

HUGO SERENO FERREIRA

CURRICULUM VITAE



Faculty of Engineering
University of Porto
Dep. of Informatics Engineering

hugo.sereno@fe.up.pt
<http://mindcode.org>

Ph.D. (All But Dissertation, 3rd year student) in Computer Science, Researcher at ParadigmaXis and INESC Porto and Invited Assistant Lecturer at FEUP/DEI. I'm currently writing my thesis on Model-Driven Software Engineering, specifically Frameworks, Design and Architectural Patterns on Adaptive Object-Models. I'm also a member of the Hillside Group, and the Software Engineering Group at FEUP.

EXPERIENCE

INVITED ASSISTANT LECTURER, FEUP — SINCE 9/2008

Teaching several courses to 3rd and 4th yr MSc Informatics students, including Software Engineering, Laboratory of Software Engineering, Formal Methods and Operating Systems.

RESEARCHER, INESC PORTO — SINCE 1/2009

My research is directly sponsored by the Associate Laboratory INESC Porto – Information Systems and Communications Unit (USIC).

LECTURER, ISTECS — 2008

Taught Database Management Systems to 2nd yr BSc Informatics students.

RESEARCHER/SENIOR SOFTWARE ENGINEER, PARADIGMAXIS — SINCE 9/2007

Performing my PhD studies by designing and developing the Oghma framework, and coordinating commercial products built upon it.

SOFTWARE ENGINEER, PARADIGMAXIS — 2003 – 2007

Worked on several industrial and research projects, fulfilling the roles of Software Engineer, Analyst, Architect, Project Manager and Team Leader, using eXtreme Programming and other Agile methodologies. Major partners included the NATO R&D agency (NC3A), the Portuguese Army, and Porto's Municipal City Hall.

FREELANCER — 2001 – 2003

Development of commercial Information Systems for Medical Healthcare and Sports Centers.

EDUCATION

Oct 2007 — Oct 2010. Universities of Minho, Aveiro and Porto – PhD in Computer Science.

Jan 2006. Faculty of Engineering, University of Porto – Licentiate in Informatics Engineering.

PEER-REVIEWED PUBLICATIONS

2009. Gabriela Soares, Rosaldo Rossetti, Nuno Flores, Ademar Aguiar, Hugo Ferreira. A Cooperative Personal Agenda in a Collaborative Team Environment. Proceedings of the 6th International Conference on Cooperative Design, Visualization and Engineering. Lecture Notes in Computer Science, Volume 5738/2009.

2009. António Rito Silva, David Martinho, Ademar Aguiar, Nuno Flores, Filipe F Correia, Hugo S Ferreira. An Implementation Model for Agile Business Process Tools. International Workshop on Organizational Design and Engineering. Portugal.

2009. Hugo Ferreira, Filipe Correia, Ademar Aguiar. Design for an Adaptive Object-Model Framework: An Overview. Proceedings of the 4th International Workshop on Models@runtime. Co-located with 12th International Conference on Model Driven Engineering Languages and Systems. Denver, Colorado. USA.

2009. Filipe Correia, Hugo Ferreira, Nuno Flores, Ademar Aguiar. Patterns for Consistent Software Documentation. Proceedings of the 16th Conference on Pattern Languages of Programs. Chicago, Illinois. USA.

2009. Hugo Ferreira, Ademar Aguiar, João Pascoal Faria. Adaptive Object Modelling: Patterns, Tools and Applications. 3rd Symposium on Doctoral Students of Software Engineering. Proceedings of the 4th International Conference on Software Engineering Advances. Porto. Portugal.

2009. Filipe Correia, Hugo Ferreira, Nuno Flores, Ademar Aguiar. Incremental Knowledge Acquisition in Software Development Using a Weakly-Typed Wiki. Proceedings of the 5th International Symposium on Wikis and Open Collaboration. Orlando, Florida. USA.

2008. Hugo Ferreira, Filipe Correia, Leon Welicki. Patterns for Data and Metadata Evolution in Adaptive Object Models. Proceedings of 15th Conference on Pattern Languages of Programs. Nashville, Tennessee. USA.

2008. Filipe Correia and Hugo Ferreira. Trends on Adaptive Object-Model Research. Proceedings of the 3rd Edition of the Doctoral Symposium in Informatics Engineering. Porto. Portugal.

DISSERTATIONS

2004. Framework for Development of Command and Control Systems at ParadigmaXis. LicEng. FEUP.

AWARDS AND CERTIFICATIONS

2009. Best paper award at the Symposium on Doctoral Students of Software Engineering (SEDES @ ICSEA).

2007 — Present. Doctoral Scholarship grant by Foundation for Science and Technology (FCT).

2004 — Present. NATO security clearance for military R&D.

INVITED TALKS/PRESENTATIONS

2009 Oct. Causal Connections, at the Models@Runtime Workshop.

2009 Jul. Adaptive Object-Models, at the Faculty of Science, University of Porto.

2009 May. Intro to Formal Proof, at the Faculty of Engineering, University of Porto.

2009 Mar. Pattern Languages, at the Faculty of Science, University of Porto.

2008 Dec. The Path To Abstraction, at ISTEC.

MAIN INDUSTRIAL PROJECTS

SMQVU, URBAN LIFE QUALITY — CMP

Analysis and development of an Information System for Câmara Municipal do Porto – Gabinete de Estudos e Projectos. Supports the assessment of “Urban Life Quality” attributes of the city of Porto, by providing a centralized tool to collect, analyze and synthesize statistical data over hundreds of indexes.

OGHMA, FRAMEWORK FOR DEVELOPMENT OF ADAPTIVE OBJECT-MODELS

The result of my PhD work, and currently the main infrastructure of several production-level Information Systems developed at ParadigmaXis, including Locvs, Zephyr and GISA.

LOCVS, ARCHITECTURAL AND ARCHAEOLOGICAL HERITAGE — CMP

Analysis and development of an Information System for Câmara Municipal do Porto, Departamento Municipal do Património e Cultura. It supports the full workflow of collection, process, analysis and storage of textual, graphical and geospatial heritage information of the city of Porto.

GEOXIS, GEO-SPATIAL BACKEND

Design and implementation of an infrastructure for displaying and analyzing geospatial data. Used by several partners including, but not limited to, Vodafone, Portugal Telecom, Optimus, Clix and ITP.

MRS, MIP REFERENCE SYSTEM — NC3A

Architecture, design and implementation of the MIP Reference System for LC2IEDM Data Replication, used by the NATO R&D Agency, and to which the alliance national implementations have to comply.

MIPX, FRAMEWORK FOR DEVELOPMENT OF COMMAND AND CONTROL SYSTEMS — NC3A

A framework built on top of my internship project, which provides an infrastructure to develop LC2IEDM-based Command and Control Systems.

RESEARCH AND ACADEMIC INTERESTS

Adaptive Object-Models, Design and Architectural Patterns, Object-Oriented Programming, Model-Driven Software Engineering, Meta-modeling, Meta-programming, Domain Specific Languages, Frameworks, Unified Modeling Language, eXtreme Programming and Agile methodologies, Software Quality and Tests, Formal languages and methodologies, Theory of Computation and Philosophy of Science.