

Pedro Martins

Curriculum Vitae

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Education

- 2010–2014 **Ph.D. Degree in Informatics**, *MAP-i Doctoral Program, Universidade do Minho*, under the supervision of João Saraiva and João Paulo Fernandes.
Thesis: Embedding Attribute Grammars and their Extensions using Functional Zippers
- 2008–2010 **Master's Degree in Informatics**, *Universidade do Minho*, final grade: 16.
Specialized Curricular Units:
- Communication Services and Ubiquitous Systems
 - Software Analysis and Design
- Thesis:** A Domain Specific Aspect Language for Matlab
- 2008 **Certificate in Advanced English (CAE)**, *Cambridge ESOL*, Final grade: C.
- 2003–2008 **Bachelor in Computer Sciences**, *Universidade do Minho*, final grade: 12.

Conference and Journal Papers

- 14 **Smelling Faults in Spreadsheets**, *Rui Abreu, Jácome Cunha, João Paulo Fernandes, Pedro Martins, Alexandre Perez and João Saraiva*, in the proceedings of the 3rd International Conference on Software Maintenance and Evolution (ICSME '14). IEEE Computer Society (to appear).
- 13 **Refactoring meets Model-Driven Spreadsheet Evolution**, *Jácome Cunha, João Paulo Fernandes, Pedro Martins, Rui Pereira and João Saraiva*, in the proceedings of the 9th International Conference on the Quality of Information and Communications Technology (QUATIC'14), pages 196-201, September 23-26 2014, Guimarães, Portugal. IEEE Computer Society.
- 12 **Zipper-based Modular and Deforested Computations**, *Pedro Martins, João Paulo Fernandes and João Saraiva*, in the proceeding of the DSL 2013, an intensive summer school in the field of domain specific languages (to appear).
- 11 **Refactoring Smelly Spreadsheet Models**, *Rui Pereira and Pedro Martins*, in the proceedings of the 14th International Conference on Computational Science and Its Applications (ICCSA'14), pages 556-571, June 30 - July 3 2014, Guimarães, Portugal. LNCS 8583.

- 10 **A Visual DSL for the Certification of Open Source Software**, *Tiago Carção and Pedro Martins*, in the proceedings of the 14th International Conference on Computational Science and Its Applications (ICCSA'14), pages 602-617, June 30 - July 3 2014, Guimarães, Portugal. LNCS 8583.
- 9 **Generating Attribute Grammar-based Bidirectional Transformations from Rewrite Rules**, *Pedro Martins, João Paulo Fernandes, João Saraiva and Eric Van Wyk*, in the proceedings of the 2014 ACM SIGPLAN Workshop on Partial Evaluation and Program Manipulation, (PEPM'14), pages 63-70, January 20-21, 2014 San Diego, California, USA. ACM Press.
- 8 **Zipper-based Attribute Grammars and their Extensions**, *Pedro Martins, João Paulo Fernandes and João Saraiva*, in the proceedings of the 17th Brazilian Symposium on Programming Languages (SBLP'13), pages 135-149, Brasilia, Brasil, September 29 - October 4. LNCS, 8129.
- 7 **A Framework for Modular and Customizable Software Analysis**, *Pedro Martins, Nuno Carvalho, João Paulo Fernandes, José João Almeida and João Saraiva*, in the proceedings of the 13th International Conference on Computational Science and Its Applications (ICCSA'13), pages 443-458, Ho Chi Minh City, Vietnam, June 24-27, 2013. LNCS, 7972.
- 6 **A combinator language for software quality reports**, *Pedro martins, João Paulo Fernandes and João Saraiva*, in the International Journal of Computer and Communication Engineering (IJCCE), vol. 2, no. 3, pp. 377-382, 2013.
- 5 **SmellSheet Detective: A Tool for Detecting Bad Smells in Spreadsheets**, *Jácome Cunha, João Paulo Fernandes, Pedro Martins, Jorge Mendes and João Saraiva*, in proceedings of the 2012 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC'2012) (Formal Demonstration), pages 243-244, Innsbruck, Austria, September/October 2012. IEEE Computer Society.
- 4 **A Web Portal for the Certification of Open Source Software**, *Pedro Martins, João Paulo Fernandes and João Saraiva*, in the proceedings of the Open Source Software Certification Conference (OPENCERT'12), pages 244-260, Thessaloniki, Greece, October 2012. LNCS, 7991.
- 3 **A Purely Functional Combinator Language for Process Management**, *Pedro Martins, João Paulo Fernandes and João Saraiva*, in the proceedings of the 1st Symposium on Languages, Applications and Technologies (SLATE'12), pages 51-69, Braga, Portugal. OASlcs OpenAccess Series in Informatics.
- 2 **Program and Aspect Metrics for Matlab**, *Pedro Martins, Paulo Lopes, João Paulo Fernandes, João Saraiva and João Cardoso*, in the proceedings of the 12th International Conference on Computational Science and Its Applications (ICCSA'12), pages 217-233, Salvador da Bahia, Brasil, June 2012, LNCS 733.
- 1 **Zipper-based embedding of modern attribute grammar extensions**, *Pedro Martins*, in the proceeding of the doctoral Symposium of the 3rd International Conference on Software Language Engineering (SLE'10), pages 15-20, Eindhoven, Netherlands, October 2010.

Books

- 1 **A Domain Specific Aspect Language for Matlab: Extending Matlab with Aspects**, Pedro Martins, LAP LAMBERT Academic Publishing, ISBN-10: 3659324981, ISBN-13: 978-3659324987.

The book publishes a revised version of the Master thesis.

Projects

- 8 **Grant holder on Project Languages and Tools for Critical Real Time Systems**, ref.^a NORTE-01-0124-FEDER-000062, with grant BPD-2014_BestCase_RL8.3_UMINHO.
- 7 **Grant holder on BEST CASE - Better Science Through Competitive Advanced Synergetic Efforts**, *Gestão confiável de grandes volumes de dados para armazenamento e processamento analítico* - ref.^a NORTE-01-0124-FEDER-000058, with grant BIM-2013_BestCase_RL3.2_UMINHO.
- 6 **Grant holder on System for Adapting the Vehicle dynamic parameters to the driving Environment and Driver capabilities (SAVED)**, through the program MIT Portugal, a collaboration between the Massachusetts Institute of Technology and portuguese academic, governmental and industrial partners, project ref. MIT-PT/TS-ITS/0036/2008.
- 5 **Grant holder on Bidirectional Transformations Applied to Programming Environments for Scientific Computing**, a joint research project with U.S. partners Eric Van Wyk, Ted Kaminski and Kevin Williams, all at the University of Minnesota, funded by Fundação Luso Americana para o Desenvolvimento (FLAD) under the program Portugal-U.S. Research Networks 2011.
- 4 **Collaborated on SpreadSheets as a Programming Paradigm (SSaaPP)**, funded by the ERDF through the Programme COMPETE and by the Portuguese Government through FCT - Fundação para a Ciência e a Tecnologia (Portuguese Foundation for Science and Technology), project ref. PTDC/EIA-CCO/108613/2008 within project PTDC/EIA/70271/2006.
- 3 **Collaborated on Foundations, Applications and Tools for Bidirectional Transformation (FATBIT)**, funded by the ERDF through the Programme COMPETE and by the Portuguese Government through FCT - Fundação para a Ciência e a Tecnologia (Portuguese Foundation for Science and Technology), project ref. FCOMP-01-0124-FEDER-020532.
- 2 **Grant holder on An Infrastructure for Certification and Re-engineering of Open Source Software (CROSS)**, funded by ERDF - European Regional Development Fund through the COMPETE Programme (operational programme for competitiveness) and by National Funds through the FCT - Fundação para a Ciência e a Tecnologia (Portuguese Foundation for Science and Technology) within project FCOMP-01-0124-FEDER-010049, Portuguese Foundation for Science and Technology) within project PTDC/EIA/70271/2006, with grant Ref B13-2011_PTDC/EIA-CCO/108995/2008.

- 1 **Grant holder on Aspects and Compiler Optimizations for Matlab System Development (AMADEUS)**, funded by the Portuguese Government through FCT - Fundação para a Ciência e a Tecnologia (Portuguese Foundation for Science and Technology) within project PTDC/EIA/70271/2006, with grant Ref BI-1_PTDC/EIA/70271/2006.

Communication Skills

- 2014 Oral Presentation at the International Conference on Computational Science and Its Applications (ICCSA'14).
- 2014 Oral Presentation at the Workshop on Partial Evaluation and Program Manipulation (PEPM'14).
- 2013 Oral Presentation at the the 17th Brazilian Symposium on Programming Languages (SBLP'13).
- 2013 Oral Presentation at the Summer School on Domain specific languages (DSL'13).
- 2012 Oral Presentation at the Joint SSaaPP (SpreadSheets as a Programming Paradigm)/FATBIT (Foundations, Applications and Tools for Bidirectional Transformation) workshop, two projects with which I have collaborated.
- 2012 Oral Presentation at the Open Source Software Certification Conference (OPENCERT'12).
- 2010 Oral Presentation at the doctoral Symposium of the 3rd International Conference on Software Language Engineering (SLE'10).

Other Research Activities

Reviewer

- 2014 Reviewer for the special issue of the Software Quality Journal: Quality in Model-Driven Engineering (special issue for the International Conference in Software Maintenance and Evolution, ICSME'14).
- 2014 External reviewer for the International Conference on Software Language Engineering (SLE'14).
- 2013 External reviewer for the International Conference on Computational Science and Its Applications (SBLP'13).
- 2010 Reviewer in the Doctoral Symposium of the 3rd International Conference on Software Language Engineering (SLE'10).

Research Partners

- 2015 Invitee researcher on the National Institute of Informatics, Tokyo, Japan, during the month of February, supported by a mobility grant by this institute.
- 2014 Invitee researcher on the Universidad de Montevideo, Montevideo, Uruguay, during the month of October, supported by a mobility grant by the same university
- 2011 / 2012 Young researcher in the University of Minnesota, Minneapolis, USA, under the supervision of Eric Van Wyk, for a total of six months: three months between October and December, 2011 and three more months between April and June 2012.

Summer Schools

- 2013 Attended the Summer School on Domain Specific Languages (DSL'13).
- 2011 Attended the 4th Summer School on Generative and Transformational Techniques in Software Engineering (GTTSE'11).
- 2010 Attended the 4th Central European Functional Programming Summer School (CEFP'10).

Teaching

- 2012 Lab. Assistant for the course of Laboratórios de Informática, a first year course in the Engineering Informatics bachelor, Universidade do Minho.
- 2011 Computer Graphics, in the 6th edition of Desenvolvimento de Produtos Multimédia, a technological specialization course from Instituto Superior de Barcelos (IPCA).

Languages

- Portuguese **Mother tongue**
- English **Advanced**
- Spanish **Basic**

Basic words and phrases