Henrique Emanuel Mostaert Rebêlo

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URL: http://www.cin.ufpe.br/~hemr/

Education

Federal University of Pernamuco, Recife, PE.   **March 2009—present**

Doctor of Philosophy in Computer Science, expected in 2013. provisory Thesis title: *A Design By Contract Modularization Method*. Thesis supervisor: Professor Ricardo Massa F. Lima. Thesis co-supervisor: Gary T. Leavens.

State University of Pernamuco, Recife, PE.   **Aug. 2006—May 2008**

Master of Science in Computer Engineering, received in May, 2008. Dissertation title: *Implementing JML Contracts with AspectJ*. Dissertation supervisor: Professor Ricardo Massa F. Lima. Dissertation co-supervisor: Márcio L. Cornélio.

Faculdades Integradas Barros Melo (College), Olinda, PE.   **Feb. 2002—Dec. 2005**

Bachelor of Information System, with High Distinction and Honors in Computer, received in January, 2006.

Research Interests

Aspect-Oriented Software Development, Design by Contract, Software Specification and Verification, Software Architecture, Product Lines, Software Metrics, Empirical Software Engineering, Programming Languages.

Researcher Intern Employment

Microsoft Research, Redmond, WA.   **May 2010—August 2010**

Software Reliability Research group (2010). Working with program analysis and program verification to improve the quality of software. More information is available on the web from the URL: http://research.microsoft.com/en-us/groups/srr/.

Teaching Employment

Faculdades Integradas Barros Melo (College), Olinda, PE.   **August 2008—December 2009**

Assistant Professor (2008-2009). Teaching undergraduate courses in programming languages and software engineering. Taught the undergraduate course "Techniques of Imperative Programming" (2009). Taught the undergraduate course "Logic Programming" (2009). Taught the undergraduate course "Software Architecture and Design Patterns" (2009). Taught the undergraduate course

"Aspect-Oriented Programming" (2009). Taught the undergraduate course "Compiler Construction" (2009). Taught the undergraduate course "Software Development for Mobile Devices" (2008). Taught the undergraduate course "Information Systems" (2008).

Students

B.S. Students at Faculdades Integradas Barros Melo

Manoel Francisco Quintas Correia, undergraduate research project, 2009.

Other Employment

C.E.S.A.R - Recife Center for Advanced Studies and Systems, Recife, PE.   **July 2005—June 2006**

Software Engineering (2005-2006). C.E.S.A.R is a private institution that creates products, services and companies using Information Technology and Communication (ITC). More information is available on the web from the URL: `http://www.cesar.org.br/english_novo/cesar/`.

Journal Publications

Submitted Research Papers

Henrique Rebêlo, Ricardo Lima, Uirá Kulesza, Cláudio Sant'Anna, Yuanfang Cai, Roberta Coelho, Alexandre Mota and Márcio Ribeiro. **Quantifying the Effects of Aspectual Decompositions on Design By Contract Modularization: A Maintenance Study**. Submitted to *International Journal of Software Engineering and Knowledge Engineering*, 30 pages, February, 2012.

Published Research Papers

Henrique Rebêlo, Ricardo Lima, Gary T. Leavens, Márcio Cornélio, Alexandre Mota, and César Oliveira. **Optimizing Generated Aspect-Oriented Assertion Checking Code for JML Using Program Transformations: An Empirical Study**. *Science of Computer Programming*. October, 2012. `http://dx.doi.org/10.1016/j.scico.2012.09.003`

Conference Publications

Published Research Papers

Shuvendu Lahiri, Chris Hawblitzel, Ming Kawaguchi, and Henrique Rebêlo. **SymDiff: A language-agnostic semantic diff tool for imperative programs**. In Proc. of the *24th International Conference on Computer Aided Verification (CAV 2012)*, California, USA, July 07-13, 2012, pp. 712-717.

Henrique Rebêlo, Ricardo Lima, Alexandre Mota, César Oliveira, and Márcio Ribeiro. **Enforcing Contracts for Aspect-Oriented Programs with Annotations, Pointcuts and Advice**. In Proc. of the *24th International Conference on Software Engineering and Knowledge Engineering (SEKE 2012)*, San Francisco Bay, USA, July 01-03, 2012, pp. 148-153. (Conference acceptance rate for full papers: = 27%)

Henrique Rebêlo, Ricardo Lima, Alexandre Mota, César Oliveira, and Márcio Ribeiro. **Checking Contracts for AOP with XPIDRs**. In Proc. of the *24th International Conference on Software Engineering and Knowledge Engineering (SEKE 2012)*, **Demo Session**, San Francisco Bay, USA, July 01-03, 2012, pp. A-5. (**Best Demo Award**)

Henrique Rebêlo. **Towards Client-Aware Interface Specifications**. In Proc. of the *OOPSLA Companion*, **Doctoral Symposium**, Portland, OR, USA, October 22-27, 2011, pp. 71-74. 4 pages.

Henrique Rebêlo, Ricardo Lima, and Gary T. Leavens. **Modular Contracts with Procedures, Annotations, Pointcuts and Advice**. In Proc. of the *XV Brazilian Symposium on Programming Languages (SBLP 2011)*, Sao Paulo, Brazil, September 29-30, 2011.

Henrique Rebêlo, Ricardo Lima, Uirá Kulesza, Cláudio Sant'Anna, Roberta Coelho, Alexandre Mota, Márcio Ribeiro, and César Oliveira. **Assessing the Impact of Aspects on Design By Contract Effort: A Quantitative Study**. In Proc. of the *23rd International Conference on Software Engineering and Knowledge Engineering (SEKE 2011)*, Miami, USA, July 07-09, 2011. (Conference acceptance rate: = 31%)

Rodrigo Andrade, Márcio Ribeiro, Vaidas Gasiunas, Lucas Satabin, Henrique Rebêlo, and Paulo Borba. **Assessing Idioms for Implementing Features with Flexible Binding Times**. In Proc. of the *15th European Conf. Software Maintenance and Reengineering (CSMR)*, Oldenburg, Germany, March 1-4, 2011, pp. 231-240. (29 accepted / 101 submitted)

Henrique Rebêlo, Ricardo Lima, Uirá Kulesza, Roberta Coelho, Alexandre Mota, Márcio Ribeiro, and José Elias Araújo. **The Contract Enforcement Aspect Pattern**. In Proc. of the *8th Latin American Conference on Pattern Languages of Programming (SugarLoafPLoP'10)*, Salvador, Brazil, September 23-26, 2010. 16 pages.

José Elias Araújo, Henrique Rebêlo, Ricardo Lima, Alexandre Mota, Fernando Castor, Tiago Lima, Juliana Lucena, and Filipe Lima. **An Aspect-Based Approach for Concurrent Programming using CSP Features**. In Proc. of the *5th International Conference on Software and Data Technologies (ICSOFT 2010)*, Athens, Greece, July, 2010, pp. 226-231. 6 pages.

Henrique Rebêlo, Ricardo Lima, Márcio Cornélio, Gary T. Leavens, Alexandre Mota, and César Oliveira. **Optimizing JML Features Compilation in Ajmlc Using Aspect-Oriented Refactorings**. In Proc. of the *XIII Brazilian Symposium on Programming Languages (SBLP 2009)*, Gramado-RS, Brazil, August 19-21, 2009. 14 pages. (12 accepted / 30 submitted)

Henrique Rebêlo, Ricardo Lima, Márcio Cornélio, and Sérgio Soares. **A JML compiler based on AspectJ**. In Proc. of the *First International Conference on Software Testing, Verification and Validation (ICST 2008)*, Lillehammer, Norway, April 9-11, 2008, pp. 541-544. (Conference acceptance rate: = 29%)

Henrique Rebêlo, Ricardo Lima, Márcio Cornélio, Sérgio Soares, and Leopoldo Ferreira. **Implementing Java Modeling Language Contracts with AspectJ**. In Proc. of the *the 23rd Annual ACM Symposium on Applied Computing (SAC 2008)*, Fortaleza, Ceará, Brazil, March 16-20, 2008, pp. 228-233. (Conference acceptance rate: = 30%)

Alessandro Lima, Jairson Vitorino, and Henrique Rebêlo. **Buzzmonitor: A Tool For Measuring Word Of Mouth Level In On-Line Communities**. In Proc. of the *the Internacional Conference on E-Commerce (IADIS 2005)*, Porto, Portugal, October 19-22, 2005.

Workshop Publications

Accepted Research Papers to Appear

Henrique Rebêlo, Gary T. Leavens, Ricardo Lima, Paulo Borba, and Márcio Ribeiro. **Modular Aspect-Oriented Design Rule Enforcement with XPIDRs**. Accepted for *Foundations of Aspect-Oriented Languages workshop (FOAL 2013) at AOSD 2013*. Fukuoka, Japan, March 26, 2013.

Published Research Papers

Chris Hawblitzel, Ming Kawaguchi, Shuvendu K. Lahiri, and Henrique Rebêlo. **Mutual Summaries: Unifying Program Comparison Techniques**. In Proc. of the *1st Workshop on Intermediate Verification Languages (Boogie 2011)* at CADE-23 2011, Wroclaw, Poland, August 01, 2011.

Henrique Rebêlo, Roberta Coelho, Ricardo Lima, Gary T. Leavens, Marieke Huisman, Alexandre Mota, and Fernando Castor. **On the Interplay of Exception Handling and Design by Contract: An Aspect-Oriented Recovery Approach**. In Proc. of the *13th Workshop on Formal Techniques for Java-like Programs (FTfJP 2011) at ECOOP 2011*, Lancaster, UK, July 26, 2011.

José Elias Araújo, Henrique Rebêlo, Ricardo Lima, Alexandre Mota, Uirá Kulesza, and Cláudio Sant'Anna. **An annotation-based approach for JCSP concurrent programming: a quantitative study**. In Proc. of the *1st workshop on Modularity in systems software (MISS 2011) at AOSD 2011*, Porto de Galinhas, Pernambuco, Brazil, March 22, 2011, pp. 7-11.

Carlos Eduardo Pontual, Rodrigo Bonifácio, Henrique Rebêlo, Márcio Ribeiro, and Paulo Borba. **Modularizing Variabilities with CaesarJ Collaboration Interfaces**. In Proc. of the *3rd Workshop on Assessment of Contemporary Modularization Techniques (ACoM 2009) at OOPSLA 2009*, Orlando, Florida, USA, 26 October 2009.

Márcio Ribeiro, Rodrigo Cardoso, Paulo Borba, Rodrigo Bonifácio, and Henrique Rebêlo. **Does AspectJ Provide Modularity when Implementing Features with Flexible Binding Times?**. In Proc. of the *the III Latin American Workshop on Aspect-Oriented Software Development, (LA-WASP 2009) at SBES 2009*, Fortaleza, Ceará, Brazil, October, 2009.

Henrique Rebêlo, Sérgio Soares, Ricardo Lima, Paulo Borba, and Márcio Cornélio. **JML and Aspects: The Benefits of Instrumenting JML Features with AspectJ**. In Proc. of the *the 7th International Workshop on Specification and Verification of Component-Based Systems, (SAVCBS 2008) at FSE 2008*, Atlanta, Georgia, USA, November 9-14, 2008.

Posters

Henrique Rebêlo and Márcio Ribeiro. **Guiding the use of AspectJ Advice: An Initial Assessment**. In Proc. of the *the III Latin American Workshop on Aspect-Oriented Software Development, (LA-WASP 2009) at SBES 2009*, Fortaleza, Ceará, Brazil, October, 2009.

Other Research Publications

Technical Reports

Chris Hawblitzel, Ming Kawaguchi, Shuvendu Lahiri, and Henrique Rebêlo. **Mutual summaries and relative termination**. Technical report MSR-TR-2011-112, Microsoft Research, October, 2011.

Henrique Rebêlo, Gary T. Leavens, and Ricardo Lima. **Modular Enforcement of Supertype Abstraction and Information Hiding with Client-Side Checking**. Technical report CS-TR-11-07, School of Electrical Engineering and Computer Science, University of Central Florida, October, 2011.

Henrique Rebêlo, Ricardo Lima, and Gary T. Leavens. **Modular Contracts with Procedures, Annotations, Pointcuts and Advice**. Technical report CS-TR-11-05, School of Electrical Engineering and Computer Science, University of Central Florida, September, 2011.

Ming Kawaguchi, Shuvendu K. Lahiri, and Henrique Rebêlo. **Conditional equivalence**. Technical report MSR-TR-2010-119, Microsoft Research, July, 2010.

Henrique Rebêlo, Ricardo Lima, Gary T. Leavens, Márcio Cornélio, Alexandre Mota, and César Oliveira. **Optimizing Generated Aspect-Oriented Assertion Checking Code for JML Using Programming Laws: An Empirical Study**. Technical report CS-TR-10-01, School of Electrical Engineering and Computer Science, University of Central Florida, February, 2010.

Henrique Rebêlo, Ricardo Lima, Márcio Cornélio, Gary T. Leavens, Alexandre Mota, and César Oliveira. **Optimizing JML Features Compilation in Ajmlc Using Aspect-Oriented Refactorings**. Technical report CS-TR-09-05, School of Electrical Engineering and Computer Science, University of Central Florida, April 2009.

Master's Thesis

Henrique Rebêlo. **Implementing JML Contracts with AspectJ**. Master's Thesis, Departament of Computing and Systems, State University of Pernambuco, Brazil, May 2008.

Publications in Portuguese

Henrique Rebêlo and Ricardo Lima. **Programação Funcional Usando Erlang**. CESBAM - Revista do Centro de Estudos Superiores Barros Melo , ISSN 1517-5251, Olinda, Março de 2004 pp. 07-17.

Talks

Invited Talks

Henrique Rebêlo. **Checking Contracts for AOP using XPIDRs**. Invited Talk in EECS Seminar Series at University of Central Florida (UCF), School of Electrical Engineering & Computer Science, November 1, 2012, Florida, USA.

Henrique Rebêlo. **Assessing the Impact of Aspects on Design By Contract Effort: A Quantitative Study**. Invited Talk in EECS Seminar Series at University of Central Florida (UCF), School of Electrical Engineering & Computer Science, July 14, 2011, Florida, USA.

Henrique Rebêlo. **Refactoring Contracts using Aspects: Is it Always Worthwhile?**. Invited Lightning Talk in AOSD Workshop on Modularity in Systems Software (Miss'11), March 22, 2011, Porto de Galinhas, Pernambuco, Brazil.

Henrique Rebêlo. **AOP, Program Verification, and Applications**. Invited Talk in SRR Seminar Series'10, Microsoft Research, July, 2010, Redmond, USA.

Henrique Rebêlo. **AOP Framed!**. Invited Talk in EECS Seminar Series at University of Central Florida (UCF), School of Electrical Engineering & Computer Science, November 3, 2009, Florida, USA.

Henrique Rebêlo. **An Aspect-Oriented Approach to implement JML Features**. Invited Talk in EECS Seminar Series at University of Central Florida (UCF), School of Electrical Engineering & Computer Science, November 17, 2008, Florida, USA.

Conference and Workshop Talks

Henrique Rebêlo. **Enforcing Contracts for AOP with Procedures, Annotations, Pointcuts and Advice**. 24th International Conference on Software Engineering and Knowledge Engineering (SEKE 2012), July 2012, San Francisco Bay, USA.

Henrique Rebêlo. **Checking Contracts for AOP using XPIDRs**. 24th International Conference on Software Engineering and Knowledge Engineering (SEKE 2012), **Demo Session**, July 2012, San Francisco Bay, USA.

Henrique Rebêlo. **Modular Contracts with Procedures, Annotations, Pointcuts and Advice**. XV Brazilian Symposium on Programming Languages, September, 2011, Sao Paulo, Brazil.

Henrique Rebêlo. **Assessing the Impact of Aspects on Design By Contract Effort**. 23rd International Conference on Software Engineering and Knowledge Engineering (SEKE 2011), July 2011, Miami Beach, USA.

Henrique Rebêlo. **The Contract Enforcement Aspect Pattern**. 8th Latin American Conference on Pattern Languages of Programming (SugarLoafPLoP'10), Salvador, Brazil, September 23-26, 2010.

Henrique Rebêlo. **Modularizing Variabilities with CaesarJ Collaboration Interfaces**. 3rd Workshop on Assessment of Contemporary Modularization Techniques (ACoM 2009) at OOPSLA 2009, Orlando, Florida, USA, October 26 2009.

Henrique Rebêlo. **Guiding the use of AspectJ Advice: An Initial Assessment**. III Latin American Workshop on Aspect-Oriented Software Development, LA-WASP 2009, SBES 2009, October 2009, Fortaleza, Ceará, Brazil.

Henrique Rebêlo. **Optimizing JML Feature Compilation in Ajmlc using Aspect-Oriented Refactorings**. XIII Brazilian Symposium on Programming Languages, August, 2009, Gramado, Rio Grande do Sul, Brazil.

Henrique Rebêlo. **JML and Aspects: The Benefits of Instrumenting JML Features with AspectJ**. 7th International Workshop on Specification and Verification of Component-Based Systems, 16th ACM SIGSOFT International Symposium on the Foundations of Software Engineering, November 2008, Atlanta, USA.

Henrique Rebêlo. **A JML compiler based on AspectJ**. 1st International Conference on Software Testing, Verification and Validation, April 2008, Lillehammer, Norway.

Henrique Rebêlo. **Implementing Java Modeling Language Contracts with AspectJ**. 23rd ACM Symposium on Applied Computing, March 2008, Fortaleza, Brazil.

Conferences and Workshops Attended

Conferences

ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages and Applications (SPLASH/OOPSLA 2012), Arizona, USA.

3rd Brazilian Conference on Software: Theory and Practice (CBSoft 2012), September, 2012.

24th International Conference on Software Engineering and Knowledge Engineering (SEKE 2012), July, 2012, San Francisco Bay, USA.

ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages and Applications (SPLASH/OOPSLA 2011), Portland, OR, USA.

ACM SIGSoft XXV Brazilian Symposium on Software Engineering (SBES 2011), September, 2011, Sao Paulo, Brazil.

XV Brazilian Symposium on Programming Languages (SBLP 2011), September, 2011, Sao Paulo, Brazil.

V Brazilian Symposium on Software Components, Software Architecture and Reuse (SBCARS 2011), September, 2011, Sao Paulo, Brazil.

XIV Brazilian Symposium on Formal Methods (SBMF 2011), September, 2011, Sao Paulo, Brazil.

Latin American MiniConference on Pattern Languages of Programming (MiniPLoP Brasil'11), September, 2011, Sao Paulo, Brazil.

23rd International Conference on Software Engineering and Knowledge Engineering (SEKE 2011), July, 2011, Miami Beach, USA.

10th Annual ACM International Conference on Aspect-Oriented Software Development (AOSD 2011), Porto de Galinhas, Pernambuco, March 21-25, 2011, Brazil.

ACM SIGSoft XXIV Brazilian Symposium on Software Engineering (SBES 2010), September, Salvador, Bahia, Brazil.

VIII Latin American Conference on Pattern Languages of Programming (SugarLoafPLoP'10), September, 2010, Salvador, Bahia, Brazil.

XIV Brazilian Symposium on Programming Languages (SBLP 2010), September, 2010, Salvador, Bahia, Brazil.

IV Brazilian Symposium on Software Components, Software Architecture and Reuse (SBCARS 2010), September, 2010, Salvador, Bahia, Brazil.

ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA 2009), Orlando, Florida, USA.

3rd Workshop on Assessment of Contemporary Modularization Techniques (ACoM 2009) at OOPSLA 2009, Orlando, Florida, USA, October 2009.

XXIII Brazilian Symposium on Software Engineering (SBES 2009), October, Fortaleza, Ceará, Brazil.

XIII Brazilian Symposium on Programming Languages (SBLP 2009), August, 2009, Gramado, Rio Grande do Sul, Brazil.

XII Brazilian Symposium on Formal Methods (SBMF 2009), August, 2009, Gramado, Rio Grande do Sul, Brazil.

1st International Conference on Software Testing, Verification and Validation (ICST 2008), April 2008, Lillehammer, Norway.

23rd ACM Symposium on Applied Computing (SAC 2008), March 2008, Fortaleza, Brazil.

Sixth Latin American Conference on Pattern Languages of Programming (SugarLoafPLoP 2007), May 2007, Porto de Galinhas, Pernambuco, Brazil.

XI Brazilian Symposium on Programming Languages (SBLP 2007), May 2007, Natal, Rio Grande do Norte, Brazil.

IX Brazilian Symposium on Programming Languages (SBLP 2005), May 2005, Recife, Pernambuco, Brazil.

Workshops

VI Latin American Workshop on Aspect-Oriented Software Development, (LA-WASP 2012) at CB-SOFT 2012, September 2012, Natal, Brazil.

V Latin American Workshop on Aspect-Oriented Software Development, (LA-WASP 2011) at CB-SOFT 2011, September 2011, Sao Paulo, Brazil.

1st Workshop on Modularity in Systems Software (Miss 2011) at AOSD 2011, Porto de Galinhas, Pernambuco, March 22, Brazil.

10th Workshop on Foundations of Aspect-Oriented Languages (FOAL 2011) at AOSD 2011, Porto de Galinhas, Pernambuco, March 21, Brazil.

IV Latin American Workshop on Aspect-Oriented Software Development, (LA-WASP 2010) at CB-SOFT 2010, September 2010, Salvador, Bahia, Brazil.

III Latin American Workshop on Aspect-Oriented Software Development, (LA-WASP 2009) at SBES 2009, October 2009, Fortaleza, Ceará, Brazil.

3rd Workshop on Languages and Tools for Parallel and Distributed Programming (LTPD 2009) at (SBLP 2009), August, 2009, Gramado, Rio Grande do Sul, Brazil.

III Brazilian Workshop on Systematic and Automated Software Testing at (SBMF 2009), August, 2009, Gramado, Rio Grande do Sul, Brazil.

7th International Workshop on Specification and Verification of Component-Based Systems (SAVCBS 2008) at 16th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE 2008), November 2008, Atlanta, USA.

Short Courses

JML

Márcio Lopes, Rohit Gheyi, Tiago Massoni, and Henrique Rebêlo. JML Short Course at *CBSoft*, September 29, Salvador, Bahia, Brazil, 2010. More information is available on the web from the URL:
`http://wiki.dcc.ufba.br/CBSOFT/ShortCourseMC05`.

Professional Activities

Journal Referee

Editorial board member for International Journal On Advances in Software, since 2012.

Referee of the Special issue in Science of Computer Programming (SCP). Special issue on Software Evolution, Adaptability and Maintenance (Benevol), 2011. More information is available on the web from the URL:
`http://rmod.lille.inria.fr/benevol/pier/special-issue`

Program Committee

Program committee member of the 25th International Conference on Software Engineering and Knowledge Engineering (SEKE 2013), 2013.

Program committee member of the Forth IARIA International Conference on Advances in System Testing and Validation Lifecycle (VALID 2012), 2012.

Program committee member of the third IEEE International Conference on Information Science and Applications (ICISA 2012), 2012.

Program committee member of the Third IARIA International Conference on Advances in System Testing and Validation Lifecycle (VALID 2011), 2011.

Program committee member of the Second IEEE International Conference on Information Science and Applications (ICISA 2011), 2011.

Program committee member of the International Conference on IT Convergence and Security (IC-ITCS 2011), 2011.

Program committee member of the Second IARIA International Conference on Advances in System Testing and Validation Lifecycle (VALID 2010), 2010.

Program committee member of the First IARIA International Conference on Advances in System Testing and Validation Lifecycle (VALID 2009), 2009.

Events Organization

Local Organization

10th Foundations of Aspect-Oriented Languages workshop (FOAL 2011) will be held in conjunction with 10th International Conference on Aspect-Oriented Software Development (AOSD 2011), Porto de Galinhas, Pernambuco, 2011. More information is available on the web from the URL: `http://www.eecs.ucf.edu/FOAL/index.shtml`.

10th International Conference on Aspect-Oriented Software Development (AOSD 2011), Porto de Galinhas, Pernambuco, 2011. More information is available on the web from the URL: `http://aosd.net/2011/organization.html`.

Proceedings Chair

10th Foundations of Aspect-Oriented Languages workshop (FOAL 2011) will be held in conjunction with 10th International Conference on Aspect-Oriented Software Development (AOSD 2011), Porto de Galinhas, Pernambuco, 2011. More information is available on the web from the URL: `http://www.eecs.ucf.edu/FOAL/index.shtml`.

Software Artifacts

JML is a behavioral interface specification language for Java modules. It was originally developed by Al Baker, Clyde Ruby, Yoonsik Cheon, and Curtis Clifton and further development has been done in my PhD thesis, which includes a new JML compiler, Ajmlc: Aspect-Oriented JML Compiler. More information is available on the web from the URL: `http://www.cin.ufpe.br/~hemr/JMLAOP/`.

Petrilogic is an Eclipse based educational environment for teaching formal methods in graduation courses. The strategy is to create a set of plug-ins for aiding students in designing and analyzing Petri net models focused on specific domain of application. More information is available on the web from the URL: `http://www.dsc.upe.br/~petrilogic/`.

Buzzmonitor is a tool for measuring word of mouth level in on-line communities. More information is available on the web from the following paper URL:
`http://www.cin.ufpe.br/~hemr/papers/IADIS05_lima_vitorino_rebelo.pdf`.

Computer Societies Membership

Association for Computing Machinery (ACM) (No. 0779302), member since: 2008.

IEEE Computer Society (No. 90648774), member since: 2009.

Brazilian Computer Society (SBC) (No. 15540), student member since: 2005.

Honors and Awards

Best Demo Award - In the 24th International Conference on Software Engineering and Knowledge Engineering (SEKE 2012), San Francisco Bay, USA, July 1-3, 2012.

MSR Internship - Selected as one of Microsoft Research Latin American Interns, Software Reliability Research (SRR) group, which is part of the Research in Software Engineering (RiSE) team, Redmond - 2010.

Certified ScrumMaster (CSM), Scrum Alliance, 2009.

Certified Scrum Product Owner (CSPO), Scrum Alliance, 2009.

Project Award - member of the Petrilogic project granted by IBM Eclipse Innovation Grants Awards Program, EIG 2005

Sun Certified Programmer for Java2 platform 1.4, Sun Microsystems, 2005.

College Honors Program, 2002-2005.

Last updated: January 28, 2013