Dipl.-Ing. Dipl.-Ing. Dr. techn.

Michael Maurer

Personal Information

Date of birth	May 26th, 1983
Place of birth	Eisenstadt, Austria
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Education

08/2009 - 06/2012	PhD program in Computer Science at TU Vienna, Austria.
12/2007 - 04/2009	Master's program Computational Intelligence at TU Vienna, Austria - graduation with distinction.
08/2008 - 12/2008	Exchange semester for master's program Computational Intelligence at City College of New York in New York, NY, USA.
02/2008 - 06/2008	Exchange semester for master's program Computational Intelligence at the Pavol Jozef Šafárik University in Košice, Slovakia, with Slovak language intensive course.
12/2007	European Business Competence* Licence (EBC*L).
10/2001 - 11/2007 (w/o 2002-2003)	Studies of Applied Mathematics (equivalent to MSc, with specialization in Computer Science) at TU Vienna, Austria - graduation with distinction.
07/2002 - 09/2003	Social year (called Gedenkdienst) at the *Fondation Auschwitz* in Brussels, Belgium.
06/2001	School leaving certificate (Matura) at grammar school BG&BRG Bruck/Leitha with a paper in Mathematics dealing with game theory.
08/1999 - 12/1999	Exchange semester at the St. Johnsbury Academy in St. Johnsbury, VT, USA.
1993 - 2001	Grammar school BG&BRG Bruck/Leitha (emphasis on modern languages).
1991 - 2001	Music school (keyboard, piano) in Bruck/Leitha, Austria.

Professional Experience

08/2009 - 06/2012	Researach assistant at TU Vienna, Distributed Systems Group.
02 - 03/2009	Advancing a database system to record and manage scouting reports within Austrian professional soccer.
10/2007 - 02/2008	Team-development of a web-based administration tool at the grammar school *GRG 17 Geblergasse* together with enhancements of the web application at the *GRG 21 Bertha von Suttner*.
10/2005 - 01/2008	Tutor at the Institute of Information Systems at the TU Vienna for the courses Data Modeling and Database Systems.
10/2006 - 02/2007	Team-development of a web-based management system for the grammar school *GRG 21 Bertha von Suttner* in Vienna.
07/2002 - 09/2003	Administration of the computer network, web design, translation of letters between English, French and German, assistance in the library, writing reviews of German and English books at the *Fondation Auschwitz* in Brussels, Belgium.
08/2001	Summer job at Denzel (Austrian car company).
1999 - 2007	Tutoring high-school students in English, mathematics, German and French.

Scholarships and Awards

08 - 12/2008	Joint-Study scholarship granted by TU Vienna for exchange semester at CCNY in New York, USA.
02 - 06/2008	CEEPUS II Free Mover scholarship granted by ÖAD (Österr. Austauschdienst) and SAIA (Slovak Academic Information Agency) for exchange semester at UPJŠ in Košice, Slovakia.
10/2007 - 06/2008	TUtheTOP, the High Potential Program at the TU Vienna.
03/2007	ATHENS program in Warsaw, Poland. Course: Numerical Methods.
08/2005	Three-week Summer language course of Slovak at the SAS (Studia Academica Slovaca) in Bratislava, Slovakia.
06/1999	Summer School of Lower Austria for Highly Talented Students in Physics and Mathematics.

Selected Scientific Activities

Projects

- HALEY - Holistic Energy Efficient Management of Hybrid Clouds, TU Vienna Science Award 2011.
- FoSII - Foundations of Self-governing ICT Infrastructures funded by Vienna Science and Technology Fund (WWTF), ICT call 2008.

Research visits

- Short Term Scientific Mission (STSM), Increasing Energy Efficiency by Incorporating VM Resource Allocation and VM Placement on Clouds, COST Action IC0804 on Energy Efficient Large Scale Distributed Systems, carried out at the Insitut de Recherche en Informatique de Toulouse (IRIT), Université Paul Sabatier, Toulouse, France, from 14-March-2011 to 01-April-2011, in cooperation with Damien Borgetto, Georges Da Costa and Jean-Marc Pierson.
- Short Term Scientific Mission (STSM), A step towards the incorporation of energy efficiency in autonomic SLA management, COST Action IC0804 on Energy Efficient Large Scale Distributed Systems, carried out at the University of Manchester, School of Computer Science, UK, from 08-March-2010 to 26-March-2010, in cooperation with Rizos Sakellariou.

Scientific talks

- "Energy-efficient and SLA-aware Managament of IaaS Clouds". Third international conference on future energy systems (e-Energy 2012), Madrid, Spain, May 9-11, 2012.
- "Towards Energy-efficient Cloud Computing". Vienna Scientific Cluster (VSC) workshop, February 27-28 2012, Hotel Wende, Neusiedl am See, Austria.
- "Achieving SLA-aware and energy-efficient management of IaaS Cloud Computing infrastructures". Cost Action Meeting (IC0804 on Energy Efficient Large Scale Distributed Systems), November 7-8 2011, International Hellenic University, Thessaloniki, Greece (invited).
- "Enacting SLAs in Clouds Using Rules". Euro-Par 2011, Bordeaux, France, August 29 - September 2, 2011.
- "Energy Efficient Autonomic Management of Clouds". Research visit at the Insitut de Recherche en Informatique de Toulouse (IRIT), Université Paul Sabatier, Toulouse, France, March 18, 2011 (invited).
- "Simulating Autonomic SLA Enactment in Clouds using Case Based Reasoning". ServiceWave 2010, Ghent, Belgium, December 13-15, 2010.
- "Towards Knowledge Management in Self-adaptable Clouds". IEEE 2010 Fourth International Workshop of Software Engineering for Adaptive Service-Oriented Systems (SEASS '10), in conjunction with ICWS 2010 and SCC 2010, Miami, Florida, USA, July 5-10, 2010.
- "Towards Knowledge Management in Clouds - Prevention of SLA Violations vs. Minimization of Energy Consumption". Cost Action Meeting (IC0804 on Energy Efficient Large Scale Distributed Systems, Focus Group Green wired networks), June 10-11 2010, University of Lyon, Lyon, France.

Selected Publications

Refereed publications in conference proceedings

- **Michael Maurer**, Ivona Brandic, and Rizos Sakellariou. Self-Adaptive and Resource-Efficient SLA Enactment for Cloud Computing Infrastructures. (Research Track) IEEE Cloud 2012. 5th International Conference on Cloud Computing, June 24-29 2012, Honolulu, Hawaii, USA.
- Damien Borgetto*, **Michael Maurer***, Georges Da Costa, Jean-Marc Pierson, and Ivona Brandic. Energy-efficient and SLA-aware managament of iaas clouds. In Third international conference on future energy systems (e-Energy 2012), Madrid, Spain, May 2012. (accepted). (* contributed equally)

- Drazen Lucanin, **Michael Maurer**, Toni Mastelic, and Ivona Brandic. Energy Efficient Service Delivery in Clouds in Compliance with the Kyoto Protocol. E2DC - 1st International Workshop on Energy-Efficient Data Centers held in conjunction with e-Energy 2012 - Third International Conference on Future Energy Systems, May 9-11 2012, Madrid, Spain. (accepted).

- Gabor Kecskemeti, **Michael Maurer**, Ivona Brandic, Attila Kertesz, Zsolt Nemeth and Schahram Dustdar. Facilitating self-adaptable Inter-Cloud management. 20th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing PDP 2012. Munich, Germany, 15-17 February, 2012.

- Vincent Chimaobi Emeakaroha*, Pawel Labaj*, **Michael Maurer***, Ivona Brandic and David P. Kreil. Optimizing Bioinformatics Workflows for Data Analysis Using Cloud Management Techniques. The 6th Workshop on Workflows in Support of Large-Scale Science (WORKS11), in conjunction with Supercomputing 2011, Seattle, November 12-18, 2011. (* contributed equally)

- **Michael Maurer**, Ivona Brandic, Rizos Sakellariou. Enacting SLAs in Clouds Using Rules. Euro-Par 2011, Bordeaux, France, August 29 - September 2, 2011.

- **Michael Maurer**, Ivan Breskovic, Vincent C. Emeakaroha, Ivona Brandic. Revealing the MAPE Loop for the Autonomic Management of Cloud Infrastructures. Workshop on Management of Cloud Systems (MoCS 2011), in association with the IEEE Symposium on Computers and Communications (ISCC 2011), 28 June 2011, Kerkyra (Corfu) Greece.

- **Michael Maurer**, Vincent C. Emeakaroha, Ivona Brandic, Joern Altmann. Cost and Benefit of the SLA Mapping Approach for Defining Standardized Goods in Cloud Computing Markets. International Conference on Utility and Cloud Computing (UCC 2010) in conjunction with the International Conference on Advanced Computing (ICoAC 2010), December 14-16, 2010, Chennai, India.

- **Michael Maurer**, Ivona Brandic and Rizos Sakellariou. Simulating Autonomic SLA Enactment in Clouds using Case Based Reasoning. ServiceWave 2010, Ghent, Belgium, December 13-15 2010.

- **Michael Maurer**, Ivona Brandic, Vincent C. Emeakaroha, Schahram Dustdar. Towards Knowledge Management in Self-adaptable Clouds. IEEE 2010 Fourth International Workshop of Software Engineering for Adaptive Service-Oriented Systems (SEASS '10), in conjunction with ICWS 2010 and SCC 2010, Miami, Florida, USA, July 5-10, 2010.

Refereed publications in journals

- **Michael Maurer**, Vincent C. Emeakaroha, Ivona Brandic, Joern Altmann. Cost-Benefit Analysis of an SLA Mapping Approach for Defining Standardized Cloud Computing Goods. Future Generation Computer Systems, 2011, doi:10.1016/j.future.2011.05.023.

- Vincent C. Emeakaroha, Ivona Brandic, **Michael Maurer**, Schahram Dustdar. SOA and QoS Management for Cloud Computing. In: Cloud computing: methodology, system, and applications. Editors: Lizhe Wang, Rajiv Ranjan, Jinjun Chen, Boualem Benatallah, CRC, Taylor & Francis group, 2011.

- Vincent C. Emeakaroha, Ivona Brandic, **Michael Maurer**, Schahram Dustdar. Cloud Resource Provisioning and SLA Enforcement Via LoM2HiS Framework, Concurrency and Computation: Practice and Experience, 2011.

Books

- **Michael Maurer**, Approval Voting - A characterization and compilation of advantages and drawbacks in respect of other voting procedures, VDM Verlag Dr. Mueller, Saarbrücken, 2008.

IT Skills

Programming, script, database and markup languages: C, C++, Java, Visual Basic, PHP, ProLog, scheme, ActionScript, Flash, SQL, PL/SQL, JBoss Drools and Drools Planner, Latex, HTML, CSS, as well as Qbasic, Logo.
Programming tools: eclipse, maven
Programs with math. background: Matlab and Simulink, Maple, Derive, R, POV-Ray.
Other programs: Final Cut Pro, Adobe After Effects, Typo 3, Filemaker, MS Office.

Language skills

German (mother tongue), English (business fluent), French (fluent), Slovak (fluent), Latin (translation skills).

Extra-curricular Activities

2004 - ongoing	Team leader of junior scouts (children from 7-10 years) at the scouts group Bruck/Leitha. Organization of weekly meetings, excursions and summer camps.
June 2011, June 2012	Event creation and management of a youth festival in Bruck/Leitha, called RoveR KnocK.
07/2010	Leadership and Soft Skills training (Wood Badge course, PPÖ).
12/2006 - 09/2007	Lead responsible for the organization and realization of a one-day international event (100 years of Scouting – We celebrate) with participating Slovak, Hungarian and Austrian Scouts in Bruck/Leitha.
2001 - 2005	Gedenkdienst. Study trips to Auschwitz and Theresienstadt; meeting survivors of the Holocaust; civil service at the *Fondation Auschwitz* in Brussels; maintaining and enhancing the club's library in Vienna.

Hobbies and Special Interests

Scouts, Skiing, Snowboarding, Star Trek, Gedenkdienst, Traveling (by means of Interrail through Europe, as well as USA, Japan, Libya), playing and developing board games, physics, astronomy, geocaching, history, foreign languages, playing the piano.

Vienna, Saturday 9th June, 2012