
Name: Dr. Stefanos Zachariadis
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Selected Professional Experience

ARCHITECT AND LEAD CONSULTANT, Zühlke Engineering ltd: May 2006 - Present
Date

Architect for Alstom Power : Architect and team lead in a project rewriting a tool for designing steam turbines for power plants, for a leading manufacturer of power generation equipment. The approach we are replacing involves a repetitive and inefficient workflow using a large selection of disconnected tools, some more than 40 years old. My team is developing a new steam turbine design tool, that uses graph techniques to integrate and replace the existing toolset, thus unifying and improving the workflow involved. The new tool now offers visualisation, reporting, validation and other features that were impossible before. Our solution has been published at the TOPI workshop at the International Conference of Engineering, 2011. My tasks include development, performance optimisation of large graphs and datasets, interfacing with engineers, balancing stakeholders, performing user interviews and enforcing agile development. **Technologies:** Eclipse RCP, Java, Maven, Fortran, C.

Architect for JP Morgan Asset Management : Technical & organisational evaluation of legacy trade-confirmation system, handling trades in all asset classes for a major global asset management house. Was processing 4000 trades an hour and needed to process 40000. Project suffered from long release cycles and repeated unplanned rework. My tasks included: analysing architecture for performance and scalability, obtaining and interpreting performance metrics, evaluating legacy code, determining limiting factors and developing options for re-engineering. I reviewed requirements and team structure, examined development and testing practices and delivered recommendations for improvements. **Technologies:** Java, C, C++, Sybase, MQ.

Lead developer for British Airways : BA required a new SOA based architecture to parameterise its flight searching and selling abilities, as part of a major overhaul of its infrastructure. My tasks included requirements gathering and developing. I also introduced agile processes, designed the architecture and lead the team. **Technologies:** Java, Spring, Spring-MVC, Spring-WS, Weblogic, Oracle, Hibernate, Agile, SOA, TDD, XML, SOAP, Aqualogic.

Lead developer for UBS : Supported the development of a multi million line of code trading system, with hundreds of developers spread over 4 continents. I wrote custom software to support the distributed development life cycle (including mandatory distributed code reviews, a task based approach to development and a branch per task strategy) as a set of Eclipse plugins with a ClearCase backend. I wrote customised infrastructure to run all tests which cut the testing time by half. I developed other infrastructure to support the project, including a servlet-based configuration generation and deployment tool, launchers which allowed all developers to run and debug server processes on their machines, regression testing infrastructure, etc.
Technologies: Java, Eclipse RCP, XML, Groovy, ClearCase, Maven, Ant.

Trainer : Design and development of Zuhlke's Eclipse RCP platform training course. Primary instructor for course delivery.

CONSULTANT, IABG / The European Space Agency (via UCL Consulting): February 2005 - July 2005

Responsibilities : Consulting on the integration of software developed during my PhD studies with programmable satellite networks; the development of media transcoding and intelligent packet dropping in particular.

Education

PHILOSOPHY DOCTORATE IN COMPUTER SCIENCE, September 2001 - May 2005
DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY COLLEGE LONDON

PhD Thesis: *Adapting Mobile Systems Using Logical Mobility Primitives* Fully sponsored by the Engineering and Physical Sciences Research Council of the United Kingdom.

1ST CLASS HONOURS BSC IN COMPUTER SCIENCE, 1998 - 2001
DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY COLLEGE LONDON. Awarded the Praxis Award in Computer Science (Best project of year).

Other Qualifications, Achievements and Abilities

Finalist in the Set for Britain / Europe parliamentary competition for best new engineering research

An adaptable middleware system for sensor networks that I developed (based on work on my PhD thesis) is shipped as a standard part of the Contiki operating system for memory constrained systems (Telos motes port)

Certifications: Sun Certified Enterprise Architect (SCEA) , Sun Certified Java Programmer for Java 5 (SCJP5 Scored 91%), Sun Certified Mobile Application Developer (SCMAD Scored 85%), PMI Project Manager Professional

TECHNICAL SKILLS:

- **Programming Languages:** Proficient in Java (J2SE, J2ME, J2EE), Python, C, PHP, Groovy, Javascript, Bash, Pascal, Basic, some C#, C++, Erlang, Cocoa/Objective C (author of CycleMaps on app store), Perl and others
- **Specialised Knowledge:** Embedded systems and mobile computing development, OSGi, JMS, iOS, Unix (Linux), Agile, TDD, and Mote/ Sensor (Contiki / TinyOS) Programming, Spring, Test Automation, Fit/FitNesse, Unix Administration, Lifecycle support, Ant, Maven, CruiseControl, ORM, Web Services (SOAP / REST), SCM systems (Subversion, MKS, ClearCase, CVS), AJAX and others
- **Data Processing and Representation:** SQL, XML, HTML
- **GUI Programming:** Swing, GTK+, AWT, SWT, JFace, some Cocoa/Interface Builder

LANGUAGES: native Greek, fluent English, some French, German and Spanish.

Selected Publications

- S. Zachariadis, C. Mascolo and W. Emmerich. *The SATIN Component System - A Meta Model For Engineering Adaptable Mobile Systems*. In IEEE Transactions on Software Engineering (TSE), 32(11):910-927.
- L. Sacks, H.K. Sellappan, S. Zachariadis, S. Bhatti, P. Kirstein, W. Fritsche, G. Gessler and K. Mayer. *On the Manipulation of JPEG2000, In-Flight Using Active Components on Next Generation Satellites*. In Seventh Annual International Working Conference on Active and Programmable Networks (IWAN05). November 2005, La Cote d'Azur, France.
- C. Mascolo, L. Capra, S. Zachariadis and W. Emmerich. *XMIDDLE: A Data-Sharing Middleware for Mobile Computing*. In Personal and Wireless Communications Journal, Kluwer. April 2002.