



# Luis Mastrangelo

Software Development Engineer

Via Zurigo 1  
6900 Lugano, Switzerland

+41 789 44 2022

✉ [luismastrangelo@gmail.com](mailto:luismastrangelo@gmail.com)

📄 [acuarica.gitlab.io/blog/](https://acuarica.gitlab.io/blog/)

## Education

- Apr 2013–June 2019 **Ph.D. Graduate, Computer Science**, *University of Lugano*, Switzerland.  
Programming languages research in Java and Haskell, runtime systems and virtual machines with C++, software verification, 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.  
Automatic model based testing research 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**, *DB&L Services SA*, Lugano, Switzerland.  
Aug 2019–to date IT infrastructure support for Monitoring Operations at Avaloq Sourcing (CH & LI) SA.
- 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.

## Technical Skills

Languages	Java, Kotlin, Scala, C/C++, C#, Haskell, Python, R, JavaScript/TypeScript, Go, Bash, PHP, $\text{\LaTeX}$ , LLVM, Perl, VB.NET/6, ASP/ASP.NET, Assembler, Pascal
Paradigms	Object-Oriented, Imperative, Functional and Logic Programming
Modelling	Design by Contract, Design Patterns, Database Design, UML
Fields	Static and Dynamic Program Analysis, Data Science, Mining, Visualization
Databases	SQL, PL/SQL, Datalog/QL, PostgreSQL, MySQL, SQL Server, Oracle, SQLite
Editors/IDEs	VSCoDe, IntelliJ/CLion/Rider, Visual Studio.NET, Eclipse, Xcode, Vim/Emacs
IT	Linux, Scripting, Virtualization, Samba, Apache, Tomcat, MSMQ/ActiveMQ
SCMs	Git, Subversion, CVS

## 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 dept.*, *University of Buenos Aires*, Argentina.

## 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.

## Language Proficiency

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