

# RODRIGO LAIOLA GUIMARÃES

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## RESEARCH INTERESTS

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Multimedia systems, document engineering and user-centered design.

## EDUCATION

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**Vrije Universiteit (VU)**, Amsterdam, The Netherlands.

*Ph.D. in Computer Science (September/2007 – January/2014)*

- Thesis: Socially-Aware Multimedia Authoring.
- Advisors: Prof. Dr. Dick Bulterman and Dr. Pablo Cesar.

**Pontifical Catholic University of Rio de Janeiro (PUC-Rio)\***, Rio de Janeiro, RJ, Brazil.

*M.Sc. in Informatics (March/2005 – June/2007)*

*GPA\*\**: 9.4 (out of 10.0)

- Dissertation: Composer – an Authoring Tool of NCL Documents for Interactive Digital TV.
- Advisor: Prof. Dr. Luiz Fernando Gomes Soares.

**Federal University of Espírito Santo (UFES)**, Vitória, ES, Brazil.

*Computer Engineer (April/1999 – October/2004)*

*GPA\*\**: 9.1 (out of 10.0)

- Final Project: Desenvolvimento da Infraestrutura Computacional de Gerenciamento e Comunicação de Dados do Ambiente MultiJADE.
- Advisor: Prof. Dr. Flávio Miguel Varejão.

**Federal Institute of Espírito Santo (IFES)**, Vitória, ES, Brazil.

*High School in Electrotechnics (March/1996 – December/1999)*

## IDIOMS (SPEAKING, LISTENING, WRITING AND READING)

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- Portuguese (fluent, fluent, fluent, fluent)
- Spanish (regular, good, regular, good)
- English (good, good, good, good)
- French (basic, basic, basic, basic)

## PROFESSIONAL EXPERIENCE

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**Federal University of Espírito Santo (UFES)**, Vitória, ES, Brazil.

*Assistant Professor (February/2017 – present)*

- Teaches introductory undergraduate courses on Programming, Data Structures and Database Systems within the Department of Informatics (DI) and participates as collaborating faculty of the graduate program in Informatics (PPGI).

**IBM Research**, São Paulo, SP, Brazil.

*Research Staff Member (December/2013 – February/2017)*

- Participated of a Brazilian government funded project that explored new educational and social engagement technologies to facilitate the qualification and inclusion of people with disabilities in the labor market. Contributions included the use of iterative user-centered design (e.g., for requirements gathering, iterative prototyping and user evaluation) and development of mobile education solutions.
- Worked with Sergio Borger and Dr. Rogério Abreu de Paula.

**Samsung Research America (SRA)**, San Jose, CA, USA.

*Research intern (August/2013 – November/2013)*

- Contributed to the design, development and evaluation of a JavaScript stack for presenting personalized stories built from user-generated content and linked open data.
- Worked in the Advanced Technology Lab with Dr. Alan Messer.

**Centrum Wiskunde & Informatica (CWI)**, Amsterdam, The Netherlands.

*Research Assistant (September/2007 – July/2012)*

- Designed, developed and evaluated novel multimedia tools targeted to end-users. Participated in the pan-European project Together Anywhere, Together Anytime (TA2 – EU FP7 IP) that explored how technology can improve relationships between groups of people separated in time/space. Partners included British Telecom, Alcatel-Lucent, Fraunhofer, Philips and Goldsmiths University of London.
- Worked with Prof. Dr. Dick Bulterman, Dr. Pablo Cesar and Jack Jansen.

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\* Best ranked Brazilian postgraduate university from 2004 to 2013.

\*\* According to the Brazilian criteria.

**Pontifical Catholic University of Rio de Janeiro (PUC-Rio)**, Rio de Janeiro, RJ, Brazil.

*Research Assistant (February/2005 – August/2007)*

- Designed and developed authoring tools of interactive digital TV programs for the Brazilian digital television standard (GINGA).
- Worked in the TeleMídia Laboratory with Prof. Dr. Luiz Fernando Gomes Soares.

**Xerox of Brazil**, Vitória, ES, Brazil.

*Junior Software Analyst (April/2004 – December/2004)*

- Developed e-statement and e-billing solutions for telecommunication companies using the CheckFree i-Series software package.
- Worked with Meiri Santos and Luiz Cláudio Xavier.

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**EXTRACURRICULAR ACTIVITIES**

**Georgia Institute of Technology (Georgia Tech)**, Atlanta, GA, USA.

*Visiting Scholar (January/2011 – February/2011)*

- Short-term participation in the Digital Media graduate program and eTV lab at the School of Literature, Communication, and Culture (LCC).
- Worked with Prof. Dr. Janet Murray.

**Microsoft Corporation and PUC-Rio**, Rio de Janeiro, RJ, Brazil.

*Translator (October/2005 – December/2005)*

- Performed technical reviews of machine translated MSDN Library content to Brazilian Portuguese in the MS Visual Studio Wiki Project.
- Worked with Prof. Dr. Daniel Schwabe and Prof. Dr. Simone Diniz Junqueira Barbosa.

**Brazilian Synchrotron Light Laboratory (LNLS)**, Campinas, SP, Brazil.

*Research Intern (January/2003 – February/2003)*

- Brazilian government funded Summer Program for talented undergraduate students (8.93% admission rate) where I participated in the characterization and optimization of the experiment to determine the LNLS storage ring optics.
- Worked with Dr. Liu Lin and Dr. Ruy H. A. Farias.

**Federal University of Espírito Santo (UFES)**, Vitória, ES, Brazil.

*Research Intern (August/2002 – April/2004)*

- Brazilian government funded Scientific Initiation Program (PIBIC/CNPq) for undergraduate students where I participated in the design and development of MultiJADE: A Domain Independent Multiagent Active Design Documents Environment.
- Worked with Prof. Dr. Flávio Miguel Varejão.

**Federal University of Espírito Santo (UFES)**, Vitória, ES, Brazil.

*Intern (January/2000 – April/2004)*

- Brazilian government funded Tutorial Education Program (PET) for talented undergraduate students.
- Worked with Prof. Dr. Thomas Walter Rauber and Prof. Dr. José Gonçalves Pereira Filho.

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**TEACHING EXPERIENCE**

- Keynotes, Invited Talks & Guest Lectures:
  1. “‘Olá, Watson’: utilizando o serviço IBM Watson Conversation para criar assistentes conversacionais personalizados”, HACKATRUCK, UFES, Vitória, ES, Brazil. December 20th, 2016.
  2. “Já sofreu para achar uma legenda na web? Uma abordagem para correção automática do dessincronismo de legendas durante playback”, HACKATRUCK, UFES, Vitória, ES, Brazil. December 19th, 2016.
  3. “Pesquisa, Desenvolvimento e Inovação no Laboratório de Pesquisas da IBM do Brasil”, VII Semana de Engenharia do Norte do Espírito Santo (SENEs 2015), UFES, São Mateus, ES, Brazil. October 2nd, 2015.
  4. “Repensando Editores Online para Autoria de Documentos Web com Aspectos Temporais”, Conferência Web W3C Brasil (Web.br 2015), Centro de Convenções Rebouças, São Paulo, SP, Brazil. September 23rd, 2015.
  5. “Autoria Multimídia sob o Enfoque Social”, XV Escola Regional de Computação Bahia - Alagoas - Sergipe (ERBASE 2015), Federal Institute of Bahia (IFBA), Salvador, BA, Brazil. April 14th, 2015.
  6. “Autoria Multimídia: Um Panorama das Ferramentas e Desafios no Contexto da Web”, Multimedia Systems graduate class, UFES, Instructor: Celso A. Saibel Santos. April 5th, 2013. (15 students)
  7. “Automatic and Manual Processes in End-User Multimedia Authoring Tools: Where is the Balance?”, Ubiquitous Computing Research Group, Georgia Tech, Instructor: Gregory D. Abowd. February 25th, 2011. (25 students)
  8. “Learning from MyVideos user study”, Human-Computer Interaction graduate class, Georgia Tech, Instructor: Melody M. Moore. February 16th, 2011. (40 students)
  9. “Towards Next Generation of Multimedia Authoring Tools”, eTV Project Studio graduate class, Georgia Tech, Instructor: Janet Murray. February 3rd, 2011. (7 students)

• Lecturer/Course Instructor:

1. INF09279 - Database Systems, UFES, 2017/2. (16 students/75h)
2. INF09330 - Programming II, UFES, 2017/2. (20 students/60h)
3. INF06894 | INF09278 - Database Systems, UFES, 2017/1. (34 students/60h)
4. INF09292 - Data Structures I, UFES, 2017/1. (18 students/60h)
5. Technical course in Informatics, Federal Institute of Espírito Santo (IFES – Campus Serra). Summer 2013. (70 students/96h)
6. Graduate Teaching Assistant, Distributed Multimedia Systems graduate class, VU Amsterdam, Instructor: Dick C.A. Bulterman. Spring 2012. (12 students/30h)
7. Projeto Aluno Técnico: a middle school level computer basics training in Brazilian public schools (UFES/SEED/MEC). December 2002. (40 students/60h)

## SCIENTIFIC PRODUCTION

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• Conference Papers:

1. **Guimarães, R. L.**, Mattos, A. B., and Cardonha, C. H. 2017. A Comparative Study of Technology-Mediated Learning Strategies for Teaching People with Intellectual Disability. To appear in *Proceedings of the 16th Brazilian Symposium on Human Factors in Computing Systems* (Joinville/SC, Brazil, October 23-27). IHC '17. (**Nominated, best paper in the HCI in Practice track**)
2. Brito, J. O., **Guimarães, R. L.**, and Santos, C. A. S. 2017. Investigating the Collaborative Process of Subtitles Creation and Sharing for Videos on the Web. In *Proceedings of the 23rd Brazilian Symposium on Multimedia and the Web* (Gramado/RS, Brazil, October 17-20). WebMedia '17. ACM, New York, NY, USA, 69-72.
3. **Guimarães, R. L.**, Avegliano, P., and Villa Real, L. C. 2016. A Lightweight and Efficient Mechanism for Fixing the Synchronization of Misaligned Subtitle Documents. In *Proceedings of the 2016 ACM Symposium on Document Engineering* (Vienna, Austria, September 13-16). DocEng '16. ACM, New York, NY, USA, 175-184. (31% acceptance rate)
4. **Guimarães, R. L.**, Mattos, A. B., and Cardonha, C. H. 2016. Investigating Instructional Pacing Supports for Teaching People with Intellectual Disability. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (San Jose, CA, USA, May 7-12). CHI EA '16. ACM, New York, NY, USA, 2171-2177.
5. Santana, V. F., **Guimarães, R. L.**, and Mattos, A. B. 2016. Identifying Challenges and Opportunities in Computer-based Vocational Training for Low-Income Communities of People with Intellectual Disabilities. In *Proc. of the 13th Web for All Conference* (Montreal, Canada, April 11-13). W4A '16. ACM, New York, NY, USA, 8 pages. (36% acceptance rate) (**Nominated, best paper**)
6. Cardonha, C., Mattos, A. B., and **Guimarães, R. L.** 2016. A Platform to Support Personalized Training of People with Disabilities. In *Proceedings of the 13th Web for All Conference* (Montreal, Canada, April 11-13). W4A '16. ACM, New York, NY, USA, 4 pages.
7. Villa Real, L. C., **Guimarães, R. L.**, and Avegliano, P. 2015. Dynamic Adjustment of Subtitles Using Audio Fingerprints. In *Proc. of the ACM Int. Conf. on Multimedia* (Brisbane, Australia, Oct. 26-30). MM '15. ACM, New York, NY, USA, 975-978. (35% acceptance rate)
8. Guimarães, R. L., Bulterman, D. C. A., Cesar, P., and Jansen, J. 2014. Synchronizing Web Documents with Style. In *Proceedings of the 20th Brazilian Symposium on Multimedia and the Web* (João Pessoa, PB, Brazil, November 18-21). WebMedia '14. ACM, New York, NY, USA, 151-158. (31% acceptance rate)
9. **Guimarães, R. L.** and Motta, M. M. 2014. Design and Evaluation of an Easy-to-Use Web Playground. In *Adjunct Proceedings of the 20th Brazilian Symposium on Multimedia and the Web* (João Pessoa, PB, Brazil, November 18-21). WebMedia '14.
10. **Guimarães, R. L.**, Cesar, P., and Bulterman, D. C. A. 2013. Personalized Presentations from Community Assets. In *Proceedings of the 19th Brazilian Symposium on Multimedia and the Web* (Salvador, BA, Brazil, November 5-8). WebMedia '13. ACM, New York, NY, USA, 257-264. (33% acceptance rate) (**Won, best paper in the Multimedia track**)
11. Pedrosa, D. C., **Guimarães, R. L.**, Cesar, P., and Bulterman, D. C. A. 2013. Designing Socially-Aware Video Exploration: A Case Study Using School Concert Assets. In *Proceedings of International Conference on Making Sense of Converging Media* (Tampere, Finland, October 1-4). AcademicMindTrek '13. ACM, New York, NY, USA, 110-117.
12. Pedrosa, D., **Guimarães, R. L.**, Pimentel, M. G., Bulterman, D. C. A., and Cesar, P. 2013. Interactive coffee table for exploration of personal photos and videos. In *Proceedings of the 28th ACM Symposium on Applied Computing* (Coimbra, Portugal, March 18-22). SAC '13. ACM, New York, NY, USA, 967-974. (22% acceptance rate)
13. Frantzis, M., Zsombori, V., Ursu, M., **Guimarães, R. L.**, Kegel, I., and Craigie, R. 2012. Interactive Video Stories from User Generated Content: a School Concert Use Case. In *Proceedings of the 5th International Conference on Interactive Digital Storytelling* (San Sebastian, Spain, November 12-15). ICIDS '12. Springer Berlin Heidelberg, 183-195. (29% acceptance rate)
14. **Guimarães, R. L.**, Cesar, P., and Bulterman, D. C. A. 2012. "Let Me Comment on Your Video": Supporting Personalized End-User Comments within Third-Party Online Videos. In *Proceedings of the 18th Brazilian Symposium on Multimedia and the Web* (São Paulo, SP, Brazil, October 15-18). WebMedia '12. ACM, New York, NY, USA, 253-260. (30% acceptance rate)
15. Jansen, J., Cesar, P., **Guimarães, R. L.** and Bulterman, D. C. A. 2012. Just-in-Time Personalized Video Presentations. In *Proceedings of the 2012 ACM Symposium on Document Engineering* (Paris, France, September 4-7). DocEng '12. ACM, New York, NY, USA, 59-68. (43% acceptance rate)
16. **Guimarães, R. L.**, Cesar, P., Bulterman, D. C. A., Zsombori, V., and Kegel, I. 2011. Creating Personalized Memories from Social Events: Community-Based Support for Multi-Camera Recordings of School Concerts. In *Proc. of the 19th ACM int. conf. on Multimedia* (Scottsdale, AZ, USA, Nov. 28 - Dec. 1). MM '11. ACM, New York, NY, USA, 303-312. (17% acceptance rate)

17. **Guimarães, R. L.**, Cesar, P., Bulterman, D. C. A., Kegel, I., and Ljungstrand, P. 2011. Social Practices around Personal Videos using the Web. In *Proc. of the ACM Web Science Conf.* (Koblenz, Germany, June 14-17). WebSci '11. (15% acceptance rate)
18. Zsombori, V., Frantzis, M., **Guimarães, R. L.**, Ursu, M. F., Cesar, P., Kegel, I., Craigie, R., and Bulterman, D. 2011. Automatic Generation of Video Narratives from Shared UGC. In *Proceedings of the 22nd ACM Conference on Hypertext and Hypermedia* (Eindhoven, The Netherlands, June 6-9). Hypertext '11. ACM, New York, NY, USA, 325-334. (34% acceptance rate) (**Nominated, best paper/best newcomer**)
19. **Guimarães, R. L.**, Cesar, P., and Bulterman, D. 2010. Creating and Sharing Personalized Time-Based Annotations of Videos on the Web. In *Proceedings of the 10th ACM Symposium on Document Engineering* (Manchester, UK, September 21-24). DocEng '10. ACM, New York, NY, USA, 27-36. (31% acceptance rate)
20. Cesar, P., Bulterman, D., **Guimarães, R. L.**, and Kegel, I. 2010. Web-Mediated Communication: in Search of Togetherness. In *Proceedings of the 2nd Web Science Conference* (Raleigh, NC, USA, April 26-27). WebSci '10.
21. Kuijk, F., **Guimarães, R. L.**, Cesar, P., and Bulterman, D. C. A. 2009. From Photos to Memories: A User-Centric Authoring Tool for Telling Stories with your Photos. In *Proceedings of the 1st International ICST Conference on User Centric Media* (Venice, Italy, December 9-11). UCMedia '09. Springer Berlin Heidelberg, 13-20.
22. Kuijk, F., **Guimarães, R. L.**, Cesar, P., and Bulterman, D. C. A. 2009. Adding Dynamic Visual Manipulations to Declarative Multimedia Documents. In *Proceedings of the 9th ACM Symposium on Document Engineering* (Munich, Germany, September 15-18). DocEng '09. ACM, New York, NY, USA, 149-152. (31% acceptance rate)
23. **Guimarães, R. L.** 2009. The Next Generation of Multimedia Authoring Tools: Telling Stories and Commenting on Media. In *Adjunct Proc. of the European Interactive TV Conf.* (Leuven, Belgium, June 3-5). EuroITV '09. (**Nominated, best Ph.D. paper**)
24. **Guimarães, R. L.**, Soares Neto, C. S., and Soares, L. F. G. 2008. A Visual Approach for Modeling Spatiotemporal Relations. In *Proceedings of the 8th ACM Symposium on Document Engineering* (São Paulo, SP, Brazil, September 16-19). DocEng '08. ACM, New York, NY, USA, 285-288. (43% acceptance rate)
25. **Guimarães, R. L.**, Costa, R. M. R., and Soares, L. F. G. 2008. Composer: Authoring Tool for iTV Programs. In *Proc. of the 6th European Interactive TV Conf.* (Salzburg, Austria, July 3-4). EuroITV '08. Springer Berlin Heidelberg, 61-71. (27% acceptance rate)
26. **Guimarães, R. L.**, Costa, R. M. R., and Soares, L. F. G. 2007. Composer: Ambiente de Autoria de Aplicações Declarativas para TV Digital Interativa. In *Proc. of the XIII Brazilian Symp. on Multimedia and the Web* (Gramado, RS, Brazil, Oct. 21-24). WebMedia '07.
27. Varejão, F. M. and **Guimarães, R. L.** 2005. Controle de Conflitos em Documentos Ativos Multiagentes. In *Proceedings of the V Brazilian Meeting on Artificial Intelligence* (São Leopoldo, RS, Brazil, July 25-29). ENIA '05. 1062-1065.
28. Varejão, F. M., Gama, F. A., **Guimarães, R. L.**, and Braun, C. S. 2004. MultiJADE - A Domain Independent Multiagent Active Design Documents Environment. In *Proceedings of the First International Conference on Design Computing and Cognition* (Boston, MA, USA, July 19-21). DCC '04. Kluwer Academic Publishers, Dordrecht, The Netherlands, 479-497.

• Book Chapters:

1. Shigeno, K., Cardonha, C., Sultanum, N., **Guimarães, R. L.**, Molinaro, M., Herrmann, R., Borger, S., and Koch, F. 2014. Shared Message Boards for Smart Enterprises. In *Agent Technology for Intelligent Mobile Services and Smart Societies*, Fernando Koch, Felipe Meneguizzi and Kiran Lakkaraju (Eds.). Springer Berlin Heidelberg, Germany, 46-55. ISBN: 978-3-662-46240-9.
2. Bulterman, D. C. A., **Guimarães, R. L.**, Cesar, P., Zsombori, V., and Kegel, I. 2012. Personalized Memories of Social Events: Studying Asynchronous Togetherness. In *Together Anywhere, Together Anytime: Technologies for Intimate Interactions*, Dick C. A. Bulterman (Ed.). CWI Press, Amsterdam, NL, 153-166. ISBN: 978-90-6196-5619.
3. Bulterman, D. C. A., **Guimarães, R. L.**, Cesar, P., Zsombori, V., Frantzis, M., Kegel, I., Craigie, R., and Steen, M. 2012. Group Sharing of Personal Videos: An Evaluation of MyVideos. In *Together Anywhere, Together Anytime: Technologies for Intimate Interactions*, Dick C. A. Bulterman (Ed.). CWI Press, Amsterdam, NL, 273-295. ISBN: 978-90-6196-5619.
4. Bulterman, D. C. A., Cesar, P., Jansen, J., and **Guimarães, R. L.** 2009. Television Content Enrichment and Sharing: The Ambulant Annotator. In *Social Interactive Television: Immersive Shared Experiences and Perspectives*, Pablo Cesar, David Geerts and Konstantinos Chorianopoulos (Eds.). IGI Global Publishing, Hershey (PA), USA, 67-76. ISBN: 978-1-60566-656-3.

• Journal & Magazine Articles:

1. Cardonha, C. H., **Guimarães, R. L.**, Mattos, A., Nogima, J., Avegliano, P., Gallo, D., Herrmann, R., and Borger, S. 2015. Toward a platform to support vocational training of people with disabilities. *IBM Journal of Research and Development*, 59, 6 (November/December 2015), Paper 2, 7 pages.
2. **Guimarães, R. L.**, Mattos, A. B., Martinêz, V., and Gonzalez, F. 2014. Apoio Tecnológico para Treinamento Vocacional. *Revista Deficiência Intelectual*, 4, 7 (July/December 2014), 34-39. ISSN: 2238-4618.
3. Bulterman, D. C. A., Cesar, P., and **Guimarães, R. L.** 2013. Socially-Aware Multimedia Authoring: Past, Present and Future. *ACM Transactions on Multimedia Computing, Communications and Applications (TOMCCAP)*, 9, 1s (Oct. 2013), Article 35, 23 pages.

• Position Papers, Posters & Demonstrations:

1. Brito, J. O., **Guimarães, R. L.**, and Santos, C. A. S. 2017. Why do People Subtitle Movies? A Survey Research of the Subtitled Motivations and Practices. In *Adjunct Proceedings of the 23rd Brazilian Symposium on Multimedia and the Web* (Gramado/RS, Brazil, October 17-20). WebMedia '17. 237-238.
2. **Guimarães, R. L.** 2016. Rethinking Online Code Editors for Authoring Web-Based Multimedia Presentations. In *Proceedings of the 2016 IEEE International Symposium on Multimedia* (San Jose, CA, USA, December 11-13). ISM '16. IEEE, 405-406.

3. **Guimarães, R. L.** and Mattos, A. B. 2015. Exploring the Use of Massive Open Online Courses for Teaching Students with Intellectual Disability. In *Proceedings of the 17th International ACM SIGACCESS Conference on Computers and Accessibility* (Lisbon, Portugal, October 26-28). ASSETS '15. ACM, New York, NY, USA, 343-344.
  4. **Guimarães, R. L.** 2015. Socially-Aware Multimedia Authoring. *ACM SIGMultimedia Records* (PhD Thesis Summaries), 7, 2 (October 2015), 16-17.
  5. **Guimarães, R. L.** 2015. Towards an Interactive Web-based Multimedia Playground. In *Adjunct Proceedings of the IEEE International Conference on Multimedia and Expo* (Torino, Italy, June 29 - July 3). ICME '15.
  6. **Guimarães, R. L.**, Kaiser, R., Hofmann, A., Cesar, P., and Bulterman, D. 2010. Video Analysis Tools for Annotating User-Generated Content from Social Events. In *Proceedings of the 5th International Conference on Semantic and Digital Media Technologies* (Saarbrücken, Germany, December 1-3). SAMT '10. Springer Berlin Heidelberg, 188-189.
  7. **Guimarães, R. L.** 2010. Automatic and Manual Processes in End-User Multimedia Authoring Tools: Where is the Balance?. In *Proceedings of the ACM Int. Conf. on Multimedia* (Firenze, Italy, October 25-29). MM '10. ACM, New York, NY, USA, 1699-1700.
  8. **Guimarães, R. L.** 2010. Analyzing the Effect of Tagging by Combining Automatic and Manual Annotation Processes. *Summer School on Multimedia Semantics* (Amsterdam, The Netherlands, August 30 - September 3). SSMS '10.
  9. **Guimarães, R. L.**, Cesar, P., and Bulterman, D. C. A. 2008. Authoring from the Couch. *2nd PEACH Summer School on Presence* (Dubrovnik, Croatia, July 9-11).
  10. **Guimarães, R. L.**, Cesar, P., and Bulterman, D. C. A. 2008. Authoring from the Couch: Research Directions and Possibilities. In *Adjunct Proceedings of the European Interactive TV Conference* (Salzburg, Austria, July 3-4). EuroITV '08.
  11. **Guimarães, R. L.**, Lin, L., and Farias, R. H. A. 2003. Caracterização e Otimização do Experimento para Determinação da Óptica do Anel de Armazenamento do LNLS. In *Proceedings of the 55th Annual Meeting of the Brazilian Society for the Progress of Science* (Recife, PE, Brazil, July 13-18). SBPC '03.
- Patent and Invention Disclosure Applications:
    1. Cardonha, C. H., **Guimarães, R. L.**, Lima, A. B. M., and Santana, V. F. 2017. Learning Systems and Automatic Transitioning Between Learning Systems, US 15/475248, Filed on March 31st, 2017. Assignee: IBM.
    2. Avegliano, P. B., Binotto, A. P. D., Cardonha, C. H., **Guimarães, R. L.**, and Villa Real, L. C. 2017. Dynamically Generating and Delivering Sequences of Personalized Multimedia Content, US 15/460566, Filed on March 16th, 2017. Assignee: IBM.
    3. Corelli, H. M., Fernandes, R. B., **Guimarães, R. L.**, Matos, R. S., Nogima, J., Silva, R. C. B. S., and Vital, T. L. B. 2017. System and Method for Cognitive Intervention on Human Interactions, US 15/397996, Filed on January 4th, 2017. Assignee: IBM.
    4. Corelli, H. M., Fernandes, R. B., **Guimarães, R. L.**, Matos, R. S., Nogima, J., Silva, R. C. B. S., and Vital, T. L. B. 2017. System and Method for Cognitive Intervention on Human Interactions, US 15/398029, Filed on January 4th, 2017. Assignee: IBM.
    5. Binotto, A. P. D., **Guimarães, R. L.**, and Santos, D. F. C. 2016. System, Method and Computer Program Product for Controlling a Mission-Oriented Robot Based on a User's Emotional State, US 15/339201, Filed on October 31st, 2016. Assignee: IBM.
    6. Cardonha, C. H., **Guimarães, R. L.**, Mattos, A. B., and Santana, V. F. 2016. Educational Media Planning and Delivery for In-Class Lessons with Limited Duration, US 15/049450, Filed on February 22nd, 2016. Assignee: IBM.
    7. Cardonha, C. H., **Guimarães, R. L.**, and Mattos, A. B. 2015. Detection of Anomalous Behavior in Digital Education Settings Based on Portable Device Movement, US 14/984000, Filed on December 30th, 2015. Assignee: IBM.
    8. Avegliano, P. B., Gallo, D. S., **Guimarães, R. L.**, and Villa Real, L. C. 2015. Automatic Synchronization of Subtitles Based on Audio Fingerprinting, US 14/981173, Granted on March 28th, 2017. Assignee: IBM.
    9. Avegliano, P. B., Cardonha, C. H., **Guimarães, R. L.**, Mattos, A. B., and Nogima, J. 2015. System and Method for Automatic Identification of Review Material, US 14/971559, Filed on December 16th, 2015. Assignee: IBM.
    10. Cardonha, C. H., **Guimarães, R. L.**, and Mattos, A. B. 2015. Method and System for Group Cheating Detection During Exams based on Students' Interaction Logs, IP.com 000243585D, Published on October 4th, 2015. Assignee: IBM.
  - Technical Reports:
    1. Steen, M., Aarts, O., Eriksson, M., Kort, J., Ljungstrand, P., Valinder, A., Coezijn, E., Demey, C., Frantzis, M., Groen, M., **Guimarães, R. L.**, and Yang, E. 2012. *D8.8 User Evaluations of TA2 Concepts*. Technical Report. Project TA2.
    2. Korchagin, D., Duffner, S., Motlicek, P., Scheffler, C., Küch, F., Kaiser, R., Kriechbaum, A., Hofmann, A., Hradis, M., Žák, P., **Guimarães, R. L.**, and Frantzis, M. 2011. *D6.6 Summary Report - Audio Capture and Data Analysis*. Technical Report. Project TA2.
    3. **Guimarães, R. L.** and Costa, R. M. R. 2006. *Interatividade e Sincronismo em TV Digital*. Monograph in the course of Seminars on Interactive Digital TV. PUC-Rio.
    4. **Guimarães, R. L.** and Rodrigues, R. F. 2005. *Relatório comparativo da produção de programas hiperídia interativos em XHTML, SMIL/GRIINS e NCL/Maestro*. Monograph in the course of Foundations of Hypermedia Systems. PUC-Rio.
    5. **Guimarães, R. L.** 2005. *Caracterização dos mecanismos de encapsulamento para integração de serviços nas redes IP e MPEG*. Monograph in the course of High Speed Networks. PUC-Rio.
    6. **Guimarães, R. L.** 2003. *Caracterização e Otimização do Experimento para Determinação da Óptica do Anel de Armazenamento do LNLS*. Final Report of Summer Internship Program. Brazilian Synchrotron Light Laboratory (LNLS).
  - Doctoral Thesis:
    - **Guimarães, R. L.** 2014. *Socially-Aware Multimedia Authoring*. Doctoral thesis. VU Amsterdam. ISBN: 978-94-6259-028-1.
  - Master's Dissertation:
    - **Guimarães, R. L.** 2007. *Composer: an Authoring Tool of NCL Documents for Interactive Digital TV*. Master's dissertation. PUC-Rio.

- Undergraduate Final Year Project:
  - **Guimarães, R. L.** 2004. *Desenvolvimento da Infraestrutura Computacional de Gerenciamento e Comunicação de Dados do Ambiente MultiJADE*. Undergraduate Final Project. UFES.

## SERVICE AND VOLUNTEERING

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- Society/Conference Roles and Responsibilities:
  - ACM SIGCHI Communication Ambassador, 2017-2018.
  - ACM Multimedia Systems Conference (MMSys), Publicity chair, 2018.
  - ACM International Conference on Interactive Experiences for TV and Online Video (TVX), Associate chair, 2014-2017.
  - IEEE International Symposium on Multimedia (ISM), Publicity co-chair, 2017.
- Member of Technical Program Committee:
  - Brazilian Symposium on Multimedia and the Web (WebMedia), 2014-2017.
  - ACM Multimedia Systems (MMSys), 2017.
  - ACM International Conference on Multimedia (MM), 2011-2013, 2016.
  - International World Wide Web Conference (WWW): PhD Symposium, 2016.
  - ACM International Conference on Intelligent User Interfaces (IUI): Poster and Demo track, 2016.
  - International Workshop on Synchronism of Things (WSoT), 2016.
  - International Workshop on Interactive Content Consumption (WSICC), 2015.
  - IEEE International Conference on Advanced Information Networking and Applications (AINA), 2015.
  - ACM Symposium on Applied Computing (SAC), 2014-2015.
  - International Workshop on Socially-Aware Multimedia (IWSAM), 2014.
  - IEEE International Conference on Connected Vehicles & Expo (ICCVE), 2013.
  - IEEE Consumer Communications and Networking Conference (CCNC), 2013.
  - European Interactive TV Conference (EuroITV), 2010-2013.
- Reviewer:
  - IEEE International Conference on Multimedia and Expo (ICME), 2016-2018.
  - ACM Transactions on Multimedia Computing, Communications and Applications (TOMM), 2015-2016.
  - Multimedia Tools and Applications Journal (MTAP), 2011-2016.
  - Multimedia Systems Journal (MMSJ), 2010-2016.
  - ACM Conference on Designing Interactive Systems (DIS), 2014 and 2016.
  - ACM Conference on Human Factors in Computing Systems (CHI): Late-Breaking Work track, 2015.
  - ACM International Conference on Multimedia (MM), 2015.
  - ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS), 2015.
  - IEEE Communications Magazine (COMMAG), 2013.
  - ACM Web Science Conference (WebSci), 2012.
  - Ibero-American Congress on Telematics (CITA), 2011.
  - Brazilian Symposium on Multimedia and the Web (WebMedia), 2010 and 2012.
  - ACM Symposium on Document Engineering (DocEng), 2006.
- Co-Organizer:
  - Workshop on “Multimedia Support for Decision-Making Processes” (with ISM 2016).
  - Workshop on “Multimedia Authoring: Challenges in Document Engineering” (with DocEng 2012).
  - Workshop on “Multimedia Document Processing in an HTML5 World” (with DocEng 2011).
  - Working session “Authoring multimedia documents: challenges and tools” (with DocEng 2010).
- Committee Member:
  - Costa Segundo, R. M. 2017. *Aplicando Crowdsourcing na Sincronização de Vídeos Gerados por Usuários*. Ph.D. thesis. UFES, Vitória, ES, Brazil, October 2017. Committee: Santos, C. A. S., Souza Filho, G. L., Pereira Filho, J. G., and **Guimarães, R. L.**
  - Uscamayta, A. O. M. 2017. *Captura multimídia colaborativa ubíqua de experiências ao vivo para autoria de documentos multimídia interativos extensíveis*. Master’s dissertation. USP, São Carlos, SP, Brazil, April 2017. Committee: Pimentel, M. G. C., Goularte, R., Santos, C. A. S., and **Guimarães, R. L.**
  - Costa Segundo, R. M. 2017. *The Crowdsourcing Workforce on Video Synchronization*. Ph.D. Qualifying Examination. UFES, Vitória, ES, Brazil, February 2017. Committee: Santos, C. A. S., Souza Filho, G. L., and **Guimarães, R. L.**
  - Lemos, V. S. 2017. *Audio Markings: Uma biblioteca para comunicação via áudio entre aplicações Web*. Master’s dissertation. UFES, Vitória, ES, Brazil, February 2017. Committee: Santos, C. A. S., Costalonga, L. L., Souza Filho, G. L., and **Guimarães, R. L.**
  - Calles, J. X. E. A. 2015. *Uma Abordagem para o Live Streaming Colaborativo de Vídeo Usando Smartphones*. Master’s dissertation. UFES, Vitória, ES, Brazil, December 2015. Committee: Santos, C. A. S., Gomes, R. L., Costa, P. D., and **Guimarães, R. L.**

- Busson, A. J. G. 2015. SceneSync: Uma Linguagem de Autoria Hiperfídia para Descrição de Objetos de Aprendizagem. Master's dissertation. Federal University of Maranhão (UFMA), São Luiz, MA, Brazil, August 2015. Committee: Soares Neto, C. S., Teixeira, M. M., and **Guimarães, R. L.**
- Student Volunteer:
  - May/2011 – July/2012: Ph.D. activity committee - organization of social events and activities to integrate students at CWI.
  - Open-Source Software Competition (OSSC), ACM Multimedia, 2011.
  - Brazilian Symposium on Computer in Education (SBIE), Vitória, ES, Brazil, 2001.

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## PROFESSIONAL AFFILIATIONS

- Member of the ACM Special Interest Group on Computer-Human Interaction (SIGCHI), 2017-.
- Member of the Association for Computing Machinery (ACM), 2008-.
- Member of the Brazilian Computer Society (SBC), 2005-.
- Member of the Institute of Electrical and Electronics Engineers (IEEE), 2015-2017.
- Member of the ACM Special Interest Group on Multimedia (SIGMM), 2013-2017.
- Member of the ACM Special Interest Group on Hypertext and the Web (SIGWEB), 2010-2017.

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## HONORS AND ACHIEVEMENTS

- Nominated for best paper on HCI in Practice in the Brazilian Symposium on Human Factors in Computing Systems (IHC), 2017.
- 1st place in civil service entrance examination for faculty position in the Department of Informatics, UFES, 2016. (4.8% admission rate)
- Nominated for best paper in the Web for All Conference (W4A), 2016.
- Best Paper Award on Multimedia in the Brazilian Symposium on Multimedia and the Web (WebMedia), 2013.
- Nominated for best paper/best newcomer in the ACM Conference on Hypertext and Hypermedia (HT), 2011.
- Nominated for best Ph.D. paper in the European Interactive TV Conference (EuroITV), 2009.
- Distinguished Master's Thesis Award at Rio Info Solution, Rio de Janeiro, RJ, Brazil, 2008.
- Diploma of Studies of the French Language (DELF), Level B1, November/2005.
- Diploma of Studies of the French Language (DELF), Level A2, November/2005.
- Sun Microsystems Certified Programmer for the Java 2 Platform 1.4, November/2004.
- Diploma of Spanish as a Foreign Language (DELE), Intermediate Level, May/2003.
- Honor Mention in the XIII Mathematical Olympiad of the state of Espírito Santo (OCM), 1999.
- 1st place in the admission process to the undergraduate program in Computer Engineering, UFES, 1999. (8.3% admission rate)
- 7th place in the XII Mathematical Olympiad of the state of Espírito Santo (OCM), 1998.

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## AWARDED GRANTS

- SIGWEB Student Travel Award for ACM DocEng 2012 (sponsored by ACM SIGWEB).
- SIGWEB Student Travel Award for ACM WebSci 2011 (sponsored by ACM SIGWEB).
- ACM Multimedia 2010 Student Scholarship (sponsored by ACM SIGMM).
- SIGWEB Student Travel Award for ACM DocEng 2010 (sponsored by ACM SIGWEB).
- Fee waiver for Summer School on Multimedia Semantics 2010 (sponsored by CCCT).
- PhD Student Scholarship for EuroITV 2009 (sponsored by conference organization).
- March/2005 – February/2007: Scholarship holder of the Master Program at PUC-Rio (sponsored by CNPq).
- August/2002 – April/2004: Scholarship holder of the Scientific Initiation Program (PIBIC) at UFES (sponsored by CNPq).
- January/2000 – July/2002: Scholarship holder of the Tutorial Education Program (PET) at UFES (sponsored by CAPES).

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## TECHNICAL SKILLS

- Programming Languages: Ruby on Rails (4yrs+), JavaScript and AJAX (4yrs+), PHP, Java (6yrs+), C, C++, Python.
- Other: HTML/CSS (6yrs+), XML, NCL, SMIL.
- Software Knowledge: Xcode, Eclipse, Photoshop, MySQL, jQuery.
- Operating Systems: Windows, Linux and OS X.

## RELEVANT SOFTWARE DESIGN

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- Vocational Training Platform (2014-2015)
  - My contribution to this proof of concept involved the design, implementation and evaluation of a synchronization module to help instructors manage the instructional pace in technology-mediated learning sessions.
  - Concept video: <https://youtu.be/-XL6PoeMsOs>
- Ambulant Sketchbook (2013-2014)
  - Online code editor useful for authoring complex Web documents containing time-based elements such as CSS3 and SVG animations, HTML5 audio and video because modifications are identified and patched in real-time, with no need to restart an ongoing presentation from the beginning.
  - Website: <http://www.laiola.com.br/sketchbook/>
- VaiChoverVix (2012)
  - Weather forecast mobile app that shows the movement of clouds and air masses over the city of Vitória, ES (Brazil).
  - Website: <http://www.laiola.com.br/vaichovervix/>
- TA2 MyVideos (2009-2012)
  - This demonstrator was based on a school concert observed and filmed by many proud parents, subsequently edited and redacted to tell different stories to other family members and friends. I actively participated in the design, implementation, integration and user evaluation of TA2 MyVideos.
  - Concept video: <http://www.youtube.com/watch?v=re-uEyHszgM>
- Ambulant Captioner (2009-2012)
  - Video commenting tool that allowed users to create and share personalized text comments synchronized within YouTube videos.
- NCL Composer (2005-2007)
  - Graphical authoring tool to create interactive digital TV programs in NCL (Nested Context Language). During many years, this was the main solution used by the research community in Brazil.
  - Web site: <http://sourceforge.net/projects/composer-ncl/>
- MultiJADS (2002-2004)
  - This was a domain independent multiagent tool designed to support decision making in concurrent and distributed projects. I was in charge of the communication infrastructure between servers and peer clients.
  - Web site: <http://sourceforge.net/projects/multijads/>

*References available upon request.*