, pages 93–101.

### Other Top-Level International Conferences

1. Travis Gagie, Meng He, and Gonzalo Navarro. Compressed Set Representations based on Set Difference. To appear in *Proc. LATIN'26*.
2. Gonzalo Navarro and Alejandro Pacheco. Counting on General Run-Length Grammars. *Proc. CPM'25*, pages 3:1–3:17, LIPIcs 331.
3. Hideo Bannai, Philip Bille, Inge Li Gørtz, Gad M. Landau, Gonzalo Navarro, Nicola Prezza, Teresa Anna Steiner, and Simon Rumle Tarnow. Text Indexing for Simple Regular Expressions. *Proc. CPM'25*, pages 20:1–20:16, LIPIcs 331.
4. Zsuzsanna Lipták, Francesco Masillo, and Gonzalo Navarro. A Textbook Solution for Dynamic Strings. *Proc. ESA-S'24*, pages 87:1–87:16, LIPIcs 308.
5. Zsuzsanna Lipták, Francesco Masillo, and Gonzalo Navarro. BAT-LZ Out of Hell. *Proc. CPM'24*, pages 21:1–21:17, LIPIcs 296.
6. Adrián Goga, Lore Depuydt, Nathaniel Brown, Jan Fostier, Travis Gagie, and Gonzalo Navarro. Faster Maximal Exact Matches with Lazy LCP Evaluation. *Proc. DCC'24*, pages 123–132.
7. Travis Gagie, Adrián Goga, Artur Jež, and Gonzalo Navarro. Space-efficient Conversions from SLPs. *Proc. LATIN'24*, part I, pages 146–161.
8. Andrej Baláž, Travis Gagie, Adrián Goga, Simon Heumos, Gonzalo Navarro, Alessia Pettescia, and Jouni Sirén. Wheeler Maps. *Proc. LATIN'24*, part I, pages 178–192.
9. Gonzalo Navarro and Cristian Urbina. Iterated Straight-Line Programs. *Proc. LATIN'24*, part I, pages 66–80.
10. Gonzalo Navarro. Computing MEMs on Repetitive Text Collections. *Proc. CPM'23*, article 22.
11. Gonzalo Navarro and Cristian Urbina. L-systems for Measuring Repetitiveness. *Proc. CPM'23*, article 14.
12. Tomasz Kociumaka, Gonzalo Navarro, and Francisco Olivares. Near-Optimal Search Time in  $\delta$ -Optimal Space. *Proc. LATIN'22*, pages 88–103, LNCS 13568.
13. Yuma Arakawa, Gonzalo Navarro, and Kunihiko Sadakane. Bidirectional r-indexes. *Proc. CPM'22*, article 11.

14. Diego Díaz and Gonzalo Navarro. Efficient Construction of the BWT for Repetitive Text Using String Compression. *Proc. CPM'22*, article 29.
15. Dominik Köppl, Gonzalo Navarro, and Nicola Prezza. HOLZ: High-Order Entropy Encoding of Lempel-Ziv Factor Distances *Proc. DCC'22*, pages 83–92.
16. Dustin Cobas, Travis Gagie, and Gonzalo Navarro. A Fast and Small Subsampled R-index. *Proc. CPM'21*, article 13.
17. Christina Boucher, Travis Gagie, Tomohiro I, Dominik Köppl, Ben Langmead, Giovanni Manzini, Gonzalo Navarro, Alejandro Pacheco, and Massimiliano Rossi. PHONI: Streamed Matching Statistics with Multi-Genome References. *Proc. DCC'21*, pages 193–202.
18. José Fuentes-Sepúlveda, Diego Gatica, Gonzalo Navarro, Andrea Rodríguez, and Diego Seco. Compact Representation of Spatial Hierarchies and Topological Relationships. *Proc. DCC'21*, 113–122.
19. Diego Díaz-Domínguez and Gonzalo Navarro. A Grammar Compressor for Collections of Reads with Applications to the Construction of the BWT. *Proc. DCC'21*, pages 93–102.
20. Daniela Campos, Adrián Gómez-Brandón, and Gonzalo Navarro. A Disk-Based Index for Trajectories with an In-Memory Compressed Cache. *Proc. DCC'21*, page 340 (poster).
21. Christina Boucher, Ondrej Cvacho, Travis Gagie, Jan Holub, Giovanni Manzini, Gonzalo Navarro, and Massimiliano Rossi. PFP Compressed Suffix Trees. *Proc. ALENEX'21*, pages 60–72.
22. Tomasz Kociumaka, Gonzalo Navarro, and Nicola Prezza. Towards a Definitive Measure of Repetitiveness. *Proc. LATIN'20*, pages 207–219. LNCS 12118.
23. J. Ian Munro, Gonzalo Navarro, and Yakov Nekrich. Text Indexing and Searching in Sublinear Time. *Proc. CPM'20*, article 24.
24. Luís Russo, Ana Correia, Gonzalo Navarro, and Alexandre Francisco. Approximating Optimal Bidirectional Macro Schemes. *Proc. DCC'20*, pages 153–162.
25. Miguel Coimbra, Alexandre Francisco, Luís Russo, Guillermo de Bernardo, Susana Ladra, and Gonzalo Navarro. On Dynamic Succinct Graph Representations. *Proc. DCC'20*, pages 213–222.
26. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and Tirso Rodeiro. Sematrix: A Compressed Semantic Matrix. *Proc. DCC'20*, pages 113–122.
27. Nieves Brisaboa, Ana Cerdeira, Guillermo de Bernardo, and Gonzalo Navarro. Improved Compressed String Dictionaries. *Proc. CIKM'19*, pages 29–38.
28. Diego Díaz-Domínguez, Travis Gagie, and Gonzalo Navarro. Simulating the DNA Overlap Graph in Succinct Space. *Proc. CPM'19*, pages 27:1–27:20.

29. Gonzalo Navarro and Víctor Sepúlveda. Practical Indexing of Repetitive Collections using Relative Lempel-Ziv. *Proc. DCC'19*, pages 201–210.
30. Jarno Alanko, Travis Gagie, Gonzalo Navarro, and Louisa Seelbach Benkner. Tunneling on Wheeler Graphs. *Proc. DCC'19*, pages 122–131.
31. José Fuentes-Sepúlveda, Gonzalo Navarro, and Yakov Nekrich. Space-Efficient Computation of the Burrows-Wheeler Transform. *Proc. DCC'19*, pages 132–141.
32. Nieves Brisaboa, Antonio Fariña, Adrián Gómez-Brandón, Gonzalo Navarro, and Tirso Rodeiro. Dv2v: A Dynamic Variable-to-Variable Compressor. *Proc. DCC'19*, pages 83–92.
33. Travs Gagie, Meng He, and Gonzalo Navarro. Tree Path Majority Data Structures. *Proc. ISAAC'18*, article 68. LIPIcs 123.
34. Travis Gagie, Gonzalo Navarro, and Nicola Prezza. On the Approximation Ratio of Lempel-Ziv Parsing. *Proc. LATIN'18*, pages 490–503. LNCS 10807.
35. Alexandre Francisco, Travis Gagie, Susana Ladra y Gonzalo Navarro. Exploiting Computation-Friendly Graph Compression Methods for Adjacency-Matrix Multiplication. *Proc. DCC'18*, pages 309–316.
36. Daniel Nunes, Felipe A. Louza, Simon Gog, Mauricio Ayala-Rincón, and Gonzalo Navarro. A Grammar Compression Algorithm based on Induced Suffix Sorting. *Proc. DCC'18*, pages 42–51.
37. Nieves Brisaboa, Guillermo de Bernardo, Gonzalo Navarro, Tirso Rodeiro, and Diego Seco. Compact Representation of Event Sequences. *Proc. DCC'18*, pages 239–248.
38. Nieves Brisaboa, Travis Gagie, Adrián Gómez-Brandón, and Gonzalo Navarro. Two-Dimensional Block Trees. *Proc. DCC'18*, pages 229–238.
39. Ian Munro, Gonzalo Navarro, and Yakov Nekrich. Fast Compressed Self-Indexes with Deterministic Linear-Time Construction. *Proc. ISAAC'17*, article 57. LIPIcs 92.
40. Gonzalo Navarro. Document Listing on Repetitive Collections with Guaranteed Performance. *Proc. CPM'17*, article 4. LIPIcs 78.
41. Travis Gagie, Meng He, and Gonzalo Navarro. Path Queries on Functions. *Proc. CPM'17*, article 5. LIPIcs 78.
42. Leo Ferres, José Fuentes, Travis Gagie, Meng He, and Gonzalo Navarro. Fast and Compact Planar Embeddings. *Proc. WADS'17*, pages 385–296. LNCS 10389.
43. Travis Gagie, Meng He, and Gonzalo Navarro. Compressed Dynamic Range Majority Data Structures. *Proc. DCC'17*, pages 260–269.

44. Héctor Ferrada and Gonzalo Navarro. Improved Range Minimum Queries. *Proc. DCC'16*, pages 516–525.
45. Simon Gog and Gonzalo Navarro. Improved Single-Term Top- $k$  Document Retrieval. *Proc. ALENEX'15*, pages 24–32.
46. Gonzalo Navarro and Sharma Thankachan. Reporting Consecutive Substring Occurrences Under Bounded Gap Constraints. *Proc. CPM'15*, pages 367–373. LNCS 9133.
47. Travis Gagie, Aleksi Hartikainen, Juha Kärkkäinen, Gonzalo Navarro, Simon Puglisi, and Jouni Sirén. Document Counting in Compressed Space. *Proc. DCC'15*, pages 103–112.
48. Travis Gagie, Javier González-Nova, Susana Ladra, Gonzalo Navarro, and Diego Seco. Faster Compressed Quadrees. *Proc. DCC'15*, pages 93–102.
49. Ian Munro, Gonzalo Navarro, Jesper Sindahl Nielsen, Rahul Shah, and Sharma V. Thankachan. Top- $k$  Term-Proximity in Succinct Space. *Proc. ISAAC'14*, pages 169–180. LNCS 8889.
50. Gonzalo Navarro, Simon Puglisi, and Jouni Sirén. Document Retrieval on Repetitive Collections. *Proc. ESA'14*, pages 725–736. LNCS 8737
51. Ian Munro, Gonzalo Navarro, Rahul Shah, and Sharma Thankachan. Ranked Document Selection. *Proc. SWAT'14*, pages 344–356. LNCS 8503.
52. Gonzalo Navarro and Sharma Thankachan. Encodings for Range Majority Queries. *Proc. CPM'14*, pages 262–272. LNCS 8486.
53. Gonzalo Navarro, Rajeev Raman, and Srinivasa Rao. Asymptotically Optimal Encodings for Range Selection. *Proc. FSTTCS'14*, pages 291–302.
54. Gonzalo Navarro and Luís Russo. Fast Fully-Compressed Suffix Trees. *Proc. DCC'14*, pages 283–291.
55. Sandra Álvarez-García, Nieves Brisaboa, Guillermo de Bernardo, and Gonzalo Navarro. Interleaved  $K^2$ -tree: Indexing and Navigating Ternary Relations. *Proc. DCC'14*, pages 342–351.
56. Gonzalo Navarro and Sharma Thankachan. Top- $k$  Document Retrieval in Compact Space and Near-Optimal Time. *Proc. ISAAC'13*, pages 394–404. LNCS 8283.
57. Roberto Grossi, John Iacono, Gonzalo Navarro, Rajeev Raman, and S. Srinivasa Rao. Encodings for Range Selection and Top- $k$  Queries. *Proc. ESA'13*, pages 553–564. LNCS 8125.
58. Djamel Belazzougui, Travis Gagie, and Gonzalo Navarro. Better Space Bounds for Parameterized Range Majority and Minority. *Proc. WADS'13*, pages 121–132. LNCS 8037.
59. Travis Gagie, Kalle Karhu, Gonzalo Navarro, Simon Puglisi, and Jouni Sirén. Document Listing on Repetitive Collections. *Proc. CPM'13*, pages 107–119. LNCS 7922.

60. Roberto Konow and Gonzalo Navarro. Faster Compact Top-k Document Retrieval. *Proc. DCC'13*, pages 351–360.
61. Gonzalo Navarro and Alberto Ordóñez. Compressing Huffman Models on Large Alphabets. *Proc. DCC'13*, pages 381–390.
62. Jérémy Barbay, Timothy Chan, Gonzalo Navarro, and Pablo Pérez-Lantero. Maximum-Weight Planar Boxes in  $O(n^2)$  Time (and Better). *Proc. CCCG'13*, pages 151–156.
63. Djamel Belazzougui and Gonzalo Navarro. New Lower and Upper Bounds for Representing Sequences. *Proc. ESA'12*, pages 181–192. LNCS 7501.
64. Gonzalo Navarro. Wavelet Trees for All. *Proc. CPM'12*, pages 2–26. LNCS 7354. Invited paper.
65. Yakov Nekrich and Gonzalo Navarro. Sorted Range Reporting. *Proc. SWAT'12*, pages 271–282. LNCS 7357.
66. Nieves Brisaboa, Guillermo de Bernardo, and Gonzalo Navarro. Compressed Dynamic Binary Relations. *Proc. DCC'12*, pages 52–61.
67. Jérémy Barbay, Gonzalo Navarro, and Pablo Pérez-Lantero. Adaptive Techniques to find Optimal Planar Boxes. *Proc. CCCG'12*, pages 79–84.
68. Francisco Claude, Antonio Fariña, Miguel Martínez-Prieto, and Gonzalo Navarro. Indexes for Highly Repetitive Document Collections. *Proc. CIKM'11*, pages 463–468.
69. Gonzalo Navarro and Luís Russo. Space-Efficient Data-Analysis Queries on Grids. *Proc. ISAAC'11*, pages 323–332. LNCS 7074.
70. Djamel Belazzougui and Gonzalo Navarro. Alphabet-Independent Compressed Text Indexing. *Proc. ESA'11*, pages 748–759. LNCS 6942.
71. Sebastián Kreft and Gonzalo Navarro. Self-Indexing Based on LZ77. *Proc. CPM'11*, pages 41–54. LNCS 6661.
72. Jérémy Barbay, Johannes Fischer, and Gonzalo Navarro. LRM-Trees: Compressed Indices, Adaptive Sorting, and Compressed Permutations. *Proc. CPM'11*, pages 285–298. LNCS 6661.
73. Francisco Claude, Antonio Fariña, Miguel Martínez-Prieto, and Gonzalo Navarro. Compressed  $q$ -gram Indexing for Highly Repetitive Biological Sequences. *Proc. BIBE'10*, pages 86–91.
74. Diego Arroyuelo, Rodrigo Cánovas, Gonzalo Navarro, and Kunihiko Sadakane. Succinct Trees in Practice. *Proc. ALENEX'10*, pages 84–97.
75. Jérémy Barbay, Travis Gagie, Gonzalo Navarro, and Yakov Nekrich. Alphabet Partitioning for Compressed Rank/Select and Applications. *Proc. ISAAC'10*, part II, pages 315–326. LNCS 6507.

76. Arash Farzan, Travis Gagie, and Gonzalo Navarro. Entropy-Bounded Representation of Point Grids. *Proc. ISAAC'10*, part II, pages 327–338. LNCS 6507.
77. Shane Culpepper, Gonzalo Navarro, Simon Puglisi, and Andrew Turpin. Top- $k$  Ranked Document Search in General Text Databases. *Proc. ESA'10*, part II, pages 194–205. LNCS 6347.
78. Luís Russo, Gonzalo Navarro, and Arlindo Oliveira. Parallel and Distributed Compressed Indexes. *Proc. CPM'10*, pages 348–360. LNCS 6129.
79. Jérémy Barbay, Francisco Claude, and Gonzalo Navarro. Compact Rich-Functional Binary Relation Representations. *Proc. LATIN'10*, pages 170–183. LNCS 6034.
80. Travis Gagie, Gonzalo Navarro, and Yakov Nekrich. Fast and Compact Prefix Codes. *Proc. SOFSEM'10*, pages 419–427. LNCS 5901.
81. Sebastián Kreft and Gonzalo Navarro. LZ77-like Compression with Fast Random Access. *Proc. DCC'10*, pages 239–248.
82. Nieves Brisaboa, Antonio Fariña, Juan López, Gonzalo Navarro, and Eduardo López. A New Searchable Variable-to-Variable Compressor. *Proc. DCC'10*, pages 199–208.
83. Francisco Claude and Gonzalo Navarro. Self-Indexed Text Compression using Straight-Line Programs. *Proc. MFCS'09*, pages 235–246. LNCS 5734.
84. Veli Mäkinen, Gonzalo Navarro, Jouni Sirén, and Niko Välimäki. Storage and Retrieval of Individual Genomes. *Proc. RECOMB'09*, pages 121–137. LNCS 5541.
85. Johannes Fischer, Veli Mäkinen, and Gonzalo Navarro. An(other) Entropy-Bounded Compressed Suffix Tree. *Proc. CPM'08*, pages 152–165. LNCS 5029.
86. Luís Russo, Gonzalo Navarro, and Arlindo Oliveira. Dynamic Fully-Compressed Suffix Trees. *Proc. CPM'08*, pages 191–203. LNCS 5029.
87. Marcos Kiwi, Gonzalo Navarro, and Claudio Telha. On-line Approximate String Matching with Bounded Errors. *Proc. CPM'08*, pages 130–142. LNCS 5029.
88. Luís Russo, Gonzalo Navarro, and Arlindo Oliveira. Fully-Compressed Suffix Trees. *Proc. LATIN'08*, pages 362–373. LNCS 4957.
89. Rodrigo González and Gonzalo Navarro. Improved Dynamic Rank-Select Entropy-Bound Structures. *Proc. LATIN'08*, pages 374–386. LNCS 4957.
90. Antonio Fariña, Gonzalo Navarro, and José Paramá. Word-based Statistical Compressors as Natural Language Compression Boosters. *Proc. DCC'08*, pages 162–171.
91. Veli Mäkinen and Gonzalo Navarro. On Self-Indexing Images — Image Compression with Added Value. *Proc. DCC'08*, pages 422–431.

92. Gonzalo Navarro and Luís Russo. Re-Pair Achieves High-Order Entropy. *Proc. DCC'08*, page 537 (poster).
93. Rodrigo González and Gonzalo Navarro. Compressed Text Indexes with Fast Locate. *Proc. CPM'07*, pages 216–227. LNCS 4580.
94. Diego Arroyuelo and Gonzalo Navarro. A Lempel-Ziv Text Index on Secondary Storage. *Proc. CPM'07*, pages 83–94. LNCS 4580.
95. Veli Mäkinen and Gonzalo Navarro. Dynamic Entropy-Compressed Sequences and Full-Text Indexes. *Proc. CPM'06*, pages 307–318. LNCS 4009.
96. Diego Arroyuelo, Gonzalo Navarro, and Kunihiko Sadakane. Reducing the Space Requirement of LZ-index. *Proc. CPM'06*, pages 319–330. LNCS 4009.
97. Rodrigo González and Gonzalo Navarro. Statistical Encoding of Succinct Data Structures. *Proc. CPM'06*, pages 295–306. LNCS 4009.
98. Rodrigo Paredes and Gonzalo Navarro. Optimal Incremental Sorting. *Proc. ALENEX'06*, pages 171–182.
99. Veli Mäkinen and Gonzalo Navarro. Position-Restricted Substring Searching. *Proc. LATIN'06*, pages 703–714. LNCS 3887.
100. Diego Arroyuelo and Gonzalo Navarro. Space-efficient Construction of LZ-index. *Proc. ISAAC'05*, pages 1143–1152. LNCS 3827.
101. Gilberto Gutiérrez, Gonzalo Navarro, Andrea Rodríguez, Alejandro González, and José Orellana. A Spatio-Temporal Access Method based on Snapshots and Events. *Proc. GIS'05*, pages 15–124.
102. Veli Mäkinen and Gonzalo Navarro. Succinct Suffix Arrays based on Run-Length Encoding. *Proc. CPM'05*, pages 45–56. LNCS 3537.
103. Veli Mäkinen, Gonzalo Navarro and Kunihiko Sadakane. Advantages of Backward Searching — Efficient Secondary Memory and Distributed Implementation of Compressed Suffix Arrays. *Proc. ISAAC'04*, pages 681–692. LNCS 3341.
104. Kimmo Fredriksson and Gonzalo Navarro. Improved Single and Multiple Approximate String Matching. *Proc. CPM'04*, pages 457–471. LNCS 3109.
105. Veli Mäkinen and Gonzalo Navarro. Compressed Compact Suffix Arrays. *Proc. CPM'04*, pages 420–433. LNCS 3109.
106. Kimmo Fredriksson, Veli Mäkinen and Gonzalo Navarro. Rotation and Lighting Invariant Template Matching. *Proc. LATIN'04*, pages 39–48. LNCS 2976.
107. Joaquín Adiego, Gonzalo Navarro and Pablo de la Fuente. Lempel-Ziv Compression of Structured Text. *Proc. DCC'04*, pages 112–121.

108. Joaquín Adiego, Pablo de la Fuente and Gonzalo Navarro. Merging Prediction by Partial Matching with Structural Contexts Model. *Proc. DCC'04*, page 522 (poster).
109. Gonzalo Navarro. Approximate Regular Expression Searching with Arbitrary Integer Weights. *Proc ISAAC'03*, pages 230–239. LNCS 2906.
110. Gonzalo Navarro and Rodrigo Paredes. Practical Construction of Metric  $t$ -Spanners. *Proc. ALLENEX'03*, pages 69–81. SIAM Press.
111. Mauricio Marín and Gonzalo Navarro. Suffix Arrays in Parallel. *Proc. EuroPar'03*, pages 338–341 (short paper). LNCS 2790.
112. Kimmo Fredriksson and Gonzalo Navarro. Average-Optimal Multiple Approximate String Matching. *Proc. CPM'03*, pages 109–128. LNCS 2676.
113. Kimmo Fredriksson, Gonzalo Navarro and Esko Ukkonen. Optimal Exact and Fast Approximate Two Dimensional Pattern Matching Allowing Rotations. *Proc. CPM'02*, pages 235–248. LNCS 2373.
114. Heikki Hyvrö and Gonzalo Navarro. Faster Bit-parallel Approximate String Matching. *Proc. CPM'02*, pages 203–224. LNCS 2373.
115. Edgar Chávez and Gonzalo Navarro. A Metric Index for Approximate String Matching. *Proc. LATIN'02*, pages 181–195. LNCS 2286.
116. Gonzalo Navarro. Regular Expression Searching over Ziv-Lempel Compressed Text. *Proc. CPM'01*, pages 1–17. LNCS 2089.
117. Veli Mäkinen, Gonzalo Navarro and Esko Ukkonen. Approximate Matching of Run-length Compressed Strings. *Proc. CPM'01*, pages 31–49. LNCS 2089.
118. Edgar Chávez and Gonzalo Navarro. A Probabilistic Spell for the Curse of Dimensionality. *Proc. ALLENEX'01*, pages 147–160. LNCS 2153.
119. Gonzalo Navarro and Mathieu Raffinot. Fast and Simple Character Classes and Bounded Gaps Pattern Matching, with Application to Protein Searching. *Proc. RECOMB'01*, pages 231–240.
120. Gonzalo Navarro, Takuya Kida, Masayuki Takeda, Ayumi Shinohara and Setsuo Arikawa. Faster Approximate String Matching over Compressed Text. *Proc. DCC'01*, pages 459–468.
121. Ricardo Baeza-Yates and Gonzalo Navarro. XQL and Proximal Nodes (Preliminary Version). *XML Workshop of ACM SIGIR'00*.
122. Juha Kärkkäinen, Gonzalo Navarro and Esko Ukkonen. Approximate String Matching over Ziv-Lempel Compressed Text. *Proc. CPM'00*, pages 195–209. LNCS 1848.

123. Gonzalo Navarro and Jorma Tarhio. Boyer-Moore String Matching over Ziv-Lempel Compressed Text. *Proc. CPM'00*, pages 166–180. LNCS 1848.
124. Gonzalo Navarro, Erkki Sutinen, Jani Tanninen and Jorma Tarhio. Indexing Text with Approximate  $q$ -grams. *Proc. CPM'00*, pages 350–363. LNCS 1848.
125. Gonzalo Navarro and Ricardo Baeza Yates. Fast Multi-dimensional Approximate Pattern Matching. *Proc. CPM'99*, pages 243–257. LNCS 1645.
126. Gonzalo Navarro and Ricardo Baeza Yates. A New Indexing Method for Approximate String Matching. *Proc. CPM'99*, pages 163–185. LNCS 1645.
127. Gonzalo Navarro and Mathieu Raffinot. A General Practical Approach to Pattern Matching over Ziv-Lempel Compressed Text. *Proc. CPM'99*, pages 14–36. LNCS 1645.
128. Gonzalo Navarro and Mathieu Raffinot. A Bit-parallel Approach to Suffix Automata: Fast Extended String Matching. *Proc. CPM'98*, pages 14–33. LNCS 1448.
129. Ricardo Baeza-Yates and Gonzalo Navarro. Fast Two-Dimensional Approximate String Matching. *Proc. LATIN'98*, pages 341–351. LNCS 1380.
130. Gonzalo Navarro. Improved Approximate Pattern Matching on Hypertext. *Proc. LATIN'98*, pages 352–357. LNCS 1380.
131. Ricardo Baeza-Yates and Gonzalo Navarro. Multiple Approximate String Matching. *Proc. WADS'97*, pages 174–184. LNCS 1272.
132. Gonzalo Navarro, João Paulo Kitajima, Berthier Ribeiro and Nivio Ziviani. Distributed Generation of Suffix Arrays. *Proc. CPM'97*, pages 102–115. LNCS 1264.
133. Ricardo Baeza-Yates and Gonzalo Navarro. Practical Indices for Approximate String Matching. *Proc. CIKM'97*, pages 1–8.
134. Ricardo Baeza-Yates and Gonzalo Navarro. A Faster Algorithm for Approximate String Matching. *Proc. CPM'96*, pages 1–23. LNCS 1075.
135. Eduardo Barbosa, Gonzalo Navarro, Ricardo Baeza-Yates, Chris Perleberg and Nivio Ziviani. Optimized Binary Search and Text Retrieval. *Proc. ESA '95*, pages 311–326. LNCS 979.

#### **Other International Conferences**

1. Diego Arroyuelo, José Cazorla, and Gonzalo Navarro. Boosting Graph Joins and Matrix Multiplications in Little Space. To appear in *Proc. GRADES-NDA'26*.
2. Antonio Fariña, Adrián Gómez-Brandón, Asunción Gómez-Colomer, and Gonzalo Navarro. Cache-Friendly Compressed Boolean Matrices. *Proc. SPIRE'25*, pages 95–108.

3. Gonzalo Navarro, Giuseppe Romana, and Cristian Urbina. Smallest Suffixient Sets as a Repetitiveness Measure. *Proc. SPIRE'25*, pages 217–232.
4. Gonzalo Navarro. Adaptive Dynamic Bitvectors. *Proc. SPIRE'24*, pages 204–2017.
5. Gonzalo Navarro and Josefa Robert. Compressed Graph Representations for Evaluating Regular Path Queries. *Proc. SPIRE'24*, pages 218–232.
6. Diego Arroyuelo, Daniela Campos, Adrián Gómez-Brandón, Gonzalo Navarro, Carlos Rojas, and Domagoj Vrgoc. Space & Time Efficient Leapfrog Triejoin. *Proc. GRADES-NDA '24*, article 2.
7. Domagoj Vrgoc, Carlos Rojas, Renzo Angles, Marcelo Arenas, Vicente Calisto, Benjamín Farías, Sebastián Ferrada, Tristan Heuer, Aidan Hogan, Gonzalo Navarro, Alexander Pinto, Juan Reutter, Henry Rosales, and Etienne Toussiant. MillenniumDB: A Multimodal, Multi-model Graph Database Engine. *Proc. SIGMOD'24 Conference Companion*, pages 496–499.
8. Dominika Draesslerova, Omar Ahmed, Travis Gagie, Jan Holub, Benjamin Langmead, Giovanni Manzini, and Gonzalo Navarro. Taxonomic Classification with Maximal Exact Matches in KATKA Kernels and Minimizer Digests. *Proc. SEA'24*, pages 10:1–10:13, LIPIcs 301.
9. Diego Arroyuelo, Adrián Gómez-Brandón, and Gonzalo Navarro. Evaluating Regular Path Queries on Compressed Adjacency Matrices. *Proc. SPIRE'23*, pages 35–48, LNCS 14240.
10. Zsuzsanna Lipták, Francesco Masillo, Gonzalo Navarro, and Aaron Williams. Constant Time and Space Updates for the Sigma-Tau Problem. *Proc. SPIRE'23*, pages 323–330, LNCS 14240.
11. Travis Gagie, Sana Kashgouli, and Gonzalo Navarro. A Simple Grammar-based Index for Finding Approximately Longest Common Substrings. *Proc. SPIRE'23*, pages 246–252, LNCS 14240.
12. Gonzalo Navarro, Francisco Olivares, and Cristian Urbina. Balancing Run-Length Straight-Line Programs. *Proc. SPIRE'22*, pages 117–131, LNCS 13617.
13. Gonzalo Navarro and Cristian Urbina. On Stricter Reachable Repetitiveness Measures. *Proc. SPIRE'21*, pages 193–206, LNCS 12944.
14. Diego Díaz-Domínguez, Gonzalo Navarro, and Alejandro Pacheco. An LMS-based Grammar Self-index with Local Consistency Properties. *Proc. SPIRE'21*, pages 100–113, LNCS 12944.
15. Gonzalo Navarro. Contextual Pattern Matching. *Proc. SPIRE'20*, article 1, LNCS 12303.
16. Travis Gagie, Tomohiro I, Giovanni Manzini, Gonzalo Navarro, Hiroshi Sakamoto, Louisa Seelbach Benkner, and Yoshimasa Takabatake. Practical Random Access to SLP-Compressed Texts. *Proc. SPIRE'20*, article 16, LNCS 12303.

17. Manuel Cáceres and Gonzalo Navarro. Faster Repetition-Aware Compressed Suffix Trees based on Block Trees. *Proc. SPIRE'19*, pages 434–451. LNCS 11811.
18. Dustin Cobas and Gonzalo Navarro. Fast, Small, and Simple Document Listing on Repetitive Text Collections. *Proc. SPIRE'19*, pages 482–498. LNCS 11811.
19. José Fuentes, Gonzalo Navarro, and Diego Seco. Implementing the Topological Model Succinctly. *Proc. SPIRE'19*, pages 499–512. LNCS 11811.
20. Diego Arroyuelo, Guillermo de Bernardo, Travis Gagie, and Gonzalo Navarro. Faster Dynamic Compressed  $d$ -ary Relations. *Proc. SPIRE'19*, pages 419–433. LNCS 11811.
21. Travis Gagie, Tomohiro I, Giovanni Manzini, Gonzalo Navarro, Hiroshi Sakamoto, and Yoshimasa Takabatake. Rpair: Scaling up RePair with Rsync. *Proc. SPIRE'19*, pages 35–44. LNCS 11811.
22. Gonzalo Navarro. A Self-Index on Block Trees. In *Proc. SPIRE'17*, pages 278–289. LNCS 10508.
23. Diego Arroyuelo, Rodrigo Canovas, Gonzalo Navarro, and Rajeev Raman. LZ78 Compression in Low Main Memory Space. In *Proc. SPIRE'17*, pages 38–50. LNCS 10508.
24. Nieves Brisaboa, Travis Gagie, Adrián Gómez-Brandón, Gonzalo Navarro, and Jose Parama. Efficient Compression and Indexing of Trajectories. In *Proc. SPIRE'17*, pages 103–115. LNCS 10508.
25. Antonio Fariña, Travis Gagie, Giovanni Manzini, Gonzalo Navarro, and Alberto Ordóñez. Efficient and Compact Representations of Some Non-Canonical Prefix-Free Codes. In *Proc. SPIRE'16*, pages 50–60. LNCS 9954.
26. Nieves Brisaboa, Ana Cerdeira-Pena, Narciso López-López, Gonzalo Navarro, Miguel Penabad, and Fernando Silva-Coira. Efficient Representation of Multidimensional Data over Hierarchical Domains. In *Proc. SPIRE'16*, pages 191–203. LNCS 9954.
27. Nieves Brisaboa, Adrián Gómez-Brandón, Gonzalo Navarro, and José Paramá. GraCT: A Grammar based Compressed Representation of Trajectories. In *Proc. SPIRE'16*, pages 218–230. LNCS 9954.
28. Joshimar Córdova and Gonzalo Navarro. Practical Dynamic Entropy-Compressed Bitvectors with Applications. *Proc. SEA'16*, pages 105–117. LNCS 9685.
29. Cristian Bustos, Gonzalo Navarro, Nora Reyes, and Rodrigo Paredes. An Empirical Evaluation of Intrinsic Dimensionality Estimators. *Proc. SISAP'15*, pages 125–137. LNCS 9371.
30. Nieves Brisaboa, Ana Cerdeira, Antonio Fariña, and Gonzalo Navarro. A Compact RDF Store using Suffix Arrays. *Proc. SPIRE'15*, pages 103–115. LNCS 9309.

31. Gonzalo Navarro and Nora Reyes. Dynamic List of Clusters in Secondary Memory. *Proc. SISAP'14*, pages 94–105. LNCS 8821.
32. Gonzalo Navarro and Alberto Ordóñez. Grammar Compressed Sequences with Rank/Select Support. *Proc. SPIRE'14*, pages 31–44. LNCS 8799.
33. Nieves Brisaboa, Guillermo de Bernardo, Roberto Konow, and Gonzalo Navarro.  $K^2$ -Treaps: Range Top- $k$  Queries in Compact Space. *Proc. SPIRE'14*, pages 215–226. LNCS 8799.
34. Héctor Ferrada and Gonzalo Navarro. Efficient Compressed Indexing for Approximate Top- $k$  String Retrieval. *Proc. SPIRE'14*, pages 18–30. LNCS 8799.
35. Francisco Claude, Roberto Konow, and Gonzalo Navarro. Efficient Representation of Web Access Logs. *Proc. SPIRE'14*, pages 65–76. LNCS 8799.
36. Simon Gog and Gonzalo Navarro. Improved and Extended Locating Functionality on Compressed Suffix Arrays. *Proc. SEA'14*, pages 436–447. LNCS 8504.
37. Gonzalo Navarro and Alberto Ordóñez. Faster Compressed Suffix Trees for Repetitive Text Collections. *Proc. SEA'14*, pages 424–435. LNCS 8504.
38. Gonzalo Navarro and Sharma Thankachan. Faster Top- $k$  Document Retrieval in Optimal Space. *Proc. SPIRE'13*, pages 255–262. LNCS 8214.
39. Héctor Ferrada and Gonzalo Navarro. A Lempel-Ziv Compressed Structure for Document Listing. *Proc. SPIRE'13*, pages 116–128. LNCS 8214.
40. Guillermo De Bernardo, Sandra Alvarez-García, Nieves Brisaboa, Gonzalo Navarro, and Oscar Pedreira. Compact Queriable Representations of Raster Data. *Proc. SPIRE'13*, pages 96–108. LNCS 8214.
41. Francisco Claude and Gonzalo Navarro. Improved Grammar-Based Compressed Indexes. *Proc. SPIRE'12*, pages 180–192. LNCS 7608.
42. Andrés Abeliuk and Gonzalo Navarro. Compressed Suffix Trees for Repetitive Texts. *Proc. SPIRE'12*, pages 30–41. LNCS 7608.
43. Cecilia Hernández and Gonzalo Navarro. Compressed Representation of Web and Social Networks via Dense Subgraphs. *Proc. SPIRE'12*, pages 264–276. LNCS 7608.
44. Francisco Claude and Gonzalo Navarro. The Wavelet Matrix. *Proc. SPIRE'12*, pages 167–179. LNCS 7608.
45. Roberto Konow and Gonzalo Navarro. Dual-Sorted Inverted Lists in Practice. *Proc. SPIRE'12*, pages 295–306. LNCS 7608.
46. Nieves Brisaboa, Gonzalo Navarro, and Alberto Ordóñez. Smaller Self-Indexes for Natural Language. *Proc. SPIRE'12*, pages 372–378. LNCS 7608.

47. Nieves Brisaboa, Ana Cerdeira, Gonzalo Navarro, and Oscar Pedreira. Ranked Document Retrieval in (Almost) No Space. *Proc. SPIRE'12*, pages 155–160. LNCS 7608.
48. Gonzalo Navarro and Eliana Providel. Fast, Small, Simple Rank/Select on Bitmaps. *Proc. SEA'12*, pages 295–306. LNCS 7276.
49. Gonzalo Navarro and Daniel Valenzuela. Space-Efficient Top-k Document Retrieval. *Proc. SEA'12*, pages 307–319. LNCS 7276.
50. Gonzalo Navarro. Indexing Highly Repetitive Collections. *Proc. IWOCA'12*, pages 274–279. LNCS 7643. Invited paper.
51. Djamal Belazzougui and Gonzalo Navarro. Improved Compressed Indexes for Full-Text Document Retrieval. *Proc. SPIRE'11*, pages 386–397. LNCS 7024.
52. Nieves Brisaboa, Rodrigo Cánovas, Francisco Claude, Miguel Martínez-Prieto, and Gonzalo Navarro. Compressed String Dictionaries. *Proc. SEA'11*, pages 136–147. LNCS 6630.
53. Gonzalo Navarro, Simon Puglisi, and Daniel Valenzuela. Practical Compressed Document Retrieval. *Proc. SEA'11*, pages 193–205. LNCS 6630.
54. Cecilia Hernández and Gonzalo Navarro. Compression of Web and Social Graphs supporting Neighbor and Community Queries. *Proc. SNA-KDD'11*. ACM Press.
55. Matthias Petri, Gonzalo Navarro, Shane Culpepper, and Simon Puglisi. Backwards Search in Context Bound Text Transformations. *Proc. CCP'11*, pages 82–91. IEEE CS Press.
56. Eric Sadit, Edgar Chávez, and Gonzalo Navarro. Succinct Nearest Neighbor Search. *Proc. SISAP'11*, pages 33–40. ACM Press.
57. Nieves Brisaboa, Ana Cerdeira, Gonzalo Navarro, and Gabriella Pasi. An Efficient Implementation of a Flexible XPath Extension. *Proc. RIAO'10*.
58. Nieves Brisaboa, Miguel Luaces, Gonzalo Navarro, and Diego Seco. Range Queries over a Compact Representation of Minimum Bounding Rectangles. *Proc. SeCoGIS'10*, pages 33–42. LNCS 6413.
59. Travis Gagie, Gonzalo Navarro, and Simon Puglisi. Colored Range Queries and Document Retrieval. *Proc. SPIRE'10*, pages 67–81. LNCS 6393.
60. Gonzalo Navarro and Simon Puglisi. Dual-Sorted Inverted Lists. *Proc. SPIRE'10*, pages 310–322. LNCS 6393.
61. Rodrigo Cánovas and Gonzalo Navarro. Practical Compressed Suffix Trees. *Proc. SEA'10*, pages 94–105. LNCS 6049.
62. Nieves Brisaboa, Miguel Luaces, Gonzalo Navarro, and Diego Seco. A Fun Application of Compact Data Structures to Indexing Geographic Data. *Proc. FUN'10*, pages 77–88. LNCS 6099.

63. Nieves Brisaboa, Miguel Luaces, Gonzalo Navarro, and Diego Seco. A New Point Access Method based on Wavelet Trees. *Proc. SeCoGIS'09*, pages 297–306. LNCS 5833.
64. Nieves Brisaboa, Ana Cerdeira, and Gonzalo Navarro. A Compressed Self-Indexed Representation of XML Documents. *Proc. ECDL'09*, pages 273–284. LNCS 5714.
65. Nieves Brisaboa, Susana Ladra, and Gonzalo Navarro.  $k^2$ -trees for Compact Web Graph Representation. *Proc. SPIRE'09*, pages 18–30. LNCS 5721.
66. Gonzalo Navarro and Leena Salmela. Indexing Variable Length Substrings for Exact and Approximate Matching. *Proc. SPIRE'09*, pages 214–221. LNCS 5721.
67. Nieves Brisaboa, Susana Ladra, and Gonzalo Navarro. Directly Addressable Variable-Length Codes. *Proc. SPIRE'09*, pages 122–130. LNCS 5721.
68. Gonzalo Navarro. Implementation and Application of Automata in String Processing. *Proc. CIAA'09*, page 1. LNCS 5642. Abstract of invited talk.
69. Gonzalo Navarro. Combining Text Compression and String Matching: The Miracle of Self-Indexing. *Proc. PSC'09*, page 1. Abstract of invited talk.
70. Gonzalo Navarro. Analyzing Metric Space Indexes: What For? *Proc. SISAP'09*, pages 3–10. IEEE CS Press. Invited paper.
71. Gonzalo Navarro and Nora Reyes. Dynamic Spatial Approximation Trees for Massive Data. *Proc. SISAP'09*, pages 81–88. IEEE CS Press.
72. Roberto Uribe and Gonzalo Navarro. EGNAT: A Fully Dynamic Metric Access Method for Secondary Memory. *Proc. SISAP'09*, pages 57–64. IEEE CS Press.
73. Francisco Claude and Gonzalo Navarro. Practical Rank/Select Queries over Arbitrary Sequences. *Proc. SPIRE'08*, pages 176–187. LNCS 5280.
74. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, Ángeles Places, and Eduardo Rodríguez. Self-Indexing Natural Language. *Proc. SPIRE'08*, pages 121–132. LNCS 5280.
75. Jouni Sirén, Niko Välimäki, Veli Mäkinen, and Gonzalo Navarro. Run-Length Compressed Indexes Are Superior for Highly Repetitive Sequence Collections. *Proc. SPIRE'08*, pages 164–175. LNCS 5280.
76. Francisco Claude, Gonzalo Navarro, Hannu Peltola, Leena Salmela, and Jorma Tarhio. Speeding Up Pattern Matching by Text Sampling. *Proc. SPIRE'08*, pages 87–98. LNCS 5280.
77. Luís Russo, Gonzalo Navarro, and Arlindo Oliveira. Indexed Hierarchical Approximate String Matching. *Proc. SPIRE'08*, pages 144–154. LNCS 5280.
78. Francisco Claude and Gonzalo Navarro. A Fast and Compact Web Graph Representation. *Proc. SPIRE'07*, pages 105–116. LNCS 4726.

79. Luís Russo, Gonzalo Navarro, and Arlindo Oliveira. Approximate String Matching with Lempel-Ziv Compressed Indexes. *Proc. SPIRE'07*, pages 264–275. LNCS 4726.
80. Veli Mäkinen and Gonzalo Navarro. Implicit Compression Boosting with Applications to Self-Indexing. *Proc. SPIRE'07*, pages 214–226. LNCS 4726.
81. Rodrigo González and Gonzalo Navarro. A Compressed Text Index on Secondary Memory. *Proc. IWOCA'07*, pages 80–91. College Publications, UK.
82. Diego Arroyuelo and Gonzalo Navarro. Smaller and Faster Lempel-Ziv Indices. *Proc. IWOCA'07*, pages 11–20. College Publications, UK.
83. Rafał Przywarski, Szymon Grabowski, Gonzalo Navarro, and Alejandro Salinger. FM-KZ: An Even Simpler Alphabet-Independent FM-Index. *Proc. PSC'06*, pages 226–240. Prague Stringology Club, Czech Republic.
84. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá. Improving Semistatic Compression via Pair-Based Coding. *Proc. PSI'06*, pages 124–134. LNCS 4378.
85. Rodrigo Paredes, Edgar Chávez, Karina Figueroa, and Gonzalo Navarro. Practical Construction of  $k$ -Nearest Neighbor Graphs in Metric Spaces. *Proc. WEA'06*, pages 85–97. LNCS 4007.
86. Karina Figueroa, Edgar Chávez, Gonzalo Navarro, and Rodrigo Paredes. On the Least Cost For Proximity Searching in Metric Spaces. *Proc. WEA'06*, pages 279–290. LNCS 4007.
87. Roberto Uribe, Gonzalo Navarro, Ricardo Barrientos, and Mauricio Marín. An Index Data Structure for Searching in Metric Space Databases. *Proc. ICCS'06*, pages 611–617. LNCS 3991.
88. Edgar Chávez, Karina Figueroa, and Gonzalo Navarro. Proximity Searching in High Dimensional Spaces with a Proximity Preserving Order. *Proc. MICAI'05*, pages 405–414. LNAI 3789. This paper won the third prize to the best conference paper.
89. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro, and José Paramá. Compressing Dynamic Text Collections via Phrase-Based Coding. *Proc. ECDL'05*, pages 462–474. LNCS 3652.
90. Rodrigo González, Szymon Grabowski, Veli Mäkinen, and Gonzalo Navarro. Practical Implementation of Rank and Select Queries (poster). *Poster Proceedings Volume of WEA'05*, pages 27–38. CTI Press and Ellinika Grammata (Greece).
91. Kimmo Fredriksson, Veli Mäkinen, and Gonzalo Navarro. Flexible Music Retrieval in Sublinear Time. *Proc. PSC'05*, pages 174–188. Prague Stringology Club, Czech Republic.
92. Heikki Hyvrö and Gonzalo Navarro. Bit-Parallel Computation of Local Similarity Score Matrices with Unitary Weights. *Proc. PSC'05*, pages 95–108. Prague Stringology Club, Czech Republic.

93. Szymon Grabowski, Veli Mäkinen, Gonzalo Navarro, and Alejandro Salinger. A Simple Alphabet-Independent FM-Index. *Proc. PSC'05*, pages 230–244. Prague Stringology Club, Czech Republic.
94. Joaquín Adiego, Pablo de la Fuente, and Gonzalo Navarro. Combining Structural and Textual Contexts for Compressing Semistructured Databases. *Proc. ENC'05*, pages 68–73. IEEE CS Press.
95. Carlos Avendaño, Claudia Feregrino and Gonzalo Navarro. Approximate Searching on Compressed Text. *Proc. CONIELECOMP'05*, pages 258–261. IEEE CS Press.
96. Veli Mäkinen and Gonzalo Navarro. Run-length FM-index (abstract). *Proc. DIMACS Workshop: “The Burrows-Wheeler Transform: Ten Years Later”*, 2004, pages 17–19. Invited paper. Informal proceedings.
97. Paolo Ferragina, Giovanni Manzini, Veli Mäkinen and Gonzalo Navarro. An Alphabet-Friendly FM-index. *Proc. SPIRE'04*, pages 150–160. LNCS 3246.
98. Szymon Grabowski, Veli Mäkinen and Gonzalo Navarro. First Huffman, then Burrows-Wheeler: A Simple Alphabet-Independent FM-Index. *Proc. SPIRE'04* (abstract), pages 210–211. LNCS 3246.
99. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro and José Paramá. Simple, Fast, and Efficient Natural Language Adaptive Compression. *Proc. SPIRE'04*, pages 230–241. LNCS 3246.
100. Kjell Lemström, Gonzalo Navarro and Yoan Pinzon. Bit-Parallel Branch and Bound Algorithm for Transposition Invariant LCS. *Proc. SPIRE'04* (abstract), pages 74–75. LNCS 3246.
101. Heikki Hyvärö, Kimmo Fredriksson and Gonzalo Navarro. Increased Bit-Parallelism for Approximate String Matching. *Proc. WEA'04*, pages 285–298. LNCS 3059.
102. Kjell Lemström and Gonzalo Navarro. Flexible and Efficient Bit-Parallel Techniques for Transposition Invariant Approximate Matching in Music Retrieval. *Proc SPIRE'03*, pages 224–237. LNCS 2857.
103. Maxime Crochemore, Costas Iliopoulos, Gonzalo Navarro and Yoan Pinzon. A Bit-parallel Suffix Automaton Approach for  $(\delta, \gamma)$ -Matching in Music Retrieval. *Proc SPIRE'03*, pages 211–223. LNCS 2857.
104. Joaquín Adiego, Gonzalo Navarro and Pablo de la Fuente. SCM: Structural Contexts Model for Improving Compression in Semistructured Text Databases. *Proc SPIRE'03*, pages 153–167. LNCS 2857.
105. Nieves Brisaboa, Antonio Fariña, Gonzalo Navarro and María Esteller. (S,C)-Dense Coding: An Optimized Compression Code for Natural Language Text Databases. *Proc SPIRE'03*, pages 122–136. LNCS 2857.

106. Mauricio Marín and Gonzalo Navarro Distributed Query Processing using Suffix Arrays. *Proc SPIRE'03*, pages 311–325. LNCS 2857.
107. Diego Arroyuelo, Francisca Muñoz, Gonzalo Navarro and Nora Reyes. Memory-Adaptative Dynamic Spatial Approximation Trees. *Proc SPIRE'03*, pages 360–368. LNCS 2857 (short paper).
108. Heikki Hyvrö and Gonzalo Navarro. A Practical Index for Genome Searching. *Proc SPIRE'03*, pages 341–349. LNCS 2857 (short paper).
109. Nieves Brisaboa, Eva Iglesias, Gonzalo Navarro and José Paramá. An Efficient Compression Code for Text Databases. *Proc. ECIR'03*, pages 468–481. LNCS 2633.
110. Joaquín Adiego, Gonzalo Navarro and Pablo de la Fuente. Compressing Semistructured Text Databases. in *Proc. ECIR'03*, pages 482–490 (short paper). LNCS 2633.
111. Gonzalo Navarro and Nora Reyes. Improved Deletions in Dynamic Spatial Approximation Trees. *Proc. SCCC'03*, pages 13–22. IEEE CS Press.
112. Veli Mäkinen, Gonzalo Navarro and Esko Ukkonen. Matching Numeric Strings under Noise. *Proc. PSC'03*, pages 99–110. Prague Stringology Club, Czech Republic.
113. Maxime Crochemore and Gonzalo Navarro. Improved Antidictionary Based Compression. *Proc. SCCC'02*, pages 7–13. IEEE CS Press.
114. Gonzalo Navarro. Indexing Text using the Ziv-Lempel Trie. *Proc. SPIRE'02*, pages 325–336. LNCS 2476.
115. Benjamin Bustos and Gonzalo Navarro. Probabilistic Proximity Searching Algorithms Based on Compact Partitions. *Proc. SPIRE'02*, pages 284–297. LNCS 2476.
116. Gonzalo Navarro, Rodrigo Paredes and Edgar Chávez.  $t$ -Spanners as a Data Structure for Metric Space Searching. *Proc. SPIRE'02*, pages 298–309. LNCS 2476.
117. Gonzalo Navarro and Nora Reyes. Fully Dynamic Spatial Approximation Trees. *Proc. SPIRE'02*, pages 254–270. LNCS 2476.
118. Gonzalo Navarro and Mathieu Raffinot. Compact DFA Representation for Fast Regular Expression Search. *Proc. WAE'01*, pages 1–12. LNCS 2141.
119. Benjamin Bustos, Gonzalo Navarro and Edgar Chávez. Pivot Selection Techniques for Proximity Searching in Metric Spaces. *Proc. SCCC'01*, pages 33–40. IEEE CS Press.
120. Gonzalo Navarro and Nora Reyes. Dynamic Spatial Approximation Trees. *Proc. SCCC'01*, pages 213–222. IEEE CS Press.
121. Josué Kuri and Gonzalo Navarro. Fast Multipattern Search Algorithms for Intrusion Detection. *Proc. SPIRE'00*, pages 169–180. IEEE CS Press.

122. Edgar Chávez and Gonzalo Navarro. An Effective Clustering Algorithm to Index High Dimensional Metric Spaces. *Proc. SPIRE'00*, pages 75–86. IEEE CS Press.
123. Nancy Hitschfeld, Gonzalo Navarro and Rodrigo Farías. Tessellations of Cuboids with Steiner Points. *Proc. the 9th International Meshing Roundtable*, 2000, pages 275–282.
124. Josué Kuri, Gonzalo Navarro, Ludovic Mé and Laurent Heye. A Pattern Matching Based Filter for Audit Reduction and Fast Detection of Potential Intrusions. *Proc. RAID'00*, pages 17–27. LNCS 1907.
125. Kimmo Fredriksson, Gonzalo Navarro and Esko Ukkonen. An Index for Two Dimensional String Matching Allowing Rotations. En J. van Leeuwen, O. Watanabe, M. Hagiya, P. Mosses and T. Ito (editors), *Proc. IFIP TCS 2000*, pages 59–75, LNCS 1872.
126. Gonzalo Navarro and Mathieu Raffinot. Fast Regular Expression Search. *Proc. WAE'99*, pages 198–212. LNCS 1668.
127. Gonzalo Navarro. Searching in Metric Spaces by Spatial Approximation. *Proc. SPIRE'99*, pages 141–148. IEEE CS Press.
128. Edleno de Moura, Gonzalo Navarro and Nivio Ziviani. Linear Time Sorting of Skewed Distributions. *Proc. SPIRE'99*, pages 135–140. IEEE CS Press.
129. João Paulo Kitajima and Gonzalo Navarro. A Fast Distributed Suffix Array Generation Algorithm. *Proc. SPIRE'99*, pages 97–104. IEEE CS Press.
130. Edgar Chávez, José Luis Marroquín and Gonzalo Navarro. Overcoming the Curse of Dimensionality. *Proc. CBMI'99*, pages 57–64.
131. Autran Macedo, Marco Cristo, Elaine Silva, Denilson Barbosa, João Paulo Kitajima, Berthier Ribeiro, Gonzalo Navarro and Nivio Ziviani. Experimental Analysis of a Parallel Quicksort-Based Algorithm for Suffix Array Generation. *Proc. VECPAR'98*, pages 1049–1062.
132. Ricardo Baeza-Yates and Gonzalo Navarro. Fast Approximate String Matching in a Dictionary. *Proc. SPIRE'98*, IEEE CS Press, pages 14–22.
133. Edleno de Moura, Gonzalo Navarro, Nivio Ziviani and Ricardo Baeza-Yates. Direct Pattern Matching on Compressed Text. *Proc. SPIRE'98*, IEEE CS Press, pages 90–95.
134. Ricardo Baeza-Yates, Gonzalo Navarro, Jesús Vegas and Pablo de la Fuente. A Model and a Visual Query Language for Structured Text. *Proc. SPIRE'98*, IEEE CS Press, pages 7–13.
135. Berthier Ribeiro, João Paulo Kitajima, Gonzalo Navarro, Cláudio Sant'Ana and Nivio Ziviani. Parallel Generation of Inverted Lists for Distributed Text Collections. *Proc. SCCC'98*, IEEE CS Press, pages 149–157.

136. Gonzalo Navarro. Multiple Approximate String Matching by Counting. *Proc. WSP'97*, Carleton University Press, pages 125–139.
137. Gonzalo Navarro. A Partial Deterministic Automaton for Approximate String Matching. *Proc. WSP'97*, Carleton University Press, pages 112–124.
138. Márcio Araújo, Gonzalo Navarro and Nivio Ziviani. Large Text Searching Allowing Errors. *Proc. WSP'97*, Carleton University Press, pages 2–20. This work won the prize to the best software tool in SBES'97 (Brazilian Symposium of Software Engineering) and the 4th prize in the IV CLEI-UNESCO Contest of Latin American MSc. Thesis.
139. Edleno de Moura, Gonzalo Navarro and Nivio Ziviani. Indexing Compressed Text. *Proc. WSP'97*, Carleton University Press, pages 95–111.
140. João Paulo Kitajima, Gonzalo Navarro, Berthier Ribeiro and Nivio Ziviani. Distributed Generation of Suffix Arrays: a Quicksort-Based Approach. *Proc. WSP'97*, Carleton University Press, pages 53–69.
141. Gonzalo Navarro. An Optimal Index for PAT Arrays. *Proc. WSP'96*, Carleton University Press, pages 214–227.
142. Ricardo Baeza-Yates and Gonzalo Navarro. A Fast Heuristic for Approximate String Matching. *Proc. WSP'96*, Carleton University Press, pages 47–63.
143. Ricardo Baeza-Yates, Ricard Gavaldá and Gonzalo Navarro. Bounding the Expected Length of Longest Common Subsequences and Forests. Invited paper. *Proc. WSP'96*, Carleton University Press, pages 1–15.
144. Gonzalo Navarro, Eduardo Barbosa, Chris Perleberg, Ricardo Baeza-Yates and Nivio Ziviani. Optimized Indirect Binary Search and Text Retrieval (Preliminary Version). *Proc. WSP'95*, pages 53–67.
145. Gonzalo Navarro and Jorge Sanz. MediaCore: a Multimedia Interface Composition Toolkit. *Proc. SCCC'94* pages 191–201.

## Theses

1. Gonzalo Navarro. Approximate Text Searching. PhD thesis, Technical Report TR/DCC-98-14, DCC, Dec 1998. Abstract in *European Annals of Theoretical Computer Science (EATCS) Bulletin* 67, pages 278–282, Feb 1999.
2. Gonzalo Navarro. A Language for Queries on Structure and Content of Textual Databases. MSc. thesis, DCC, Apr 1995. Spanish abstract in R. Cardoso (editor), *Proc. CLEI'96*, volume 2, pages 1125-1144. First prize at III CLEI-UNESCO Contest of Latin American MSc. Computer Science Theses.
3. Gonzalo Navarro. MediaCore: a Multimedia Interface Composition Toolkit. Licenciante thesis, UNLP, 1993.

4. Gonzalo Navarro. Un Estudio sobre Estructuras de Control. Licenciante thesis, ESLAI, 1992. In Spanish.

## **Extension Activities and Academic Administration**

### **Professional Societies**

- Member of ACM.
- Member of IEEE Computer Society (until 2011).
- Member of the Chilean Computer Science Society (SCCC).

### **Project Coordinations and Academic Consulting**

- (2024-2025) Evaluator of applications for Fondecyt, Chile.
- (2024) Evaluator of applications for the European Science Foundation.
- (2023-2026) Evaluator of applications to the 10th–12th Heidelberg Laureate Forum (ACM).
- (2020-2023) Project evaluator for the Natural Sciences and Engineering Research Council of Canada (NSERC).
- (2019) External evaluator of PEDECIBA researchers, Uruguay.
- (2019) External evaluator for the National Science Center, Poland.
- (2018) Member of a promotion committee at the Charles University of Prague, Czech Republic.
- (2017-2018) External evaluator of promotions at Universidad Técnica Federico Santa María, Chile.
- (2017) Member of a promotion committee at the University of Haifa, Israel.
- (2015-2020) Member of the promotion committee at the Facultad de Ingeniería y Ciencias, Universidad Diego Portales.
- (2014) External project evaluator for the Danish Council for Independent Research.
- (2013) External evaluator of researchers for the National Research Foundation of South Africa.
- (2012-2015) External project evaluator for the German-Israeli Foundation for Scientific Research and Development and for the Israeli Science Foundation.
- (2011) External project evaluator for Innova Chile – CORFO.

- (2010-2012) Member of the High Council of Scientific and Technological Development of Fondecyt Program, Conicyt, Chile.
- (2008-) External project evaluator for the Czech Science Foundation and the Academy of Sciences of the Czech Republic.
- (2006) Evaluator of projects for the Fund for Academic Innovation (MECESUP, Ministry of Education), Chile.
- (2006-2007) External project evaluator for City University of Hong Kong, and for the Research Grants Council of Hong Kong, China.
- (2005-2006) External project evaluator for CONICYT (Chilean national funding agency).
- (2004-2008) Alternate director of Millennium Nucleus *Center for Web Research*, Director since 2006. Project P01-029-F (2004) and P04-067-F (2005-2007), Mideplan, Chile. See <http://www.cwr.cl>.
- (2004-2006) Visiting Professor at Universidad Nacional de San Luis, Argentina.
- (2004-2016) Evaluator for Argentinian scientific funding organisms: FONCyT (Fund for Scientific and Technological Research, Ministry of Education, Science and Technology), and National Agency for Science and Technology.
- (2003) Evaluator of projects for the Competitive Fund of the Program for Improvement of Quality and Equity of High Education (MECESUP, Ministry of Education), Chile.
- (2002-2005) Coordinator of the Research Project VII.19 “RIBIDI: Information Retrieval and Digital Libraries”, of the CYTED Program (Ibero America).
- (2001-2004) Member of Study Group Engineering 1, to advise CONICYT (Chilen national funding agency) to evaluate projects and reports in the area.

## Administration

All within the Department of Computer Science, or the Faculty of Physical and Mathematical Sciences, University of Chile.

- (2024-) Member of the Faculty Local Institutional Autoevaluation Committee.
- (2016-2017,2023-2024) Head of the Department Committee for the Accreditation of the PhD in Computer Science program.
- (2016-) Head of the PhD Program.
- (2014-2017) Member of the Faculty Academic Appointments Committee.
- (2014-2016) Head of Departmental Evaluation Committee.

- (2014) Head of the Department Committee for the Accreditation of the Engineering in Computer Science career.
- (2011-2014) Member of the Faculty Academic Evaluation Committee.
- (2009-) Research Coordinator.
- (2009-) Member of the Department Council.
- (2009-) Member of the Postgraduate Committee.
- (2009-2011) Member of the Faculty Appeals Committee.
- (2009-2010) Member of the Departmental Evaluation Committee.
- (2007-2008) Head of Department.
- (2005-2006) Head of Departmental Evaluation Committee.
- (2005-2006) Alternate Head of Department.
- (2004) Member of Departmental Evaluation Committee.
- (2003-2006) Teaching Coordinator.
- (2003-2006) Member of Postgraduate Committee.
- (2002-2006) Member of Departmental Council.
- (2000-2006) Member of Teaching Committee.
- (1999-2002) Graduation Coordinator.
- (1995-1999) Library Coordinator.

## Divulgation

- “Compact data structures for graph databases”, divulgation article (in Spanish) for *Bits de Ciencia* magazine, number 28, first semester 2026, pages 2–10.
- Interview “First graduate in the PhD in Computer Science program”, in magazine *Bits de Ciencia*, number 27, pages 79–83, 2025. <https://www.dcc.uchile.cl/difusion/revista/27>
- Interview in *El Espacio de la Escritura*, podcast of Urdimbre, “The research projects as live processes”. November 2024. [https://www.youtube.com/watch?v=RnAlh90n0d0&ab\\_channel=FundamentosdelosDatos](https://www.youtube.com/watch?v=RnAlh90n0d0&ab_channel=FundamentosdelosDatos)
- “The PhD in Computer Science at the University of Chile”, magazine *Bits de Ciencia*, number 25, pages 56–58, second semester 2023. <https://www.dcc.uchile.cl/difusion/revista/25>

- Interviewed as “Featured ACM Member” in *People of the ACM*, August 22, 2023. <https://www.acm.org/articles/people-of-acm/2023/gonzalo-navarro/>.
- Interviewed in the program “Explorers from the Atom to the Cosmos”, transmitted by channel *24 Horas* since November 2, 2022.
- “Alfred V. Aho and Jeffrey D. Ullman, ACM Turing Award 2020”, magazine *Bits de Ciencia*, number 22, pages 9–14, first semester 2022. <https://www.dcc.uchile.cl/difusion/revista/22>
- “Compact data structures: compress (well) and conquer”, magazine *Palabra Pública*, november 9, 2021, <http://palabrapublica.uchile.cl/2021/11/09/>.
- “The scientific conferences in the pandemia age”, magazine *Bits de Ciencia*, number 20, pages 44–47, second semester of 2020. <https://www.dcc.uchile.cl/difusion/revista/20>
- Co-editor of the Latin America Regional Special Section, in the Communications of the ACM, CACM 63(11), 2020.
- Interview, as a recipient of a Google Award Latin America, in Radio Pauta, 100.5 FM, november 26, 2019, 17:00 to 17:30. Together with Bárbara Poblete.
- “Bioinformatics: The threat and the promise of the data deluge”, divulgation talk to the students of last year of high school of Liceo 1, September 2016, and to the students of 7th grade of basic school to last year of high school of Colegio Montague de Peñalolén, April 2017..
- “The data deluge and repetitivity: Our best enemy”, magazine *Bits de Ciencia*, number 13, pages 8–15, first semester of 2016. <https://www.dcc.uchile.cl/difusion/revista/13>
- “Bioinformatics: The threat and the promise of the data deluge”, divulgation conference in the Chilean Academy of Science, August 2016.
- One-minute spots about research on bioinformatics, appeared in the information TV channel “TVN 24 Horas” during August 2016.
- “Information Theory”, magazine *Bits of Science*, number 9, pages 28–33, November 2013. <https://www.dcc.uchile.cl/difusion/revista/9>
- Interviewed in magazine *Bits of Science*, number 5, pages 40–42 and 78–81, April 2011. <https://www.dcc.uchile.cl/difusion/revista/5>
- “Compact Data Structures”, magazine *Bits of Science*, number 3, pages 2–8, November 2009. <https://www.dcc.uchile.cl/difusion/revista/3>
- Diverse divulgation articles in column *Bits, Science, and Society*, of Terra.cl, since July 2009.
- Interview to Ricardo Baeza-Yates, magazine *Bits of Science*, number 2, pages 30–31, April 2009. <https://www.dcc.uchile.cl/difusion/revista/2>

- Co-creator and member of the Editorial Board of the magazine *Bits of Science*, published by the DCC. Participation with an article in the first issue, August 2008.
- “Searching the Web”, chapter 4 (pages 51–62) in the book *How the Web Works*, published by the Center for Web Research, Santiago, Chile, 2008. Also, participation as a panelist, as director of the Center and the DCC, in the public presentation of the book, University of Chile, August 2008. The event was mentioned in several press releases and radio stations.
- Interview, as Head of Department, in *El Mercurio* (one of the main Chilean newspapers), March 24, 2008, page A14 (science and technology), about the position of the Department on the OOXML standard proposal.
- Opinion article “Data Standards and OOXML: today’s vote”, as Head of the DCC and on its behalf, in *La Nación* (nationwide newspaper), March 19, 2008, page 13.
- Interview, as Head of the Center for Web Research, in Radio University of Chile, 102.5 FM, March 18, 2008, 7:30 to 8:00 PM. With Claudio Gutierrez.
- Interview, with other 3 Faculty professors with a high number of ISI publications, in *Revista FCFM* (magazine of the Faculty of Physical and Mathematical Sciences, University of Chile), number 41, Summer 2008, “Passion for Research”, pages 22–25.
- Short interview, as Head of Department, in *La Tercera* (one of the main Chilean newspapers), January 12, 2007, page 7 of section “University Life”. In Spanish.
- Interview, as Head of the Center for Web Research, in Radio University of Chile, 102.5 FM, November 15, 2006, 7:00 to 7:30 PM.
- Interview, as Head of the Center for Web Research, in *Bioplanet* magazine (Chile), year 6, number 42, September 2006. “Center for Web Research: The Science of Finding it All”. pages 15–17. With Ricardo Baeza-Yates. In Spanish.
- Interview, as Teaching Coordinator of the Department, in the newspaper *Publimetro* (Chile), August 17 2006, section Admission 2006, page 6. In Spanish.

## Distinctions

- (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.

## Teaching

### Theses Advisor

- Currently advising 3 PhD students, 3 MSc students, and 5 undergrad students at Universidad de Chile.

- (1997-) Advisor of 10 postdocs, 23 PhDs (17 co-advised), 22 MScs (9 co-advised), and 34 Engineers (15 co-advised), at Universidad de Chile, Universidad de A Coruña (Spain), Universidad de Valladolid (Spain), Universidade Federal de Minas Gerais (Belo Horizonte, Brazil), Universidade de Brasília (Brasil), Universidad de La Habana (Cuba), Universidad de San Luis (Argentina), INAOEP (Mexico), and Universidad de Concepción (Chile).
- (1999-) External referee of 22 PhD. dissertations: Center for Research in Mathematics (1999, CIMAT, Guanajuato, Mexico), Polytechnic University of Catalunya (2003, Barcelona, Spain), Melbourne University (2003 and 2008, Australia), Universität Konstanz (2006, Germany), INRIA (2006, Sophia Antipolis, Francia), Universidade Técnica de Lisboa (2007, Portugal), Charles University in Prague (2010, Czech Republic), Università di Milani (2011, Italy), Università di Pisa (2012, 2017, and 2021, Italy), Universidade da Coruña (2014, Spain), Universidad de Concepción (2015 and 2016, Chile), University of Helsinki (2015, Finlandia), Universidad de Buenos Aires (2016, Argentina), Università di Udine (2017, Italy), PEDECIBA, Universidad de la República (2021, Uruguay), Universidad Católica de Chile (2023 and 2025, Chile), Universität Wien (2025, Austria), and Universität Postdam (2025, Germany). External referee of 5 MSc. theses, at RMIT (Australia), PEDECIBA (Uruguay), Universidad Católica de Chile (Chile), and Universidade Federal de Uberlandia (Brazil). Backup referee of two PhD. dissertations at RMIT (Australia). Participation in 7 PhD and 12 MSc committees at DCC. External referee for a habilitation process at Charles University Prague (2007, Czech Republic) and at Masaryk University (2011, Czech Republic).
- (2005-) Organization of *Algorithmic Wednesdays!*, a periodic meeting with my supervised students to discuss ideas related with their research subjects. It is also useful to discuss ideas related to their research, to let them practice their presentations to conferences, to have invited talks, and so on. The meetings are open and occasionally we have other attendees. The group of students under my supervision is also called *Algorithmic Wednesdays Group*. See <http://www.dcc.uchile.cl/gnavarro/algoritmos> (in Spanish).

Some of the MScs are now young professors at the University of Chile (Benjamin Bustos, PhD in Konstanz, Germany) and University of Magallanes (Chile, Roberto Uribe). The same happens with most of the PhDs: Universidad de A Coruña (Spain, Antonio Fariña, Susana Ladra and Ana Cerdeira), Universidad de Valladolid (Spain, Joaquín Adiego), Universidade Federal do Amazonas (Brazil, Edleno de Moura), Universidad del Bío-Bío (Gilberto Gutiérrez), Universidad de Concepción (Cecilia Hernández), Universidad Michoacana (Mexico, Karina Figueroa), Universidad Técnica Federico Santa Mar´ía (Diego Arroyuelo), Universidad Andrés Bello (Carlos Gómez), Universidad de Talca (Rodrigo Paredes), and Universidad Nacional de San Luis (Argentina, Nora Reyes).

## Distinctions

- (2013-2021) Advisor (and coauthor) of five students that obtained the best student paper award in conferences: Cecilia Hernández (SPIRE 2012), Roberto Konow (DCC 2013),

Héctor Ferrada (DCC 2016), Adrián Gómez-Brandón (DCC 2018), and Cristian Urbina (SPIRE 2021).

- (2016-2017) Google Research Awards to fund the MSc theses of Joshimar Córdova (2016) and Patricio Huepe (2017), and the PhD thesis of Dustin Cobas (2019).
- (2008) Best teaching award at the DCC.
- (2003-2012) Advisor of six MSc. theses awarded in the CLEI-UNESCO Contest of Latin American Computer Science MSc. Theses: Rodrigo Paredes (2nd prize, 2003), Nora Reyes (5th prize, 2003), Benjamin Bustos (7th prize, 2003), Roberto Uribe (2nd prize, 2006), Sebastián Kreft (1st prize, 2011), and Manuel Cáceres (3rd prize, 2020). Also, advisor of the PhD thesis that obtained the first prize in the Doctoral Consortium of the Mexican Computing Meeting (ENC) 2006 (Karina Figueroa), and the one that obtained the 1st Prize to the Best Doctoral Thesis in the field of Information Retrieval, awarded by the Spanish Society of Information Retrieval, SERI (Susana Ladra).

### Teaching Material

- (2018) Textbook (150 pages) for the course Design and Analysis of Algorithms, Department of Computer Science, University of Chile (DCC). See <http://www.dcc.uchile.cl/gnavarro/apunte2.html> (in Spanish).
- (2006) Textbook (175 pages) for the course Fundamentals of Computer Science, Department of Computer Science, University of Chile (DCC). See <http://www.dcc.uchile.cl/gnavarro/apunte.html> (in Spanish).
- (2000) Notes for the course Information Retrieval, DCC.
- (1996) Exercise Guide for the course Fundamentals of Computer Science, DCC.

### Created or Reformulated Courses

- (2007) Creation of the course “Compact Data Structures”, for the PhD program in Computer Science, DCC.
- (2003-2006) Head of the process for redesigning the undergraduate career in Computer Science, Dept. of Computer Science, University of Chile (DCC), as part of the global reform of the careers in the School of Engineering.
- (2005) Adaptation of the course Design and Analysis of Algorithms, of the undergraduate and MSc career, DCC.
- (2002) Complete redesign, with Claudio Gutiérrez, of the course Databases, of the undergraduate and MSc career, DCC.
- (2001) Creation of the courses “Fast and Flexible Text Searching” and “Searching in Metric Spaces”, for the PhD program in Computer Science, DCC.

- (1999) Restructuring of the course Fundamentals of Computer Science, of the undergraduate and MSc career, DCC.
- (1996-1998) Redesign of the homeworks of the course Design and Analysis of Algorithms, DCC. The homeworks became all different and the students were guided to publish the best ones in the national Computer Science conference.
- (1993) Cooperation in the redesign of the course Data Structures, of the undergraduate Computer Science career, Universidad Nacional de La Plata, Argentina.

### Regular Courses

- (2002-2004) Professor of “Databases”, for undergraduates and MSc. students at Dept. of Computer Science, Universidad de Chile (DCC).
- (2001-2005) Professor of PhD course “Fast and Flexible Text Searching”, at the Dept. of Computer Science, Universidad de Chile (DCC).
- (2001-2003) Professor of PhD course “Searching in metric spaces”, at the Dept. of Computer Science, Universidad de Chile (DCC).
- (2000-2001) Professor of “Information Retrieval”, for undergraduates and MSc. students at Dept. of Computer Science, Universidad de Chile (DCC).
- (2000-2001) Professor of “Algorithms and Data Structures”, for undergraduates and MSc. students at Dept. of Computer Science, Universidad de Chile (DCC).
- (1996-1998,2005-) Professor of “Design and Analysis of Algorithms”, for undergraduates and MSc. students at DCC.
- (1996-) Professor of “Fundamentals of Computer Science”, for undergraduates and MSc. students at DCC.
- (1995) Professor of “Computer Science I”, undergraduate course at DCC.
- (1988-95) Teaching assistant in several undergraduate courses: “Algorithms” (1994-95, DCC), “Compilers” (1994, DCC), “Data Structures” (1993, Universidad Nacional de La Plata, Argentina), “Algebra I” (1988, UNLP).

### Intensive Courses

- (2024) Minicourse “Indexing with the BWT”, at the University of Verona, Italy.
- (2015) Tutorial “Compact Data Structures”, in the *X Summer School on Discrete Mathematics*, Valparaíso, Chile.
- (2009) Talk “Compressed Self-Indexes for Text”, at JCC 2009 as part of the Workshop “Emergent Topics on the Web” organized by Yahoo! Research Chile.

- (2008) Talk “Sequential Text Searching” given at Universidad Nacional de San Luis, Argentina, and Universidad de Pinar del Río, Cuba, as a part of the course “Algorithmic Foundations of the Web”, funded by AECI.
- (2008) Ibero American head of the project *Education for the New Millennium: Algorithmic Foundations of the Net*, funded by the Spanish Agency for International Cooperation (AECI), with the goal of giving intensive courses in Latin American universities.
- (2007) Intensive course of 15 hours about “Compact data structures”, given at Universidad Nacional de San Luis, Argentina.
- (2007) Tutorial “Compact Data Structures”, given at the Mexican Computing Meeting (ENC), 8 hours.
- (2007) Talk “Compression of Web Graphs”, at DCC as part of the Workshop “Emergent Topics on the Web” organized by the Center for Web Research.
- (2006) Talk “New Techniques for Text Compression”, at DCC as part of the Workshop “Emergent Topics on the Web” organized by the Center for Web Research.
- (2005) Talk “Efficient Searchable Natural Language Adaptive Compression”, at DCC as part of the “Workshop on Web Information Retrieval” organized by the Center for Web Research.
- (2005) Talk “Implementation of Search Engines I: Indexes and Compression”, at DCC as part of the Workshop “Emergent Topics on the Web” organized by the Center for Web Research.
- (2000) Intensive course of 15 hours about “Information retrieval: algorithms, data structures and applications to the Web”, given at the School of Informatics Sciences (ECI), Buenos Aires, Argentina.
- (1998) Intensive course of 45 hours, “Advanced Algorithms” given for the MSc. in Computer Science at Universidad Mayor de San Simón (UMSS, Cochabamba, Bolivia).
- (1997) Talk “Indices for Approximate Text Searching” given at *VI Ibero American Informatics Week*, Santa Cruz de la Sierra, Bolivia, as a part of an Information Retrieval course.
- (1997) Talk “Text Searching” given at *VI Ibero American Informatics Week*, Santa Cruz de la Sierra, Bolivia, as a part of an Information Retrieval course.
- (1983-85) Courses of informatics in several private institutions.

## Developments

- (2013) Data cleaning services for the elections roll, for the Civil and Identifications Registry (Chile), processing data from termination of convictions and death records.

- (2007) Development, with Karina Figueroa and Edgar Chávez (Universidad Michoacana, Mexico), of an open-source library for metric space searching, associated to *SISAP* conference. It can be downloaded from <http://www.sisap.org>.
- (2006) Development, with Paolo Ferragina (Università di Pisa, Italy) and students, of the *PizzaChili* site (<http://pizzachili.dcc.uchile.cl>, <http://pizzachili.di.unipi.it>), with implementations and testbeds for compressed text indexes.
- (2005 and 2007) Approximate search services to match Mideplan (Chile) addresses against clients of electric companies, country-wide.
- (2005) Approximate search services to match publications using paper titles and institutions, for *Conicyt* (Chile).
- (2004) Development of an approximate multipattern string search system, used by the company *WordTracker* (UK), [www.wordtracker.com](http://www.wordtracker.com).
- (2003-2004) Development of an approximate search system over structured text for *Reuna* (Chile), used for *Buscademia* (<http://www.uportal.cl/buscademia>), a site giving information on University careers. Project leader.
- (2002) Approximate search services to match company names, for *DICOM* (Chile).
- (2001-2002) Development of formulas and programs to estimate the number of cashier servers needed to guarantee maximum waiting times for *Banco del Estado* (Chile).
- (2000-) Development and maintenance of an approximate multipattern name search system, used by the company *Matchsimile* (Brazil), [www.matchsimile.com](http://www.matchsimile.com).
- (2000) Development, as part of my postdoctoral stay, of an online pattern matching software (*nrgrep*). The software is free and can be accessed from my Web page. It has been accepted by the Free Software Foundation to make up an important part of the new release of *Gnu Grep*.
- (1999) Development, as part of my postdoctoral stay, of an online algorithm for searching PROSITE patterns in proteins. This algorithm has been patented in France by the CNRS in August 2000 under the number B00011093.
- (1995-1998) Development of diverse indexing systems for plain and structured text databases, using inverted indexes. These systems have been used by several companies such as *Hypernet* (Chile), *Mercantil* (Chile), *TodoBR* (Brazil) and *TodoCL* (Chile), and are used in sites such as [www.reuna.cl](http://www.reuna.cl), [www.mercantil.com](http://www.mercantil.com), [www.todobr.com.br](http://www.todobr.com.br) and [www.todocl.cl](http://www.todocl.cl).
- (1995-1998) Development, as part of my PhD. thesis, of a prototype for online approximate text searching. The software is free and can be accessed from my Web page.
- (1996) Collaboration in the development of a software for semidefinite programming, in Maple, at Universitat Politècnica de Catalunya (UPC, Spain).

- (1994) Development, as part of my MSc. thesis, of a prototype to index and query textual databases with hierarchical structure.
- (1992-1994) Hired (since 1993, employee) by IBM Argentina for the development of advanced applications on optical recognition, storage, querying and interfaces related to images and databases.
- (1983-1994) Several commercial systems and consulting services.
- (1993) Development, as part of my Lic. thesis at Universidad Nacional de La Plata (UNLP, Argentina), of a prototype to compose multimedia interfaces on AIX, including a script language to describe the multimedia interfaces, audio and image servers, etc. This included participation in the development of optical character recognition software for the companies *Telefónica* and *Telecom* (Argentina), as well as manuscript orders for *Avon* (Argentina).
- (1995-) Development of an index for textual databases based on partial inverted indices.
- (1986-1993) Development of several systems as part of the courses at Latin American School of Informatics (ESLAI, Argentina) and Universidad Nacional de La Plata (UNLP, Argentina).
- (1991) Multimedia presentations over OS/2, using high level composition tools and audio and video hardware.

## Languages

**English:** fluent (TOEFL 1998: 650, range 310–677).

**Portuguese, Italian and French:** able to read technical texts.

## References

- Prof. Ricardo Baeza Yates, Universidad de Chile, rbaeza@dcc.uchile.cl
- Prof. Nivio Ziviani, Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil, nivio@dcc.ufmg.br
- Prof. Esko Ukkonen, University of Helsinki, Finland, ukkonen@cs.helsinki.fi
- Prof. Gene Myers, Celera Genomics, Washington DC, USA, gene.myers@celera.com
- Prof. Maxime Crochemore, Gaspard Monge Institute, Université de Marne-la-Vallée, France, mac@univ-mlv.fr
- Prof. Paolo Ferragina, Università di Pisa, Italia, ferragin@di.unipi.it.
- Prof. Amihoud Amir, Bar-Ilan University, Israel, amir@macs.biu.ac.il.

## Abbreviations

**ALENEX:** Workshop on Algorithm Engineering and Experiments  
**ALENEX'01:** 3rd ALENEX, Washington DC  
**ALENEX'03:** 5th ALENEX, Baltimore, Maryland  
**ALENEX'06:** 8th ALENEX, Miami, Florida  
**ALENEX'07:** 9th ALENEX, New Orleans, Louisiana  
**ALENEX'10:** 12th ALENEX, Austin, Texas  
**ALENEX'15:** 17th ALENEX, San Diego, California  
**ALENEX'21:** 23rd ALENEX, Alexandria, Virginia  
**BIBE:** IEEE Conference on Bioinformatics and Bioengineering  
**BIBE'10:** 10th BIBE, Philadelphia, USA  
**CBMI:** European Workshop on Content-Based Multimedia Indexing  
**CBMI'99:** CBMI 1999, Toulouse, France  
**CCCG:** Canadian Conference on Computational Geometry  
**CCCG'12:** 24th CCCG, Charlottetown, Prince Edward Island, Canada  
**CCCG'13:** 25th CCCG, Waterloo, Ontario, Canada  
**CCP:** International Conference on Data Compression, Communications and Processing  
**CCP'11:** 1st CCP, Palinuro, Italy  
**CIAA:** International Conference on Implementation and Application of Automata  
**CIAA'09:** 14th CIAA, Sydney, Australia  
**CIKM:** ACM International Conference on Information and Knowledge Management  
**CIKM'97:** 6th CIKM, Las Vegas, Nevada  
**CIKM'06:** 15th CIKM, Arlington, Virginia  
**CIKM'11:** 20th CIKM, Glasgow, Scotland  
**CIKM'19:** 28th CIKM, Beijing, China  
**CONIELECOMP:** International Conference on Electronics, Communications, and Computers  
**CONIELECOMP'05:** 15th CONIELECOMP, Puebla, Mexico  
**CPM:** Annual Symposium on Combinatorial Pattern Matching  
**CPM'96:** 7th CPM, Laguna Beach, USA  
**CPM'97:** 8th CPM, Aarhus, Denmark  
**CPM'98:** 9th CPM, New Jersey, USA  
**CPM'99:** 10th CPM, Warwick, UK  
**CPM'00:** 11th CPM, Montreal, Canada  
**CPM'01:** 12th CPM, Jerusalem, Israel  
**CPM'02:** 13th CPM, Fukuoka, Japan  
**CPM'03:** 14th CPM, Morelia, Mexico  
**CPM'04:** 15th CPM, Istanbul, Turkey  
**CPM'05:** 16th CPM, Jeju Island, Korea  
**CPM'06:** 17th CPM, Barcelona, Spain  
**CPM'07:** 18th CPM, London, Canada  
**CPM'08:** 19th CPM, Pisa, Italy  
**CPM'10:** 21st CPM, New York, USA  
**CPM'11:** 22nd CPM, Palermo, Italy  
**CPM'12:** 23rd CPM, Helsinki, Finland  
**CPM'13:** 24th CPM, Karlsruhe, Germany  
**CPM'14:** 25th CPM, Moscow, Russia  
**CPM'15:** 26th CPM, Ischia Island, Italy  
**CPM'17:** 28th CPM, Warsaw, Poland  
**CPM'19:** 30th CPM, Pisa, Italy

**CPM'20:** 31st CPM, Copenhagen, Denmark  
**CPM'21:** 32nd CPM, Wroclaw, Poland  
**CPM'22:** 33rd CPM, Prague, Czech Republic  
**CPM'23:** 34th CPM, Marne-la-Valée, France  
**CPM'24:** 35th CPM, Fukuoka, Japan  
**CPM'24:** 36th CPM, Milan, Italy  
**DCC:** Data Compression Conference  
**DCC'01:** 11th DCC, Snowbird, USA  
**DCC'04:** 14th DCC, Snowbird, USA  
**DCC'08:** 18th DCC, Snowbird, USA  
**DCC'10:** 20th DCC, Snowbird, USA  
**DCC'12:** 22nd DCC, Snowbird, USA  
**DCC'13:** 23rd DCC, Snowbird, USA  
**DCC'14:** 24th DCC, Snowbird, USA  
**DCC'15:** 25th DCC, Snowbird, USA  
**DCC'16:** 26th DCC, Snowbird, USA  
**DCC'17:** 27th DCC, Snowbird, USA  
**DCC'18:** 28th DCC, Snowbird, USA  
**DCC'19:** 29th DCC, Snowbird, USA  
**DCC'20:** 30th DCC, Snowbird, USA  
**DCC'21:** 31st DCC, Snowbird, USA  
**DCC'22:** 32nd DCC, Snowbird, USA  
**DCC'24:** 34th DCC, Snowbird, USA  
**ECDL:** European Conference on Research and Advanced Technology for Digital Libraries  
**ECDL'05:** 9th ECDL, Vienna, Austria  
**ECDL'09:** 13th ECDL, Corfu, Greece  
**ECIR:** European Conference on Information Retrieval Research  
**ECIR'03:** 25th ECIR, Pisa, Italy  
**ESA:** Annual European Symposium on Algorithms  
**ESA'95:** 3rd ESA, Corfu, Greece  
**ESA'10:** 18th ESA, Liverpool, UK  
**ESA'11:** 19th ESA, Saarbrücken, Germany  
**ESA'12:** 20th ESA, Ljubljana, Slovenia  
**ESA'13:** 21st ESA, Sophia-Antipolis, France  
**ESA'14:** 22nd ESA, Wroclaw, Poland  
**ESA'24:** 32nd ESA, Egham, United Kingdom  
**EuroPar:** International Conference on Parallel and Distributed Computing  
**EuroPar'03:** 9th EuroPar, Klagenfurt, Austria  
**FSTTCS:** Annual Conference on Foundations of Software Technology and Theoretical Computer Science  
**FSTTCS'14:** 34th FSTTCS, New Delhi, India  
**FUN:** Conference on Fun with Algorithms  
**FUN'04:** 3rd FUN, Isola d'Elba, Italy  
**FUN'10:** 5th FUN, Ischia Island, Italy  
**GIS:** ACM International Symposium on Advances in Geographic Information Systems  
**GIS'05:** 13th ACM GIS, Bremen, Germany  
**GRADES-NDA:** Joint Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA)  
**GRADES-NDA'24:** 7th GRADES-NDA, Santiago, Chile  
**GRADES-NDA'26:** 9th GRADES-NDA, Bengaluru, India  
**ICCS:** International Conference on Computational Science

**ICCS'06:** 6th ICCS, Reading, UK  
**ICDE:** International Workshop on Data Engineering  
**ICDE'08:** 24th ICDE, Cancun, Mexico  
**ICDE'10:** 26th ICDE, Long Beach, California, USA  
**ICDE'22:** 38th ICDE, Kuala Lumpur, Malasia  
**ICDT:** International Conference on Database Theory  
**ICDT'20:** 23rd ICDT, Copenhagen, Denmark  
**IFIP TCS:** IFIP International Conference on Theoretical Computer Science  
**IFIP TCS'00:** 1st IFIP TCS, Sendai, Japan  
**IFIP TCS'06:** 4th IFIP TCS, Santiago, Chile  
**ISAAC:** International Symposium on Algorithms and Computation  
**ISAAC'03:** 14th ISAAC, Kyoto, Japan  
**ISAAC'04:** 15th ISAAC, Hong Kong, China  
**ISAAC'05:** 16th ISAAC, Hainan, China  
**ISAAC'10:** 21st ISAAC, Jeju Island, Korea  
**ISAAC'11:** 22nd ISAAC, Yokohama, Japan  
**ISAAC'13:** 24th ISAAC, Hong Kong, China  
**ISAAC'14:** 25th ISAAC, Jeonju, Korea  
**ISAAC'17:** 28th ISAAC, Phuket, Thailand  
**ISAAC'18:** 29th ISAAC, Jiaoxi, Taiwan  
**IWOCA:** International Workshop on Combinatorial Algorithms  
**IWOCA'07:** 18th IWOCA, Newcastle, Australia  
**IWOCA'12:** 23rd IWOCA, Madurai, India  
**LATIN:** International Symposium of Latin American Theoretical Informatics  
**LATIN'95:** 2nd LATIN, Valparaíso, Chile  
**LATIN'98:** 3rd LATIN, Campinas, Brazil  
**LATIN'02:** 5th LATIN, Cancun, Mexico  
**LATIN'04:** 6th LATIN, Buenos Aires, Argentina  
**LATIN'06:** 7th LATIN, Valdivia, Chile  
**LATIN'08:** 8th LATIN, Buzios, Brazil  
**LATIN'10:** 9th LATIN, Oaxaca, Mexico  
**LATIN'18:** 13th LATIN, Montevideo, Uruguay  
**LATIN'20:** 14th LATIN, São Paulo, Brazil  
**LATIN'22:** 15th LATIN, Guanajuato, Mexico  
**LATIN'24:** 16th LATIN, Puerto Varas, Chile  
**LATIN'24:** 17th LATIN, Florianopolis, Brazil  
**MFCS:** International Symposium on Mathematical Foundations of Computer Science  
**MFCS'09:** 34th MFCS, Vysoké Tatry, Slovakia  
**MICAI:** Mexican International Conference on Artificial Intelligence  
**MICAP'05:** 4th MICAI, Monterrey, Mexico  
**PSC:** Prague Stringology Conference  
**PSC'03:** 8th PSC, Prague, Czech Republic  
**PSC'05:** 10th PSC, Prague, Czech Republic  
**PSC'06:** 11th PSC, Prague, Czech Republic  
**PSC'09:** 14th PSC, Prague, Czech Republic  
**PSI:** International Conference on Perspectives of System Informatics  
**PSI'06:** 6th PSI, Novosibirsk, Russia  
**RAID:** International Workshop on the Recent Advances in Intrusion Detection  
**RAID'00:** 3rd RAID, Toulouse, France  
**RECOMB:** International Conference on Computational Molecular Biology

**RECOMB'01:** 5th RECOMB, Montreal, Canada  
**RECOMB'09:** 13th RECOMB, Tucson, Arizona, USA  
**RIAO:** RIAO International Conference  
**RIAO'10:** 9th RIAO, Paris, France  
**SBBB:** Brazilian Symposium on Databases  
**SBBB 2001:** XVI SBBB, Rio de Janeiro, Brazil  
**SCCC:** International Conference of the Chilean Computer Science Society  
**SCCC'94:** XIV SCCC, Concepción, Chile  
**SCCC'98:** XVIII SCCC, Antofagasta, Chile  
**SCCC'01:** XXI SCCC, Punta Arenas, Chile  
**SCCC'02:** XXII SCCC, Copiapó, Chile  
**SCCC'03:** XXIII SCCC, Talca, Chile  
**SCCC'04:** XXIV SCCC, Arica, Chile  
**SCCC'12:** XXXII SCCC, Valparaíso, Chile  
**SEA:** International Symposium on Experimental Algorithms  
**SEA'10:** 9th SEA, Ischia Island, Italy  
**SEA'11:** 10th SEA, Colimpari Chania, Greece  
**SEA'12:** 11th SEA, Bordeaux, France  
**SEA'14:** 13th SEA, Copenhagen, Denmark  
**SEA'16:** 15th SEA, Saint Petersburg, Russia  
**SEA'24:** 13rd SEA, Vienna, Austria  
**SeCoGIS:** International Workshop on Semantic and Conceptual Issues in GIS  
**SeCoGIS'09:** 3rd SeCoGIS, Gramado, Brazil  
**SeCoGIS'10:** 4th SeCoGIS, Vancouver, Canada  
**SIGIR:** Annual International ACM SIGIR Conference on Research and Development in Information Retrieval  
**SIGIR'95:** 18th SIGIR, Seattle, Washington, USA  
**SIGIR'98:** 21th SIGIR, Melbourne, Australia  
**SIGIR'00:** 23rd SIGIR, Athens, Greece  
**SIGIR'05:** 28th SIGIR, Salvador, Brazil  
**SIGIR'07:** 30th SIGIR, Amsterdam, The Netherlands  
**SIGIR'08:** 31st SIGIR, Singapore  
**SIGIR'13:** 36th SIGIR, Dublin, Ireland  
**SIGMOD:** ACM International Conference on Management of Data  
**SIGMOD'21:** 47th SIGMOD, Xi'an, Shaanxi, China  
**SIGMOD'24:** 50th SIGMOD, Santiago, Chile  
**SISAP:** International Workshop on Similarity Search and Applications  
**SISAP'09:** 2nd SISAP, Prague, Czech Republic  
**SISAP'11:** 4th SISAP, Lipari, Italy  
**SISAP'14:** 7th SISAP, Los Cabos, Mexico  
**SISAP'15:** 8th SISAP, Glasgow, Scotland  
**SNA-KDD:** ACM Workshop on Social Network Mining and Analysis  
**SNA-KDD'11:** 5th SNA-KDD, San Diego, USA  
**SODA:** Annual ACM-SIAM Symposium on Discrete Algorithms  
**SODA'10:** 21st SODA, Austin, USA  
**SODA'12:** 23rd SODA, Kyoto, Japan  
**SODA'13:** 24th SODA, New Orleans, USA  
**SODA'17:** 28th SODA, Barcelona, Spain  
**SODA'18:** 29th SODA, New Orleans, USA  
**SODA'25:** 36th SODA, New Orleans, USA  
**SOFSEM:** International Conference on Current Trends in Theory and Practice of Computer Science

**SOFSEM'10:** 36th SOFSEM, Spindleruv Mlyn, Czech Republ  
**SPIRE:** International Symposium on String Processing and Information Retrieval  
**SPIRE'98:** 5th SPIRE, Santa Cruz de la Sierra, Bolivia  
**SPIRE'99:** 6th SPIRE, Cancun, Mexico  
**SPIRE'00:** 7th SPIRE, A Coruña, Spain  
**SPIRE'01:** 8th SPIRE, Laguna de San Rafael, Chile  
**SPIRE'02:** 9th SPIRE, Lisboa, Portugal  
**SPIRE'03:** 10th SPIRE, Manaus, Brazil  
**SPIRE'04:** 11th SPIRE, Padova, Italy  
**SPIRE'05:** 12th SPIRE, Buenos Aires, Argentina  
**SPIRE'06:** 13th SPIRE, Glasgow, Scotland, UK  
**SPIRE'07:** 14th SPIRE, Santiago, Chile  
**SPIRE'08:** 15th SPIRE, Melbourne, Australia  
**SPIRE'09:** 16th SPIRE, Saariselkä, Finland  
**SPIRE'10:** 17th SPIRE, Los Cabos, Mexico  
**SPIRE'11:** 18th SPIRE, Pisa, Italy  
**SPIRE'12:** 19th SPIRE, Cartagena, Colombia  
**SPIRE'13:** 20th SPIRE, Jerusalem, Israel  
**SPIRE'14:** 21st SPIRE, Ouro Preto, Brazil  
**SPIRE'15:** 22nd SPIRE, London, UK  
**SPIRE'16:** 23rd SPIRE, Beppu, Japan  
**SPIRE'17:** 24th SPIRE, Palermo, Italy  
**SPIRE'19:** 26th SPIRE, Segovia, Spain  
**SPIRE'20:** 27th SPIRE, Orlando, Florida, US  
**SPIRE'21:** 28th SPIRE, Lille, France  
**SPIRE'22:** 29th SPIRE, Concepción, Chile  
**SPIRE'23:** 30th SPIRE, Pisa, Italy  
**SPIRE'24:** 31st SPIRE, Puerto Vallarta, Mexico  
**STACS:** International Symposium on Theoretical Aspects of Computer Science  
**STACS'03:** 20th STACS, Berlin, Germany  
**STACS'09:** 26th STACS, Freiburg, Germany  
**SWAT:** Scandinavian Symposium on Algorithmic Theory  
**SWAT'12:** 13th SWAT, Helsinki, Finland  
**SWAT'14:** 15th SWAT, Copenhagen, Denmark  
**VECPAR:** International Meeting on Vector and Parallel Processing  
**VECPAR'98:** 3rd VECPar, Porto, Portugal  
**WADS:** International Workshop on Algorithms and Data Structures  
**WADS'97:** 5th WADS, Halifax, Nova Scotia, Canada  
**WADS'13:** 12th WADS, London, Ontario, Canada  
**WADS'17:** 16th WADS, St. John's, Newfoundland, Canada  
**WAE:** Workshop on Algorithm Engineering  
**WAE'99:** 3rd WAE, London, UK  
**WAE'01:** 5th WAE, Aarhus, Denmark  
**WEA:** Workshop on Efficient and Experimental Algorithms  
**WEA'04:** 3rd WEA, Angra dos Reis, Brazil  
**WEA'05:** 4th WEA, Santorini, Greece  
**WEA'06:** 5th WEA, Menorca, Spain  
**WSP:** South American Workshop on String Processing  
**WSP'95:** 2nd WSP, Valparaíso, Chile  
**WSP'96:** 3rd WSP, Recife, Brazil  
**WSP'97:** 4th WSP, Valparaíso, Chile  
**WWW:** International World Wide Web Conference  
**WWW'07:** 16th WWW, Banff, Alberta, Canada  
**WWW'25:** 34th WWW, Sydney, Australia