

Francis Tang

BA (Oxon.), MSc (Oxon.), PhD (Edin.)

PERSONAL INFORMATION

Contact details available on request

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SKILLS AND EXPERIENCE

Technologies:

- Java, Servlets, JSP, Struts
- Oracle, Transact-SQL (Microsoft SQL Server), MySQL, PostgreSQL
- .net Framework, C#, VB, ASP.NET
- Grid, cluster computing, Sun GridEngine, Platform LSF, PBS, Condor, MPI
- PHP, CGI, XML/XSLT, C/C++, perl, python, bash, awk
- Linux/UNIX (Redhat, Debian, Solaris)
- Windows Server, Novell Netware

Tools:

- CVS, SVN (Subversion), dares (distributed revision control)
- Bugzilla, Trac, ClearQuest (issue trackers)
- JUnit, check (unit test framework for C/C++) , EMMA (Java coverage analysis)
- CheckStyle (coding style checker), CyVis (cyclomatic complexity analysis),
- Ant (build scripting), CruiseControl (continuous integration)
- Wire Shark / Ethereal (network analysis)

Other skills:

- Experience in team management, project management and client liaison

EDUCATION

PhD, Computer Science, 2002

University of Edinburgh

MSc (distinction), Computer Science, 1998

University of Oxford

BA, Mathematics, 1997

University of Oxford

Other

Merchant Taylors' School, Northwood

Special papers: Mathematics, Physics, (distinction, distinction)

A-Levels: Pure and Applied Mathematics, Physics, Chemistry (A, A, A, A)

EMPLOYMENT HISTORY

Google, Dublin, Ireland (since Jan 2008)

Role: Software Engineer (Site Reliability)

Dept: Site Reliability Engineering aka Google.com Engineering

Responsibilities:

1. Manage shared cluster resources
2. Develop tools for cluster resource management
3. Production monitoring

NDS, Staines, UK (Jan 2007 to Jan 2008)

Role: Senior Software Engineer

Dept: Broadcast Technologies, UK R&D

Responsibilities:

1. Software design and development (Java, XSLT, PL/SQL, XML)
2. Build system owner (Ant, CruiseControl)
3. Tools administrator (including Trac, Eclipse)
4. Process documentation

LShift Ltd, London, UK (Jul 2005 to Jan 2007)

Role: Senior Developer

Responsibilities:

1. Lead and Develop Software Projects
2. Project management / client liaison

Bioinformatics Institute, Singapore (Nov 2002 to Jul 2005)

Role: Senior Software Engineer / Postdoctoral Research Fellow

Responsibilities:

1. Lead and Develop Software Projects
2. Research High-Performance Computing

Internships

- Atomic Energy Authority (CFD/Fusion, UK, 1994 & 1995)
- Madge Networks (ATM Adapters, UK, 1996)
- CSC/Pinnacle Alliance (JPMorgan outsourcing, UK, 1997).

MAJOR PROJECTS

Head End Application

Description: Head End application for importing program metadata

Company: NDS

Responsibility: Developer and "Tools owner"

Technologies: Java, XSLT, XML, Servlets, JSP, Apache Struts, Apache Tomcat, Jetty, Linux, Oracle

Tools: JAXB, Subversion, Trac, CruiseControl, ClearQuest, CheckStyle, EMMA, CyVis, JUnit, ANT

Wildfire GEL

Description: A programming language for developing parallel Grid, cluster and compute-farm applications
Company: Bioinformatics Institute
Responsibility: Research and Development Lead
Technologies: Java, JLex+CUP (compiler generator)
Linux, Solaris, Digital OSF
Sun GridEngine, Platform LSF, PBS, Condor
Tools: EMMA (Java coverage analysis), continuous integration and testing

Java-based e-commerce website

Description: An e-commerce website built using Struts and Hibernate
Company: LShift Ltd
Responsibility: Lead Developer (Client-facing and technical responsibilities)
Technologies: Java, Struts, Apache Tomcat, Apache httpd, JSP, Velocity (templating), Hibernate, MySQL, Redhat Enterprise Linux

.NET-based e-commerce website

Description: An e-commerce site with a complex portfolio of products
Company: LShift Ltd
Responsibility: Lead Developer (Client-facing and technical responsibilities)
Technologies: Windows Server 2000, SQL Server 2000, MySQL, IIS 5.1, ASP.NET 2.0, .net Framework 2.0, C#, Gentle.NET ORM library

IPTV head-end component

Description: A component of an IPTV head-end
Company: NDS
Responsibility: Developer and build system owner
Technologies: Java, JAXB, XSLT, PL/SQL, Jetty (embedded HTTP server), Struts, JSP
Tools: CruiseControl, EMMA, JUnit, Trac (issue tracker), ClearQuest (issue tracker), CheckStyle (static checker), Cyvis (complexity metrics)

Due to the commercial nature of projects, further information can be made available on request.

PUBLICATIONS

1. "Implementing a Program Logic of Objects in a Higher-Order Logic Theorem Prover", with Martin Hofmann, In Proc. *Theorem Proving in Higher Order Logics*, LNCS 1869, pp267--282, Springer 2000.
2. "Generating Verification Conditions for Abadi and Leino's Logic of Objects", with Martin Hofmann, In Proc. *Foundations of Object-Oriented Languages (FOOL9)*, 2002.
3. *Exhaustive Whole-Genome Tandem Repeats Search*, with Arun Krishnan, Bioinformatics 20(16):2702-2710, OUP 2004.
4. "A Universal Machine File Format for MPI Jobs", with Ho Liang Yoong, Chua Ching Lian and Arun Krishnan, In Proc. *Parallel and Distributed Computing: Applications and Technologies*, LNCS 3320, pp740-3, Springer 2004.
5. "Implementing a Bioinformatics Workflow in a Parallel and Distributed Environment", with Chua Ching Lian, Lim Yun-Ping, Ho Liang Yoong and Arun Krishnan, In Proc. *Parallel and Distributed Computing: Applications and Technologies*, LNCS 3320, pp1-4, Springer 2004.
6. "Parallel Computing Platform for the Agent-Based Modeling of Multicellular Biological Systems", with Toh Da-Jun, Travis Lee, Deepak Sarada, Arun Krishnan and Andrew B. Goryachev, In Proc. *Parallel and Distributed Computing: Applications and Technologies*,

pp5-8, Springer 2004.

7. *Wildfire: Distributed, Grid-Enabled Workflow Construction and Execution*, with Chua Ching Lian, Ho Liang Yoong, Lim Yun-Ping, Praveen Issac and Arun Krishnan, BMC Bioinformatics 2005, 6:69.
8. *WebAllergen: a web server for predicting allergenic proteins*, with Tariq Riaz, Hen Ley Hor, Arun Krishnan and Kuo-Bin Li, Bioinformatics 21(10):2570-2571, OUP 2005.
9. *GEL: Grid Execution Language*, with Chua Ching Lian, Praveen Issac and Arun Krishnan, J. Parallel and Distributed Computing, 65(7):857-869, Elsevier 2005.

PERSONAL INTERESTS

- I am an avid photographer, and served as President of the Edinburgh University Photographic Society (2000-1).
- I like to play squash and badminton.