

# Matteo Corti

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## Address

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Scheuerrain 3  
3007 Bern  
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<http://corti.li>

## Personal data

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Place of birth Lugano, TI, Switzerland; September 12th, 1974  
Marital status married  
Citizen of Aranno, TI, Switzerland

## Interests

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Software design, identity management, networking & security, operating systems, compilers

## Education

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**PhD Computer Science** (Dr sc. techn.), Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, March 2005

*Approximating the Worst-Case Execution of Soft Real-Time Applications*

**MS Computer Science** (Dipl. Informatikingenieur), Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, 1998

Diploma thesis: *A Profiler/Analyzer for XOberon/PowerPC*

Liceo scientifico (High School), Lugano, TI. Maturità tipo C (scientific curriculum), 1993

## Experience

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**Head of the Web Applications and Identity Management Group, Information and Communication Services, Swiss Federal Institute of Technology Zurich, since May 2008**

- Manage the Web Applications and Identity Management Group (around seven persons) which develops the in-house identity management system and web applications for ETH customers.
- Design and implementation of the next generation identity management system (Oracle, Java).
- Maintain a series of legacy web applications (Perl, Oracle)

**Lecturer, Swiss Federal Institute of Technology, Zurich, March, 2006 — December 2007**

- Teach the Compiler Design II class (fall semester 2007)
- Teach the Computer Systems Lab (operating systems practical lab) with around 40 students (spring semester 2006 and 2007).

**Software Engineer, Information and Communication Services, Swiss Federal Institute of Technology Zurich, November 2005 — April 2008**

- Design and implementation of identity management software modules (Oracle, Perl).
- Design and implementation of prepaid billing system for the ETH centralized printing system (Oracle, Perl).
- Development of tools to administer and monitor Apache server farms (C, Perl).

**Compiler Engineer, Freescale Semiconductor, Zurich, July 2005 — October 2005**

- Alias analysis (C++)

**Lecturer, Swiss Federal Institute of Technology, Zurich, December 2004 — March 2005**

- Teach the System Software (operating systems fundamentals) core lecture with 180 students. This includes the organization of the lab classes, teaching assistants and exams.

**Research and teaching assistant, Swiss Federal Institute of Technology, Zurich, December 1999 – November 2004**

- **Research:**
  - Worst-case execution time analysis of soft-real-time Java applications both on the semantic level (e.g., loop bounding, type analysis) and the hardware level (i.e., instruction duration estimation).
  - Joint work on an optimizing ahead-of-time Java bytecode to native compiler (several SSA based optimizations and analyses related to various research projects).
- **Teaching:** exercise sessions of System software, Compiler construction I & II, Computer science I (introductory course), Computer science III (programming in the large), Patterns and frameworks (industry courses).

**Swisswin, Rapperswil, part-time job, May 2000 – October 2000**

- Teach the networking classes for a webmaster course

**Internship at FIDES/EDS, Zurich, November 1997 – July 1998**

- System administration (AIX)
- Designed and implemented a tool to replicate the database structure of the Credit-Suisse stock funds management application (Sybase, C, SQL).

**Swiss Federal Institute of Technology, Zurich, part-time job, June 1997 – October 1998**

- Developed a web interface for a database of an inter-enterprise mechanical components (Perl).

## Publications

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- M. Corti, *Approximating the Worst-Case Execution of Soft Real-Time Applications*, PhD Thesis, Swiss Federal Institute of Technology (ETH) Zurich, March 2005, Nr 15927.
- M. Corti and Th. Gross, *Approximation of the Worst-Case Execution Time Using Structural Analysis*, Proceedings of the Fourth ACM International Conference on Embedded Software (EMSOFT 04), September 27–29, 2004, Pisa, Italy.
- M. Corti and Th. Gross, *Instruction Duration Estimation by Partial Trace Evaluation*, Proceedings of the WIP Session of the 10th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 04), May 25–28, 2004, Toronto, Canada.
- M. Corti, R. Brega, and Th. Gross, *Approximation of Worst-Case Execution Time for Preemptive Multitasking Systems*, Proceedings of the ACM SIGPLAN 2000 Workshop on Languages, Compilers, and Tools for Embedded Systems (LCTES'2000), June 18, 2000, Vancouver, Canada.
- M. Corti, *A Real-Time Profiler/Analyzer for X86/PPC*, Diploma Thesis, ETH Zurich, 1998

## Continuing education

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- *The Challenge of Egypt*, PRINCE2 (Project management method) simulation, one day seminar, 2010.
- *OO-Analyse und -Design mit UML*, three days course by Digicomp, 2010.
- *Core Spring*, four days course by Spring source, 2010.
- *ITIL<sup>®</sup> v3 Foundation* exam, EXIN, 2009
- *Mitarbeiterführung Grundlagen*, three days seminar, BWI, 2008
- *Perl — Advanced Module Interface Techniques, Understanding Regular Expressions, Perl 5.10*, three days seminar with Damian Conway, 2008
- *Projektmanagement Projektführung*, three days course at ETH Zurich, 2008
- *Projektmanagement Methodik*, three days course at ETH Zurich, 2008
- *Perl Best Practices*, two days seminar with Damian Conway, 2007

## Languages

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Italian    native language  
English    fluent (Cambridge Certificate of Proficiency in English)  
German    good  
French    good