

Curriculum Vitae

Nivio Ziviani

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1 Personal Data

Citizenship : Brazilian
Birthdate : August 27, 1946
Position : Professor Emeritus of the Federal University of Minas Gerais
Work Olace : Universidade Federal de Minas Gerais
Departamento de Ciência da Computação
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Interests : algorithms, information retrieval, text indexing, text searching,
Web information systems, cognitive computing.

2 Studies

- Ph.D. in Computer Science, Department of Computer Science, University of Waterloo, Canada, April 1982, Supervised by Gaston Gonnet.
- M.Sc. in Informatics, Department of Informatics, Pontifícia Universidade Católica, Rio de Janeiro, Brazil, November 1976, Supervised by Antonio Furtado.
- B.Sc. in Mechanical Engineering, School of Engineering, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, 1971.

3 Awards

- Honorary Chair of the 44th International Conference on Very Large Data Bases, in 2018.

- Santos Dumont Gold Medal given by the Governor of the State of Minas Gerais, in 2017.
- Good Example in Innovation Award from FIEMG, Dom Cabral Foundation, O Tempo and Globo Minas, in 2017.
- Friend of Science, Friend of FAPEMIG Award from FAPEMIG, in 2016.
- Best Paper in the Web and Social Networks Track of the WebMedia 2012 Symposium, “Selecting Keywords to Represent Web Pages Using Wikipedia Information”, Maisa Vidal, Guilherme Vale Menezes, Klessius Berlt, Edleno S. de Moura, Karla Okada, Nivio Ziviani, David Fernandes and Marco Cristo.
- Scientific Merit 2011, Brazilian Computer Society, July 2011, in recognition of the scientific distinction in different areas and specialties of Computing comprised by the Society.
- Award for the contribution to the IT area in Minas Gerais State, SUCESU - Sociedade de Usuários de Informática e Telecomunicações de Minas Gerais, in 2011..
- Google Academic Prize, Top Master Computer Science Student at UFMG in 2008, student: Anisio Mendes Lacerda, supervisor: Nivio Ziviani, in 2009.
- National Order of Scientific Merit, in the class Comendador, given by the President of Brazil, 2007.
- Member of the Brazilian Academy of Sciences, elected in 2007.
- Award *Honra da Inconfidência*, given by the Governor of the State of Minas Gerais, Brazil, n 2006.
- Professor Emeritus of Computer Science, Universidade Federal de Minas Gerais, September 2005.
- Compaq Award for Scientific Production, best scientific publication in Brazil, 1997.
- *Best Software Tool*, XI Brazilian Symposium on Software Engineering, Fortaleza, Brazil, Oct. 1997.
- Award Santos Dumont Silver Medal, given by the Governor of the State of Minas Gerais, Brazil, October 1991.
- Visiting Professor, Dept. of Computer Science, University of Waterloo, Canada, June - July 1984.

4 Main Regular Activities

- Co-founder and Director of R&D of Kunumi, 2016–now.
- Professor Emeritus of Computer Science, Computer Science Department, Universidade Federal de Minas Gerais, Brazil, since 2005.

- Full Professor of Computer Science, Computer Science Department, Universidade Federal de Minas Gerais, Brazil, 1991 – 2003.
- Associate Chairman for Graduate Studies, Department of Computer Science, Universidade Federal de Minas Gerais, August 1996 to July 2000.
- Coordinator of LATIN – Laboratory for Treating Information, Department of Computer Science, Universidade Federal de Minas Gerais (<http://www.dcc.ufmg.br/latin>).
- Editor of the "News from Latin America" section in the Bulletin of the European Association for Theoretical Computer Science, January 1998 – present.
- Member of the University Council (CEPE) of the Universidade Federal de Minas Gerais, October 1992 to October 1995.
- Member of the University Research Chamber, Universidade Federal de Minas Gerais, October 1992 to October 1995.
- Chairman of the Computer Science Department, Universidade Federal de Minas Gerais, May 1989 to April 1991.
- Chairman of the Steering Committee for the area of Computer Science, Brazilian Research Council (CNPq), January 1991 to December 1993.
- Chairman of the Steering Committee of Informatics, CAPES, January 1985 to December 1988.
- Associate Chairman for Graduate Studies, Department of Computer Science, Universidade Federal de Minas Gerais, 1983 to 1984.

5 Industrial Contributions

- Application Programming Interfaces (APIs) in C, implementing new minimal perfect hashing algorithms, with wide practical applicability, developed by Ph.D. student Fabiano Cupertino Botelho, found in cmph.sf.org, which presented 32,874 downloads on December 31st, 2017.
- Co-founder of Kunumi, in 2016 (www.kunumi.com).
- Co-founder of Neemu Technologies in 2010, sold to Linx in 2015 (www.neemu.com.br).
- Co-founder of Akwan Information Technologies in 2000, sold to Google Inc. in 2005 (www.akwan.com.br).
- Co-founder of the Web search engine TodoBR (www.todobr.com.br) in 1999, a vertical search engine focused on the Brazilian Web, owned by Akwan Information Technologies, know transferred to Google Inc.
- Co-founder of Miner Technology Group, sold to Folha de São Paulo / UOL group in 1999. The Miner company was the owner of the Miner Family of Agents for the Web, theme of a M.Sc. thesis, defended by Victor Fernando Ribeiro in February 1998.

6 Publications

6.1 Books

1. Ziviani, N. *Projeto de Algoritmos com Implementações em Pascal e C*, São Paulo, Brazil, Cengage Learning, ISBN 10 85-221-1050-6, 2010, terceira edição revista e ampliada, 659 pages (in Portuguese).
2. Ziviani, N. *Diseño de Algoritmos con Implementaciones en Pascal y C*, Madrid, Espanha, Thomson Paraninfo, ISBN 978-84-9732-538-7, 2007, 542 páginas.
3. Ziviani, N. *Projeto de Algoritmos com Implementações em Java e C++*, São Paulo, Brazil, Thomson Learning, ISBN 85-221-0525-1, 2007, 641 pages (in Portuguese).

6.2 Proceedings and Journal Issues

1. Calderón-Benavides, L., González-Caro, C., Chávez, E. and N. Ziviani (Eds.): *Proceedings of the 19th International Conference on String Processing and Information Retrieval (SPIRE'12)*, Springer Lecture Notes in Computer Science (LNCS), Vol. 7608, Cartagena de India, Colombia, October 21-25, 2012 (DOI: 10.1007/978-3-642-34109-0).
2. Ziviani, N. and Baeza-Yates, R. (Eds.): *Proceedings of the 14th International Conference on String Processing and Information Retrieval (SPIRE'07)*, Springer Lecture Notes in Computer Science (LNCS), Vol. 4276, ISBN 978-3-540-75529-6, ISSN 0302-9743, Santiago, Chile, October 29-31, 2007, 311 pages (DOI: 10.1007/978-3-540-75530-2).
3. Marchionini, G., Moffat, A., Tait, J., Baeza-Yates, R. and Ziviani, N. (Eds.) *Proceedings of the Twenty-Eighth Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR'05)*, ACM Press, Salvador, Brazil, August 15 – 19, 2005, 692 pages.
4. Baeza-Yates, R., Schwabe, D., Piquer, J., Ziviani, N. and Olsina L. (Eds.), *Proceedings of LA-WEB*, IEEE CS Press, Santiago, Chile, November 2003.
5. Ziviani, N., Baeza-Yates, R. and Guimarães, K. (Eds.) *Proceedings of the Third South American Workshop on String Processing (WSP'96)*, Carleton University Press International Informatics Series, v. 4, Recife, Brazil, August 8 – 9, 1996, 294 pages.
6. Ziviani, N., Piquer, J., Ribeiro, B. and Baeza-Yates, R. (Eds.) *Proceedings of the XV International Conference of the Chilean Computer Science Society*, Arica, Chile, November 1 – 3, 1995, 490 pages.
7. Baeza-Yates, R. and Ziviani, N. (Eds.) (1995) *Journal of the Brazilian Computer Society, Special Issue on String Processing 1* (3), April 1995.
8. Baeza-Yates, R. and Ziviani, N. (Eds.) (1993) *Proceedings of the First South American Workshop on String Processing (WSP'93)*, Belo Horizonte, Brazil, September 13 – 15, 1993, 160 pages.

6.3 Chapter of Books

1. Navarro, G. and Ziviani, N. “Documents: Languages and Properties”. In: *Modern Information Retrieval - The Concepts and Technology Behind Search*, Baeza-Yates, R. and Ribeiro-Neto, B., Pearson, 2011, 203-254.
2. Ziviani, N. and Moura, E.S. “Adding Compression to Next-Generation Text Retrieval Systems”. In: Zelkowitz, M.V. (Ed.) *Advances in Computers: Information Repositories*, Academic Press, Volume 57, ISBN 0-12-02157-3, 2003, 171-204.
3. Ziviani, N. “Text Operations”. In: Baeza-Yates, R. and Ribeiro-Neto, B. *Modern Information Retrieval*, Chapter 7, Addison-Wesley, ISBN 0-201-39829-X, 1999, 163–190.
4. Barbosa, E. F. and Ziviani, N. “Data Structures and Access Methods for Read-Only Optical Disks”. In: Baeza-Yates, R. e Manber, U. (Eds.) *Computer Science: Research and Applications*, Plenum Publishing Corp., 1992, 189–207.

6.4 Journals

1. Carvalho, C., Moura, E. S., Veloso, A. and Ziviani, N. “Website Replica Detection with Distant Supervision”, *Information Retrieval Journal* 23, 2017, 1-20.
2. Bessa, A., Santos, R.L.T., Veloso, A. and Ziviani, N. “Exploiting item co-utility to improve collaborative filtering recommendations”, *Journal of the American Society for Information Science and Technology* 68(10), 2017, 2380–2393.
3. Lacerda, A.M., Santos, R.L.T., Veloso, A. and Ziviani, N. “Improving daily deals recommendation using explore-then-exploit strategies”, *Information Retrieval Journal* 18(2), 2015, 95-122.
4. Santos, A.S., Carvalho, C., Almeida, J., Moura, E.S., Silva, A.S. and Ziviani, N. “A genetic programming framework to schedule webpage updates”, *Information Retrieval Journal* 18(1), 2015, 73-94.
5. Brandão, W., Moura, E.S., Santos, R.L.T., Silva, A.S. and Ziviani, N. “Learning to Expand Queries Using Entities”, *Journal of the American Society for Information Science and Technology* 65(9), 2014, 1870–1883.
6. Ribeiro, M.T., Lacerda, A.M., Moura, E.S., Hata, I., Veloso, A. and Ziviani, N. “Multi-Objective Pareto-Efficient Approaches for Recommender Systems”, *ACM Transactions on Intelligent Systems and Technology* 5(4), 2014, 1-20.
7. Hata, I., Veloso, A. and Ziviani, N. “Learning Accurate and Interpretable Classifiers Using Optimal Multi-Criteria Rules”, *JIDM* 4(3), 2013, 204-219.
8. Guimarães, A.S., Costa, T.L., Lacerda, A.M., Pappa, G.L. and Ziviani, N. “GUARD: A Genetic Unified Approach for Recommendation”, *JIDM* 4(3), 2013, 295-310.
9. Botelho, F.C., Pagh, R., and Ziviani, N. “Practical Perfect Hashing Algorithm in Nearly Optimal Space”, *Information Systems* 38(1), 2013, 108–131 (DOI: 10.1016/j.is.2012.06.002).

10. Fabiano C. Botelho, Nicholas C. Wormald, Nivio Ziviani: Cores of random r-partite hypergraphs. *Inf. Process. Lett.* 112(8-9): 314-319 (2012)
11. Matos-Junior, O. ; Ziviani, Nivio ; Botelho, Fabiano C. ; Cristo, Marco ; Lacerda, A.M. ; Silva, A. S. “Using Taxonomies for Product Recommendation”, *Journal of Information and Data Management* (3), 2012, 85–100.
12. Fabiano C. Botelho, Nicholas C. Wormald, Nivio Ziviani: Cores of random r-partite hypergraphs. *Inf. Process. Lett.* 112(8-9): 314-319 (2012) (DOI: 10.1016/j.ipl.2011.10.017).
13. Pereira, A.P., Ribeiro-Neto, B., Ziviani, N., Laender, A.H.F. and Gonçalves, M.A. “A Generic Web-Based Entity Resolution Framework”, *Journal of the American Society for Information Science and Technology* 62,919-932, 2011 (DOI: 10.1002/asi.21518).
14. Botelho, F.C., Lacerda, A., Menezes, G.V. and Ziviani, N. “Minimal Perfect Hashing: A Competitive Method for Indexing Internal Memory”, *Information Sciences* 181, 2011, 2608-2625 (DOI: 10.1016/j.ins.2009.12.003).
15. Ziviani, N., Gonçalves, M.A., Moura, E.S., Ribeiro-Neto, B., Silva, A. S. and Veloso, “Information Retrieval Research at UFMG”, *Journal of Information and Data Management* 2 (2), 77-92, 2011.
16. Berlt, K.R., Moura, E.S., Carvalho, A., Cristo, M., Ziviani, N. and Couto, T. “Modeling the Web as a Hypergraph to Compute Page Reputation”, *Information Systems* 35, 2010, 530-543 (DOI: 10.1016/j.is.2009.02.005).
17. Martins, W.S., Gonçalves, M.A., Laender, A. H. F. and Ziviani, N. “Assessing the Quality of Scientific Conferences Based on Bibliographic Citations”, em *Scientometrics* 83(1), 2010, 133-155 (DOI: 10.1007/s11192-009-0078-y).
18. Couto, T., Ziviani, N., Calado, P., Cristo, M., Gonçalves, M., Moura, E.S., Brandão, W. “Classifying Documents with Link-Based Bibliometric Measures”, *Information Retrieval* 13, 315-345, 2010 (DOI: 10.1007/s10791-009-9119-7).
19. Silva, A.J.C., Gonçalves, M.A., Laender, A.H.F., Modesto, M.A.B., Cristo, M. and Ziviani, N. “Finding What is Missing from a Digital Library: A Case Study in the Computer Science Field”, *Information Processing and Management* (45), 2009, 380-391 (DOI: 10.1016/j.ipm.2008.12.006).
20. Laender, A.H.F., Lucena, C.J.P, Maldonado, J.C., Silva, E.S. e Ziviani, N. “Assessing the Research and Education of the Top Brazilian Computer Science Graduate Programs”, *ACM SIGCSE Bulletin Inroads* 40(2), 2008, 135-145 (DOI: 10.1145/1383602.1383654).
21. Badue, C.S., Baeza-Yates, R., Ribeiro-Neto, B., Ziviani, A. and Ziviani, N. “Analyzing Imbalance among Homogeneous Index Servers in a Web Search System”, *Information Processing Management* 43(3), 2007, 592-608.
22. Ziviani, N., Laender, A., Moura, E.S., Silva, A., Heuser, C.A. and Meira Jr, W. “Gerindo: Managing and Retrieving Information in Large Document Collections”, *UP-GRADE European Journal for the Informatics Professional* 8(1), 2007, 41-48.

23. Ziviani, N., Laender, A., Moura, E.S., Silva, A., Heuser, C.A. and Meira Jr, W. “Gerindo: Gestión y Recuperación de Información en Grandes Recopilaciones de Documentos”, *Novática 185*, 2007, 36-42.
24. Calado, P., Cristo, M., Moura, E.S., Gonçalves, M.A., Ziviani, N. and Ribeiro-Neto, B. “Linkage Similarity Measures for the Classification of Web Documents”, *Journal of the American Society for Information Science and Technology (JASIST) 57*, (2), 2006, 208-221.
25. Pôssas, B., Ziviani, N., Ribeiro-Neto, B. and Meira Jr, W. “Set-Based Vector Model: An Efficient Approach for Correlation-Based Ranking”, *ACM Transactions on Information Systems 23*(4), October 2005, 397-429.
26. Deutscher, J.A., Renault, T. and Ziviani, N. “A geração de riqueza a partir da universidade: o caso da Akwan”, *Revista Inteligência Empresarial 24*, jul/ago/set 2005, 2-8.
27. Pereira Jr., A. and Ziviani, N. “Retrieving Similar Documents from the Web”, *Journal of Web Engineering (JWE) 4*(2), 2004, 247-261.
28. Fonseca, B., Golgher, P., Moura, E. S., Pôssas, B. and Ziviani, N. “Discovering Search Engine Related Queries Using Association Rules”, *Journal of Web Engineering (JWE) 4*(2), 2004, 215-227.
29. Calado, P., Moura, E.S., Ribeiro-Neto, B., Reis, I. and Ziviani, N. “Local versus Global Link Information”, *ACM Transactions on Information Systems 21*(1), 2003, 1–22.
30. Szwarcfiter, J. L., Navarro, G., Baeza-Yates, R., Oliveira, J. S., Cunto, W. and Ziviani, N. “Optimal Binary Search Trees with Costs Depending on the Access Paths”, *Theoretical Computer Science 290*(3), 2003, 1799–1814.
31. Ziviani, N., Moura, E. S., Navarro, G., and Baeza-Yates, R. “Compression: A Key for Next-Generation Text Retrieval Systems”, *IEEE Computer 33* (11), 2000, 37–44.
32. Moura, E. S., Navarro, G., Ziviani, N. and Baeza-Yates, R. “Fast and Flexible Word Searching on Compressed Text”, *ACM Transactions on Information Systems 18* (2), 2000, 113–139.
33. Navarro, G., Moura, E. S., Neubert, M., Ziviani, N. and Baeza-Yates, R. “Adding Compression to Block Addressing Inverted Indexes”, *Information Retrieval 3* (1), 2000, 49-77.
34. Navarro, G., Barbosa, E. F., Baeza-Yates, R., Cunto, W. and Ziviani, N. “Binary Searching with Nonuniform Costs and Its Application to Text Retrieval”, *Algorithmica 27* (2) 2000, 145-169.
35. Almeida, V. A. F., Meira Jr., W., Ribeiro, V. F. and Ziviani, N. “Efficiency Analysis of Brokers in the Electronic Marketplace”, *Computer Networks (31)*, Elsevier, Netherlands, 1999, 1079–1090.
36. Baeza-Yates, R., Barbosa, E. F. and Ziviani, N. “Hierarchies of Indices for Text Searching”, *Information Systems 21* (6), 1996, 497–514.

37. Baeza-Yates, R., Barbosa, E. F. and Ziviani, N. “Efficient Text Searching for Read-Only Optical Disks”, *Revista Brasileira de Computação* 7 (1), 1993, 3–12.
38. Baeza-Yates, R., Gonnet, G. H. and Ziviani, N. “Improved Bounds for the Expected Behaviour of AVL Trees”, *BIT* 32 (2), 1992, 297–315.
39. Ziviani, N. “Um Sistema para Recuperação Eficiente de Informação em Textos”, *Revista Brasileira de Computação* 5 (3), 1990, 3–15 (in Portuguese).
40. Luna, H. P. L., Ziviani, N. and Cabral, R. H. B. “The Telephonic Switching Centre Network Problem: Formalization and Computational Experience”, *Discrete Applied Mathematics* 18, 1987, 199–210.
41. Ziviani, N., Gonnet, G. H. and Olivie, H. “The Analysis of an Improved Symmetric Binary B-Tree Algorithm”, *The Computer Journal* 28 (4), 1985, 417–424.
42. Eisenbarth, B., Ziviani, N., Gonnet, G. H., Mehlhorn, K., and Wood, D. “The Theory of Fringe Analysis and Its Application to 2-3 Trees and B-Trees”, *Information and Control* 55 (1), 1982, 125–174.
43. Ziviani, N. and Tompa, F. “A Look at Symmetric Binary B-Trees”, *INFOR – Canadian Journal of Operational Research and Information Processing* 20 (2), 1982, 65–81.
44. Ziviani, N. “Introdução ao Conceito de Banco de Dados”, *Dados e Idéias* 3 (2), 1977, 7–12.
45. Magalhães, G. C., Ziviani, N. e Pequeno, T. H. C., “Um Modelo para Implantação de um Banco de Dados Relacional”, *CAPRE Boletim Informativo* 3 (2), 1975, 76–98.
46. Ziviani, N. “O Profissional de Processamento de Dados, sua Formação e a Empresa”, *Comércio e Indústria* (147), 1974, 4-10.

6.5 Conference Papers

1. Glater, R., Santos, R.L.T. and Ziviani, N. ‘Intent-Aware Semantic Query Annotation’, *Proceedings of International ACM SIGIR Conference on Research and Development in Information Retrieval*, 2017.
2. Marczewski, A., Veloso, A. and Ziviani, N. ‘Learning Transferable Features for Speech Emotion Recognition’, *Proceedings of the Thematic Workshops of ACM Multimedia*, 2017, 529-536.
3. Moraes, F., Santos, R.L.T. and Ziviani, N. “On Effective Dynamic Search in Specialized Domains”, *Proceedings of the ACM SIGIR International Conference on Theory of Information Retrieval*, 2017. 177-184.
4. Pimentel, T., Veloso, A. and Ziviani, N. “Unsupervised and Scalable Algorithm for Learning Node Representations”, *Proceedings of the International Conference on Learning Representations, Workshop Track*, 2017.
5. Moraes, F., Santos, R.L.T. and Ziviani, N. “UFMG at the TREC 2016 Dynamic Domain track”, *Proceedings of the 25th Text REtrieval Conference*, 2016.

6. Ribas, S., Ribeiro-Neto, B., Santos, R.L.T., Silva, E.S., Ueda, A. and Ziviani, N. “Random Walks on the Reputation Graph”, *Proceedings of the 2015 International Conference on The Theory of Information Retrieval*, 2015, 181-190.
7. Ribas, S., Ribeiro-Neto, B., Silva, E.S., Ueda, A.H. and Ziviani, N. “Using Reference Groups to Assess Academic Productivity in Computer Science”, *World Wide Web Conference (Companion Volume)* 2015, 603-608.
8. Ribas, S., Ribeiro-Neto, R., Silva, E.S., Ueda, A.H. and Ziviani, N. “P-score: A Publication-based Metric for Academic Productivity”, *CoRR* abs/1503.07496 (2015)
9. Lacerda, A., Veloso, A., Santos, R. and Ziviani, N., “Context-aware deal size prediction”, *21st Symposium on String Processing and Information Retrieval (SPIRE’14)*, 2014, 20-22.
10. Costa, T, Lacerda, A., Santos, R. and Ziviani, N., “Information-theoretic term selection for new item recommendation”, *21st Symposium on String Processing and Information Retrieval (SPIRE’14)*, 2014, 20-22.
11. Lacerda, A., Veloso, A. and Ziviani, N. “Exploratory and Interactive Daily Deals Recommendation” *7th ACM Conference on Recommender Systems*, 2013, 12-16.
12. Bessa, A., Veloso, A. and Ziviani, N., “Using Mutual Influence to Improve Recommendations”, *20th Symposium on String Processing and Information Retrieval (SPIRE’13)*, 2013, 7-9.
13. Santos, A., Ziviani, N., Almeida, J., Carvalho, C., Moura, E. and Silva, A. “Learning to Schedule Webpage Updates Using Genetic Programming”, *20th Symposium on String Processing and Information Retrieval (SPIRE’13)*, 7-9, 2013.
14. Hata, I., Veloso, A. and Ziviani, N. “Learning Accurate and Interpretable Classifiers Using Optimal Multi-Criteria Rules”, *28th Brazilian Symposium on Databases*, 2013.
15. Guimarães, A., Lacerda, A. Pappa, G. and Ziviani, N. “GUARD: A Genetic Unified Approach for Recommendation”, *28th Brazilian Symposium on Databases*, 2013.
16. Menezes, D., Lacerda, A., Silva, L., Veloso, A. and Ziviani, N. “Weighted slope one predictors revisited”, *World Wide Web Conference (Companion Volume)*, 2013, 967-972.
17. Lacerda, A. and Ziviani, N. “Building user profiles to improve user experience in recommender systems”, *WSDM*, 2013, 759-764,
18. Matos-Junior, O., Ziviani, N., Botelho, F.C., Cristo, M., Lacerda, A. and Silva, A.S. “Using Taxonomies for Product Recommendation”, *Brazilian Symposium on Databases*, São Paulo, Brazil, October 15-18, 2012.
19. Vidal, M., Menezes, G.V., Berlt, K., Moura, E.S. Okada, K., Ziviani, N., Fernandes, D. and Marco Cristo, M. “Selecting Keywords to Represent Web Pages Using Wikipedia Information”, *WebMedia*, São Paulo, Brazil, October 15-18, 2012 (DOI: 10.1145/2382636.2382714).

20. Ribeiro, M.T., Lacerda, A., Veloso, A. and Ziviani, N. "Pareto-Efficient Hybridization for Multi-Objective Recommender Systems", *6th ACM Conference on Recommender Systems*, Dublin, Ireland, 9-13th September, 2012, 9-16 (DOI: 10.1145/2365952.2365962).
21. Bessa, A., Laender, A.H.F., Veloso, A. and Ziviani, N. "Alleviating the Sparsity Problem in Recommender Systems by Exploring Underlying User Communities", *6th Alberto Mendelzon International Workshop on Foundations of Data Management*, 2012.
22. Botelho, F.C., Brandão, W.C. and Ziviani, N. "Minimal Perfect Hashing and Bloom Filters Made Practical", *IADIS International Conference Applied Computing*, 2011, 465-470.
23. Brandão, W.C., Moura, E.S., Silva, A.S. and Ziviani, N. "Exploiting Entity Semantics for Query Expansion", *IADIS International Conference WWW/Internet*, 2011, 365-372.
24. Henrique, W.F., Ziviani, N., Cristo, M., Moura, E.S., Silva, A.S. and Carvalho, C. "A New Approach for Verifying URL Uniqueness in Web Crawlers" *18th Symposium on String processing and Information Retrieval (SPIRE'11)*, Pisa, Italy, October 17-21, 2011.
25. Brandão, W.C., Moura, E.S., Silva, A.S. and Ziviani, N. "A Self-Supervised Approach for Extraction of Attribute-Value Pairs from Wikipedia Articles" *17th Symposium on String processing and Information Retrieval (SPIRE'10)*, Los Cabos, Mexico, October 11-13, 2010, 279-289.
26. Menezes, G.V., Almeida, J., Belém, F., Gonçalves, M.A., Lacerda, A., Moura, E.S., Pappa, G.L., Veloso, A. and Ziviani, N. "Demand-Driven Tag Recommendation", European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD10), Barcelona, Spain, September, 2010, 402-417.
27. Menezes, G. V., Ziviani, N., Laender, A. H. F., Almeida, V. "A Geographical Analysis of Knowledge Production in Computer Science", *18th International World Wide Web Conference (WWW09)*, Madrid, Spain, April 2009, 1041-1050.
28. Pereira, A., Baeza-Yates, R., Ziviani, N. and Bisbal, J. "A Model for Fast Web Mining Prototyping", *2nd ACM International Conference on Web Search and Data Mining (WSDM09)*, Barcelona, Spain, February 2009, 114-123.
29. Botelho, F.C., Galinkin, D., Meira Jr, W. and Ziviani, N. "Distributed Perfect Hashing for Very Large Key Sets", *3rd international Conference on Scalable Information Systems*, Naples, Italy, June 2008.
30. Pereira, D.A., Ribeiro-Neto, B., Ziviani, N. and Laender, A.H.F. "Using the Web for Creating Publication Venue Authority Files", *8th ACM/IEEE Joint Conference on Digital Libraries*, Pittsburgh, USA, June 2008, 295-304.
31. Baeza-Yates, R., Pereira-Jr, A. and Ziviani, N. "Genealogical Trees on the Web: A Search Engine User Perspective", *17th International World Wide Web Conference (WWW08)*, Beijing, China, April 2008, 367-376.

32. Ziviani, N. and Moura, E.S. “Research Developments in Web Information Retrieval from Two Brazilian Universities”, *Latin American Web Conference (LA-WEB08)*, Vila Velha, Brazil, October 2008, 165-170.
33. Botelho, F.C. and Ziviani, N. “External Perfect Hashing for Very Large Key Sets”, *16th ACM Conference on Information and Knowledge Management (CIKM07)*, Lisbon, Portugal, November 2007, 653-662.
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6.7 Theses

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7 Ph.D. Dissertations Supervised

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3. Anisio Mendes Lacerda, Revenue Optimization and Customer Targeting in Daily-Deals Sites. 2013 (PhD).
4. Alvaro Rodrigues Pereira Junior. A Model for Fast Prototyping of Web Mining Applications. 2009, as co-supervisor, (PhD).
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6. Fabiano Cupertino Botelho, Near Space-Optimal Perfect Hashing Algorithms. 2008 (PhD).
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8 M.Sc. Theses Supervised

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11. Marco Túlio Ribeiro, Multi-Objective Pareto-Efficient Algorithms for Recommender Systems, 2013 (MSc).
12. Itamar Hata, Classificadores de Alta Interpretabilidade e de Alta Precisão, 2013 (MSc).
13. Ivan Conti, Reputation-Based Ranking Academic Groups, 2012 (MSc).
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15. Wallace Favoreto Henrique, Verificação de unicidade de URLs em coletores de Páginas Web, 10 de Março de 2011 (MSc).
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26. Lindenberg Naffah Ferreira, Implementação de Algoritmos Distribuídos para a Construção de Arquivos Invertidos 22 de novembro de 2002 (MSc).
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28. Bruno Pôssas, Modelagem Vetorial Estendida por Regras de Associação, 21 de dezembro de 2001 (MSc).
29. Tânia de Fatima Acris Jesini, Filtragem de Informação: Uma Máquina de Busca para Notícias (MSc). 05 de outubro de 2001 (MSc).
30. Daniela Ferreira da Mota, Geração Semi-Automática de Diretórios para a Web (MSc). 21 de setembro de 2001 (MSc).
31. Patricia Correia Saraiva, *Mecanismos Eficientes de Cache em Máquinas de Busca para a Web*, 8 de junho de 2001 (MSc).
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33. Claudine Santos Badue, *Distributed Query Processing Using Partitioned Inverted Files*, 27 de março de 2001 (MSc).
34. Marden Silveira Neubert *Algoritmos Distribuídos para a Construção de Arquivos Inver-tidos*, 30 de março de 2000 (MSc).
35. Kênio de Oliveira Couto *Geração Sequencial e Paralela de Arranjos de Sufixos* (MSc). 27 de março de 1998 (MSc).

36. Victor Fernando Ribeiro, *A Família Miner de Agentes para a World Wide Web*, 26 de fevereiro de 1998 (MSc).
37. Márcio Drumond Araújo, *Igrep: Um Sistema para Busca Aproximada em Textos Indexados*, 24 de março de 1997 (MSc).
38. Luísa Paiva de Almeida, *Um Conjunto de Primitivas para Recuperação Eficiente de Informações em Textos*, 7 de dezembro de 1994 (MSc).
39. Martinho Miranda Evangelista, *Recuperação de Informação para o Serviço de Auxílio à Lista 102/121*, 2 de setembro de 1994 (MSc).
40. Eugênia Vale Marques, *Projeto de um Sistema de Hipertextos para um Ambiente de Documentação Científica* (MSc). março de 1992 (MSc).
41. Elias Procópio Duarte Júnior, *Árvores Quad e Aplicações*, 30 de outubro de 1991 (MSc).
42. Eduardo Fernandes Barbosa, *Estruturas de Dados e Alocação de Arquivos em Discos CD-ROM*, 5 de dezembro de 1990 (MSc).
43. Cristina Duarte Murta, *Uma Interface para Usuários Novatos do Sistema PATPLUS*, 18 de outubro de 1990 (MSc).
44. Paulo Cesar Bicalho de Abreu Chagas, *Planejamento e Análise de Redes Telefônicas Interurbanas*, 14 de dezembro de 1989 (MSc).
45. Carlos Corrêa Gonçalves, *A Árvore Patricia como Método de Acesso para Bancos de Dados não Estruturados*, 31 de março de 1989 (MSc).
46. Patricia Seno Fusaro, *Uma Linguagem de Consulta para um Sistema de Recuperação em Texto Completo*, 28 de dezembro de 1988 (MSc).
47. Guilherme Pereira da Silva e Pádua, *Egide - Editor Gráfico Interativo de Rede*, 29 de agosto de 1988 (MSc).
48. Luiz Carlos de Abreu Albuquerque, *Recuperação Eficiente de Informação em Bancos de Dados não Estruturados*, 27 de março de 1987 (MSc).
49. Regina Helena Bastos Cabral, *Um Sistema para Planejamento de Redes Telefônicas Urbanas*, 4 de julho de 1985 (MSc).

9 Languages

	Speak	Read	Write
Inglês	✓	✓	✓
Português	✓	✓	✓
Espanhol	✓	✓	

10 Memberships

- Association For Computing Machinery (ACM)
- European Association for Theoretical Computer Science (EATCS)
- Sociedade Brasileira de Computação (SBC)