

# Luis Mastrangelo, *Ph.D.*

*Software Development Engineer*

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## Education

- Apr 2013–June 2019 **Ph.D. Graduate, Computer Science**, *University of Lugano*, Switzerland.  
Subject: programming languages research in Java and Haskell, runtime systems and virtual machines with C++, software verification and declarative programming, data analysis using R and Python  
Advisors: Prof. Matthias Hauswirth and Prof. Nathaniel Nystrom  
Ph.D. Thesis: “*When and How Java Developers Give Up Static Type Safety*”
- Jul 2012–Nov 2012 **Ph.D. Student, Computer Science**, *University of Luxembourg*, Luxembourg.  
Subject: automatic model based testing with focus on embedded systems.
- Apr 2007–Nov 2011 **Licentiate in Computer Science**, *University of Buenos Aires*, Argentina.  
This degree is considered by many institutions as being equivalent to an M.Sc. degree.
- Apr 2011–Oct 2011 **Internship**, *INRIA/University of Strasbourg*, France.  
Internship title: “A Virtual Machine for Automatic Program Parallelization”.
- Apr 2003–Dec 2006 **Computer Analyst**, *University of Buenos Aires*, Argentina.  
This is a 3 years degree as part of the *Licentiate in Computer Science* programme.
- Mar 1994–Nov 1999 **Secondary School Diploma in Informatics**, Buenos Aires, Argentina.

## Professional Experience

- Current position **Technical Consultant**, *Avaloq Banking Group AG*, Lugano, Switzerland.  
Aug 2019–to date IT infrastructure support for Monitoring Operations
- Dec 2006–Mar 2011 **Project Leader**, *Recursiva S.R.L.*, Buenos Aires, Argentina.  
Software engineering and architect roles using Java and C# among others technologies.
- Mar–Jul 2006 **Network Administrator**, *HS Eventos*, Buenos Aires, Argentina.  
Technical service, software installation and maintenance of company network.
- Jul–Oct 2004 **Network Administrator**, *Texpampa*, Buenos Aires, Argentina.  
Technical service, software installation and maintenance of company network.
- Mar 2000–May 2004 **Software Developer**, *Fernando Hermo y Asoc.*, Buenos Aires, Argentina.  
ERP and CRM development using VB 6, SQL Server and Crystal Reports.

## Freelance Projects

- May–Sep 2018 **Software Developer**, *Essentia, Family Office*, Lugano, Switzerland.  
Desktop application written in Scala
- Oct–Nov 2017 **Software Developer**, *Essentia, Family Office*, Lugano, Switzerland.  
Desktop application written in C#
- Dec 2010–Jan 2011 **Web Developer**, *vCelebrate*, Buenos Aires, Argentina.  
Web application using Facebook API and Adobe Flex.

- Apr–Dec 2008 **Full Stack Developer**, *Andrea Importadora*, Buenos Aires, Argentina.  
E-commerce platform using ASP.NET and MySQL.
- Feb–Apr 2006 **Full Stack Developer**, *Reid Systems, ApareSer*, Buenos Aires, Argentina.  
Web application using ASP.NET, C# and SQL Server 2000.
- Apr–Oct 2005 **Full Stack Developer**, *Dream On*, Buenos Aires, Argentina.  
Invoicing desktop application using C# and PostgreSQL.

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## Technical Skills

Languages	Java, C#, C/C++, Scala, Haskell, Python, R, SQL, Datalog (QL), JavaScript, Perl, LLVM/Clang, VB.NET, ASP.NET, ASP, PHP, Assembler, Pascal, VB 6.0
Paradigms	OOP, Design by Contract, Functional and Logic programming, UML, Design Patterns, Database design
Databases	PostgreSQL, MySQL, SQL Server, Oracle, SQLite, Crystal Reports
SCMs	Git, Subversion, CVS
IDEs	Visual Studio .NET, Eclipse, Xcode, IntelliJ, IBM WebSphere Message Broker
IT	Linux, Shell Scripting, VirtualBox, VMWare, Microsoft Virtual Server, Parallels, Samba, Apache, vsFTPd, OpenSSH, Tomcat, Microsoft MSMQ, ActiveMQ

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## Teaching Experience

- Apr 2013–Nov 2017 **Teaching Assistant**, *University of Lugano*, Switzerland. Multiple courses.
- Apr 2006–Nov 2010 **Teaching Assistant**, *University of Buenos Aires*, Argentina. Multiple courses.
- Apr–Oct 2008 **Scientific Popularizer**, *Informatics dpt., University of Buenos Aires*, Argentina.

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## Publications

**Luis Mastrangelo**, M. Hauswirth, and N. Nystrom. Casting about in the Dark: A Survey of Cast Usage in Java. 2019.

**Luis Mastrangelo**, L. Ponzanelli, A. Mocci, M. Lanza, M. Hauswirth, and N. Nystrom. Use at Your Own Risk: The Java Unsafe API in the Wild. 2015.

**Luis Mastrangelo** and M. Hauswirth. JNIF: Java Native Instrumentation Framework. 2014.

A. Jimborean, **Luis Mastrangelo**, V. Loechner, and P. Clauss. VMAD: an Advanced Dynamic Program Analysis & Instrumentation Framework. 2012.

A. Jimborean, P. Clauss, B. Pradelle, **Luis Mastrangelo**, and V. Loechner. Adapting the polyhedral model for efficient speculative parallelization. 2012.

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## Language Proficiency

Spanish	<b>Native speaker</b>
English	<b>Proficient User</b> : Level C2 under CEFR
Italian	<b>Proficient User</b> : Level C1 under CEFR
French	<b>Independent User</b> : Level B1 under CEFR