

Felipe Meneguzzi

PhD

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Education

- 2005–2009 **PhD in Computer Science**, *King's College London/University of Southampton*, UK.
- 2002–2003 **MSc in Computer Science**, *PUCRS*, Porto Alegre, Brazil.
Performance Coefficient: 9.41 (out of 10) - 1st of 19 students
- 1997–2001 **BSc in Computer Science**, *PUCRS*, Porto Alegre, Brazil.
Performance Coefficient: 9.15 (out of 10) - 1st of 70 students

PhD thesis

- title Extending agent languages for multiagent domains
- supervisor Professor Michael Luck
- description Introduction of planning, cooperative planning, motivated reasoning and normative processing in an AgentSpeak(L) (an agent language) interpreter. Prototype was an extension of the Jason AgentSpeak(L) interpreter, and included a Java planning algorithm, and a scripted agent environment middleware.

Master thesis

- title *Planejamento Proposicional em Agentes BDI (Propositional Planning in BDI Agents)*
- supervisor Dr. Avelino Zorzo
- description Introduction of planning capabilities to a logic-based agent system. Prototype included a C++ implementation of Graphplan.

Diploma thesis

- title *ICE: Kernel de Agentes para Jogos (ICE: Agent Kernel for Games)*
- supervisor Dr. Michael da Costa Móra
- description Implementation of a C++ agent interpreter, the demo included an OpenGL 2D game that used the agent interpreter to control in-game characters.

Employment

Academia

- 2009-2011 **Postdoctoral Research Fellow**, *Carnegie Mellon University*, Pittsburgh, USA.
Work in a joint US/UK project
- 2007-2009 **Part-time Research Assistant**, *King's College London*, London, UK.
Work in EU-funded CONTRACT project
Implementation of electronic contracting-based agent system prototype
- 2003-2004 **Research Assistant**, *Pontificia Universidade Catolica do RS*, Porto Alegre, Brazil.
Work in HP-funded projects
Led a team of 3 people
Research on digital publishing tools and variable data printing
- 2000-2003 **Research Assistant**, *Pontificia Universidade Catolica do RS*, Porto Alegre, Brazil.
Work in HP-funded projects
Research on embedded Linux
Fulltime work while in MSc

Industry

- 2004-2005 **Software Engineer**, *Hewlett-Packard*, Porto Alegre, Brazil.
Imaging and Printing Labs
Managed a development team of 6 software engineers
Responsible for software design and releases

Industry Projects

- 2005 **Technical Leader**, *Hewlett Packard Brazil*, Implementation of web-based manager software for the HP Forms Automation System.
Forms Automation System at HP
- 2005 **Technical Leader**, *Hewlett Packard Brazil*, Integration of variable data printing XSL-FO processor within a print station software (collaboration with Hewlett Packard Vancouver).
- 2004-2005 **Software Engineer**, *Hewlett Packard Brazil*, Implementation of an advanced prototype of the Pluribus project (collaboration with HP Labs Palo Alto) – Prototype consisted of a camera-projector system that adjusts multiple projectors output at the pixel level to maximise lumens and resolution of a single, combined, image. Implementation took advantage of GPU shaders to achieve real-time image adjustment.
Pluribus at HP
- 2003-2004 **Research Assistant**, *PUCRS/Hewlett Packard Brazil*, Research on arbitrarily shaped text-layout for an XSL-FO processor within the Anvil project (collaboration with HP Labs Bristol) – Prototype consisted of a re-implementation of the FOP XSL-FO typesetter that uses Java2D graphics primitives calculate text positioning.
HP Labs Technical Report
- 2003 **Research Assistant**, *PUCRS/Hewlett Packard Brazil*, Integration of an embedded Java VM within an embedded Linux platform (collaboration with Hewlett Packard Boise).
- 2001-2002 **Research Assistant**, *PUCRS/Hewlett Packard Brazil*, Implementation of an embedded Linux (collaboration with Hewlett Packard Brazil).

Teaching

- 2007–2008 **Tutor**, *King's College London*, London, UK.
Small Group Tutorials for Undergraduate Students on Computer Systems, Programming Practice, Programming Concepts, Programming Applications, Distributed Systems and Software Engineering
Tutorials for MSc Students on Internet Systems
- 2006–2007 **Tutor**, *King's College London*, London, UK.
Small Group Tutorials for Undergraduate Students on Programming Applications, Distributed Systems and Software Engineering
Tutorials for MSc Students on Internet Systems
- 2006–2007 **Lab Assistant**, *King's College London*, London, UK.
Assisted Java Programming Labs
- 2005–2006 **Lab Assistant**, *University of Southampton*, Southampton, UK.
Assisted Java Programming Labs
- 2003 **Lecturer**, *PUCRS*, Porto Alegre, Brazil.
Taught Introduction to Computing (History of Computer Science, Binary System, etc)

Technology Skills

Programming

- Java **Experienced (11 years)**, *Worked in large Java-based projects for HP and in academia.*
- C/C++ **Experienced (6 years)**, *Worked in one C++-based project for HP and minor projects in academia.*
- OO Design **Experienced (9 years)**, *Designed various Object-Oriented projects for HP and academia using design patterns and other OO techniques.*
- AgentSpeak(L) **Experienced (7 years)**, *PhD thesis develops extensions to the AgentSpeak(L) agent language.*
- Prolog **Intermediate (5 years)**, *Developed an academic project in Prolog.*
- SQL **Intermediate**, *Worked with SQL-based database technologies using MySQL.*
- Scripting **Intermediate**, *Some experience using various scripting languages, such as AWK, SED and bash.*
- JUnit **Experienced.**
- Ant **Experienced.**
- Ruby **Novice.**

GUI APIs

- Java Swing and AWT **Experienced.**
- OpenGL **Novice.**
- Windows API **Novice.**

Development Environments

Eclipse	Experienced.
Visual Studio	Intermediate.
Vi	Intermediate.
CVS	Intermediate.
SVN	Intermediate.

Web technologies

XSL/XSL-FO	Experienced (4 years) , <i>Developed an XSL-FO typesetter for HP.</i>
HTML	Experienced.
CSS	Intermediate.
XML	Experienced.
SOAP	Intermediate.
Web Services	Intermediate.
PHP	Novice.

Operating Systems

Windows	Experienced.
MacOS	Intermediate.
Linux	Intermediate.

Development Methodologies

eXtreme Programming	Intermediate.
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Other Technologies

Postscript	Intermediate.
PDF	Intermediate.

Side Projects

- Java **Java game engine**, *Development of a full game engine using Java*, both game engine core and graphics engine were completed, small platform game developed as proof of concept.
- Java **Document duplicate detector**, *Development of a detector for duplicate documents within a folder structure*, detects duplicate files through various metrics including file attributes and PDF content, used to optimise personal PS/PDF paper database.
- C++ **Graphplan**, *Development of an object oriented Graphplan in C++*, capable of performing planning on first order logic, uses dynamic programming (the memoisation table) to optimise plan search.
Available at Emplan at Sourceforge

Awards

- 2001 Best performing undergraduate student award.

Grants and Funding

- 2009 **Scholarship**, *Travel scholarship to attend AAMAS '09*, International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS), USA.
- 2005 **Scholarship**, *Fully funded PhD scholarship in the UK*, Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), Brazil.

Reviewing

- 2010 **Reviewer**, *Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Toronto, Canada.
- 2009 **Reviewer**, *Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS)*.
- 2009 **Reviewer**, *Eight International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Budapest, Hungary.
- 2008 **Reviewer**, *Nineteenth Brazilian Symposium on Artificial Intelligence*, Salvador, Brazil.

Presentations

- 2009 **Paper Presentation**, *Norm-based behaviour modification in BDI agents.*, Eighth International Conference on Autonomous Agents and Multiagent Systems, Budapest, Hungary.
- 2008 **Colloquium**, *Creating and reusing plans in agent languages*, KCL Department of Computer Science Colloquiums, London, UK.
- 2008 **Paper Presentation**, *Leveraging new plans in AgentSpeak(PL)*, Declarative Agent Languages and Technologies, Estoril, Portugal.
- 2008 **Paper Presentation**, *Electronic contracting in aircraft aftercare: A case study*, Seventh International Conference on Autonomous Agents and Multiagent Systems, Estoril, Portugal.
- 2007 **Paper Presentation**, *Motivations as an abstraction of meta-level reasoning*, Fifth International Central and Eastern European Conference on Multi-Agent Systems, Leipzig, Germany.
- 2006 **Paper Presentation**, *Motivations and declarative goals as cornerstones of autonomy*, Student Session of the Eighth European Agent Systems Summer School, Annecy, France.
- 2005 **Paper Presentation**, *Support for arbitrary regions in XSL-FO*, ACM Symposium on Document Engineering, Bristol, UK.
- 2004 **Invited Tutorial**, *Game Development Using Java*, RS Java Users Group, Porto Alegre, Brazil.
- 2004 **Paper Presentation**, *Propositional planning in BDI agents*, ACM Symposium on Applied Computing, Nicosia, Cyprus.

- 2004 **Paper Presentation**, *ICE: An agent-based kernel for games*, Brazilian Symposium on Games and Digital Entertainment, Curitiba, Brazil.
- 2003 **Paper Presentation**, *Modelling fault-tolerant systems using BDI agents*, Second Workshop on Theses and Dissertations on Dependable Computing, São Paulo, Brazil.

Languages

Portuguese	Native Speaker
English	Fluent
German	Average
Italian	Average
Spanish	Average

Publications

Patents

- 2005 **WO/2005/109230**, *Data Processing System and Method*, Optimization of XSL-FO generated documents.
HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P. [US/US]
DA SILVA, Ana Cristina Benso [BR/BR]
DE OLIVEIRA, João Batista Souza [BR/BR]
MENEGUZZI, Felipe Rech [BR/BR]
MEIRELLES, Leonardo Luceiro [BR/BR]
- 2005 **WO/2005/109231**, *Data Processing System and Method*, Grouping of elements in the Area Tree phase of XSL-FO rendering.
HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P. [US/US]
DA SILVA, Ana Cristina Benso [BR/BR]
DE OLIVEIRA, João Batista Souza [BR/BR]
MENEGUZZI, Felipe Rech [BR/BR]
MEIRELLES, Leonardo Luceiro [BR/BR]

Journal Papers

Felipe Meneguzzi, Avelino Francisco Zorzo, Michael da Costa Móra, and Michael Luck. Incorporating planning into BDI agents. *Scalable Computing: Practice and Experience*, 8(1):15–28, 2007.

Book Chapters

Simon Miles, Nir Oren, Michael Luck, Sanjay Modgil, Felipe Meneguzzi, Nora Faci, Camden Holt and Gary Vickers. Electronic Business Contracts between Services, in *Handbook of Research on P2P and Grid Systems for Service-Oriented Computing: Models, Methodologies and Applications*, published by IGI Global, (to appear), 2009.

Refereed Conference Papers

Felipe Meneguzzi, Sanjay Modgil, Nir Oren, Simon Miles, Michael Luck, Nora Faci, Camden Holt and Malcolm Smith. Monitoring and Explanation of Contract Execution: A Case Study in the Aerospace Domain. In *Proceedings of the Eighth International Conference on Autonomous Agents and Multiagent Systems – Industrial Track*, pages 77–84, 2009.

Felipe Meneguzzi and Michael Luck. Norm-based behaviour modification in BDI agents. In *Proceedings of the Eighth International Conference on Autonomous Agents and Multiagent Systems*, pages 177–184, 2009.

Sanjay Modgil, Noura Faci, Felipe Meneguzzi, Nir Oren, Simon Miles and Michael Luck. A Framework for Monitoring Agent-Based Normative Systems. In *Proceedings of the Eighth International Conference on Autonomous Agents and Multiagent Systems*, pages 153–160, 2009.

Felipe Meneguzzi, Simon Miles, Camden Holt, Michael Luck, Nir Oren, Nora Faci, and Martin Kollingbaum. Electronic contracting in aircraft aftercare: A case study. In *Proceedings of the Seventh International Conference on Autonomous Agents and Multiagent Systems – Industrial Track*, pages 63–70, 2008.

Felipe Meneguzzi and Michael Luck. Motivations as an abstraction of meta-level reasoning. In Hans-Dieter Burkhard, Gabriela Lindemann, Rineke Verbrugge, and László Varga, editors, *Proceedings of the Fifth International Central and Eastern European Conference on Multi-Agent Systems*, volume 4696 of *Lecture Notes in Artificial Intelligence*, pages 204–214. Springer, 2007.

Ana Cristina B. da Silva, Joao B. S. de Oliveira, Fernando T. M. Mano, Thiago B. Silva, Leonardo L. Meirelles, Felipe R. Meneguzzi, and Fabio Giannetti. Support for arbitrary regions in XSL-FO. In *Proceedings of the 2005 ACM Symposium on Document Engineering*, pages 64–73. ACM Press, 2005.

Avelino Francisco Zorzo and Felipe Rech Meneguzzi. An agent model for fault-tolerant systems. In *Proceedings of the 2005 ACM Symposium on Applied Computing*, pages 60–65. ACM Press, 2005.

Refereed Workshop Papers

Felipe Meneguzzi, Simon Miles, Michael Luck, Sanjay Modgil, Nir Oren, Camden Holt and Malcolm Smith. A contract-based system for aerospace aftercare. In Jesus E. Gabaldon and Javier Vazquez-Salceda, editors, *Proceedings of the Workshop on Technological trends in Enterprise Systems for SMEs and large enterprises: Heading towards the Future Internet*, (to appear), 2009.

Felipe Meneguzzi and Michael Luck. Interaction among agents that plan. In Bernhard Jung, Fabien Michel, Alessandro Ricci, and Paolo Petta, editors, *Proceedings of the Sixth International Workshop: From Agent Theory to Agent Implementation*, pages 133–140, 2008.

Felipe Rech Meneguzzi. Extending agent languages for autonomy. In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multiagent Systems: Mentoring Program*, pages 1744–1745, 2008.

Felipe Meneguzzi and Michael Luck. Leveraging new plans in AgentSpeak(PL). In Matteo Baldoni, Tran Cao Son, M. Birna van Riemsdijk, and Michael Winikoff, editors, *Proceedings of the Sixth Workshop on Declarative Agent Languages*, pages 63–78, 2008.

Noura Faci, Sanjay Modgil, Nir Oren, Felipe Meneguzzi, Simon Miles, and Michael Luck. Towards a monitoring framework for agent-based contract systems. In Matthias Klusch, Michal Pechoucek, and Axel Polleres, editors, *Proceedings of the Twelfth International Workshop on Cooperative Information Agents*, 2008.

Felipe Meneguzzi and Michael Luck. Composing high-level plans for declarative agent programming. In Matteo Baldoni, Tran Cao Son, M. Birna van Riemsdijk, and Michael Winikoff, editors, *Proceedings of the Fifth Workshop on Declarative Agent Languages and Technologies*, volume 4897 of *Lecture Notes in Computer Science*, pages 69–85. Springer, 2008.

Felipe Meneguzzi. Motivations and declarative goals as cornerstones of autonomy. In *Student Session of the Eighth European Agent Systems Summer School*, 2006.

Felipe Rech Meneguzzi, Leonardo Luceiro Meirelles, Fernando Tarlá Martins Mano, Ana Cristina Benso da Silva, and João Batista de Souza Oliveira. Strategies for document optimization in digital publishing. In *Proceedings of the 2004 ACM Symposium on Document Engineering*, pages 163–170. ACM Press, 2004.

Felipe Rech Meneguzzi, Avelino Francisco Zorzo, and Michael Da Costa Móra. Propositional planning in BDI agents. In *Proceedings of the 2004 ACM Symposium on Applied Computing*, pages 58–63, Nicosia, Cyprus, 2004. ACM Press.

Felipe Rech Meneguzzi, Paulo Henrique de Souza Schneider, Thais Christina Webber dos Santos, and Michael da Costa Móra. Ice: An agent-based kernel for games. In *Proceedings of the Third Brazilian Symposium on Games and Digital Entertainment*, 2004.

Felipe Rech Meneguzzi. Modelling fault-tolerant systems using BDI agents. In Francisco Brasileiro and Avelino Francisco Zorzo, editors, *Proceedings of the Second Workshop on Theses and Dissertations on Dependable Computing*, pages 19–24, São Paulo, Brazil, 2003. EPUSP.

Refereed Conference Posters

Ana Cristina B. da Silva, Joao B. S. de Oliveira, Fernando T. M. Mano, Thiago B. Silva, Leonardo L. Meirelles, Felipe R. Meneguzzi, and Fabio Giannetti. Support for arbitrary regions in XSL-FO: a proposal for extending XSL-FO semantics and processing model. In *Special interest tracks and posters of the 14th international conference on World Wide Web*, pages 1066–1067, New York, NY, USA, 2005. ACM.

Felipe R. Meneguzzi, Avelino F. Zorzo, and Michael C. Mora. Mapping mental states into propositional planning. In *Proceedings of the Third International Joint Conference on Autonomous Agents and Multiagent Systems*, pages 1514–1515, 2004.