

Andreas Bollin

Curriculum Vitae

PERSONAL DETAILS:

First name: Andreas
Last name: Bollin
Academic degrees: MSc. Dr. tech.

Date/place of birth: 16. Oct. 1971, Graz/Austria
Marital status: Married since 16.5.1997

Profession: Computer Scientist (University assistant at the Alpen-Adria Universität Klagenfurt)



EDUCATION:

Mai 2000 – Apr 2004 Alpen-Adria Universität Klagenfurt
PhD with distinction in the fields of Software Engineering/Applied Informatics (Apr 2004). Topic of the thesis: “Specification Comprehension – Reducing the complexity of specification”.

Oct 1989 – Apr 2000 University of Technology Graz
Dipl. Ing. (MSc.) in the fields of Telematics (Dec. 1999). Topic of the thesis: “Dialogue Classification and Specification”.

Sep 1981 – Jun 1989 Realgymnasium Pestalozzi/Graz
Passed the Abitur with distinction in Jun 1989.

WORK HISTORY:

Mai 2004 – present University Assistant (Institute for Informatics-Systems, Alpen-Adria Universität Klagenfurt, Research group of Roland Mittermeir). Area of responsibility:

- Research Areas: Software Engineering, Formal Methods, E-Learning
- Projects: AMEISE, CRISTEL
- Teaching: Databases, Programming, Formal Methods, E-Learning
- Administration: Head of technical staff
- Supervisor of MSc theses

Mai 2000 – Apr 2004 PhD Student, University Assistant (Inst. for Informatics-Systems, University of Klagenfurt, Research group of Roland Mittermeir). Area of responsibility:

- Research Areas: E-Learning, SW Comprehension, Formal Methods
- Projects: Planet-ET, AMEISE
- Teaching: Databases, Programming, Formal Methods, E-Learning
- Administration: Head of technical staff

Oct 1998 – Jan 2000 Graduate Assistant (Inst. for Information Systems and Computer Media, Graz University of Technology, Head: Hermann Maurer). Areas of responsibility:

- Editor/Author of technical papers
- Practical Classes (Programming courses)
- Head of development team (WEB-based systems)

Nov 1998 – Mai 1999 EU – EPIC Project (International Software Consulting Network Ltd. Bray/Ireland). Area of responsibility:

- Technical expert (development of video conference system)

- Oct 1994 – Oct 1996 EU-Comett Project (International Software Consulting Network Ltd. Bray/Ireland). Areas of responsibility:
- Communication Expert
 - Head of development team (Web-based conference management tool)
 - Conference organisation
- Oct 1993 – Mai 2000 Technical Assistant (Institute of Software-Technology, Graz University of Technology, Working Group of Peter Lucas). Areas of responsibility:
- Member of research team (functional programming)
 - Head of technical staff
 - Conference organization (FM'97 conference, Austrian-Hungarian Seminar on Software Technology 1996)
 - Webmaster

PROJECTS:

- Dec 2003 – present CRISTEL (EU - TEMPUS-MEDA Frankreich).
Position: Member of research team.
Topics: Curriculum development, Software Engineering, AMEISE
AMEISE – A Media Education Initiative for Software Engineering.
Position: Deputy head of project. Member of research team.
Topics: New Media in Education, Simulation-System, Software Project Management, SESAM
Link: <http://ameise.uni-klu.ac.at>
- Jan 2001 – present Planet-ET - Platform and Network for Educational Technologies.
Position: Member of research team.
Topics: E-Learning, Education program, curriculum development
Link: <http://www.planet-et.at>
- Oct 2001 – Nov 2002

SKILLS:

- Technical Memberships: IEEE member since Dec 2001
ACM member since Dec 2001
- Technical skills:
- Development:
- Several programming languages (Java, Ada, C/++, Pascal, Basic, Assembler, Clipper, Standard ML, CML, Lisp)
 - Scripting languages (Perl, t/csh, tcl/tk)
- Notations/Modelling Languages:
- Formal modelling languages (Z, VDM, Raise, Design/CPN, VHDL)
 - Semi-formal notation: UML
- Computer Systems:
- Operating systems: DOS, OS/2, Windows xx, Novell, UNIX (AIX, SUN OS, Solaris, Linux, FreeBSD)
 - Hardware/Architectures: Intel-based PCs, Apple computer systems, IBM RS6000, SUN Sparc/Axil, Indy, O2
 - Networking: 10/100MB Ethernet (incl. Cisco NW-topologies, bridges, router, switches, repeater), NIS/NIS+, NFS, TCP/IP, IPX/SPX
- Software and Applications:
- Microsoft MSDN applications, MS Office
 - Word processing: MS Office, TeX/LaTeX
 - Mathematica, Matlab, Derive, Sceptre
 - Databases: MySQL, Oracle, Microsoft SQL, HM Card
- IS Systems:
- CM Systems: Hyperwave (HIS), ZOPE
 - E-Learning: Blackboard, Web-CT, HM-Card, eLearning Suite
 - Development: Tomcat Server
- Languages: German, English (fluent), Hungarian
French (basics)
- Others: Driving license for motor vehicles (weight lt. 3.5t) and motorcycles
- Hobbies: Sports (jogging, skating, hiking, skiing, Taekwondo) and Dancing
Literature (Austrian and Hungarian romantic, poems, science fiction)
Music (classical music and folk)

RESEACH AREAS:

Working in the fields of Software Engineering, my research interests are related to several research areas. In my point of view an important task for every computer scientist and professional is to pass knowledge to others. In the fields of informatics not only the technical/scientific knowledge is relevant – also methodological and didactical issues do play a crucial role. For that reason my areas of research include contributions from the field of software engineering (with the focus on software comprehension), and didactics and related methodologies (by using Multimedia and new technologies).

- Software Comprehension. The objective is to support the combination of various development and analyses methodologies, especially for sustaining software maintenance and comprehension. This includes:
 - Specification Comprehension, the topic of my PhD thesis, where slicing and chunking techniques have been defined for formal (declarative!) specifications in order to reduce the complexity of maintenance tasks.
 - Specification Visualization, the actual field of research. Different graphical notations are used in order to bridge the gap between formal and semi-formal documents.

Relevant publications are:

[2005]

Bollin A.: Maintaining Formal Specifications – Decomposition of Large Z Specifications. Submitted to: 21st International Conference on Software Maintenance 2005. September 2005, Budapest. 2005.

[2004]

Bollin A.: Specification Comprehension - Reducing the Complexity of Specifications. PhD Thesis. Institute for Informatics-Systems, University of Klagenfurt, April 2004.

Bollin A.: The Efficiency of Specification Fragments. In: Institute of Electrical and Electronics Engineers, Inc. (Ed.): 11th Working Conference on Reverse Engineering WCRE 2004, 8-12 Nov. 2004, Delft, The Netherlands, Proceedings. U.S.A.: IEEE Press 2004.

[2003]

Mittermeir R., Bollin A.: Demand-Driven Specification Partitioning. In: Modular Programming Languages, JMLC 2003, Klagenfurt, August 2003, Proceedings. LNCS, 2789 (2003).

Bollin A., Mittermeir R.: Specification Fragments with Defined Semantics to Support SW-Evolution. In: Proc. ACS/IEEE International Conference on Computer Systems and Applications, AICCSA, Tunis, 14-18 July, 2003. July 2003.

[2002]

Bollin A.: Specification Transformation as a Basis for Specification Comprehension. In: N.H. Hamza (Ed.): Proceedings of the Twentieth IASTED International Conference Applied Informatics (AI 2002, Innsbruck, Austria) Anaheim, Calgary, Zürich: ACTA Press 2002.

[2001]

Mittermeir R., Bollin A., Pozewaunig H., Rauner-Reithmayer D.: Goal-Driven Combination of Software Comprehension Approaches for Component Based Development. In: Proceedings of the ACM Symposium on Software Reusability - SSR'01 May 18-20, Toronto, Ontario, Canada. New York, NY: ACM Press Mai 2001 (Software engineering notes, 26, 3).

- Multimedia and E-Learning Systems. The topics of research are related to the goal of improving classical lectures and practical classes. This includes:
 - E-Portfolios, where artefacts are stored electronically in order to provide enough data for assessment and reasoning.
 - Project Management Simulation, where a simulator and a rule-based system are used to improve classical software-project management lectures. The system (called AMEISE, to be found at <http://ameise.uni-klu.ac.at>) has been developed due to grants from the Initiative of New Media in Education (bm:bwk Austria).
 - E-Learning Systems. A system has been developed which enables the reuse of existing learning components. The project (called Planet-ET, to be found at: <http://www.planet-et.at>) has been founded by the Initiative of New Media in Education (bm:bwk Austria).
 - Didactical Aspects of E-Learning and New Media. The main topic is the efficient and effective use of new media. Another aspect is the question of how to transfer didactical and methodological knowledge.

Relevant Publications are:

[2005]

Bollin A., Mittermeir R., Wakounig D.: Assessment of Project Management Skills – Integration of AMEISE and Assessment ePortfolios. Proceedings of the ePortfolio Forum Austria 05, Salzburg. 2005.

Jäger S., Hochmüller E., Mittermeir R., Bollin A., Wakounig D.: AMEISE - Didaktische Vielfalt für SESAM. In Klaus-Peter Lühr / Horst Lichter (Ed.): Software Engineering im Unterricht der Hochschulen, SEUH 9 - Aachen 2005. dpunkt.verlag. Februar 2005.

[2003]

Mittermeir R., Hochmüller E., Bollin A., Jäger S., Nusser M.: AMEISE - A Media Education Initiative for Software Engineering: Concepts, the Environment and Initial Experiences. In: M. E. Auer, U. Auer (Ed.): Proceedings International Workshop ICL - Interactive Computer Aided Learning, Villach, Sept. 2003, electr. Proc. Kassel: Kassel Univ. Press September 2003.

[2002]

Bollin A., Mittermeir R. T., Wohlfahrt R.: Component-based Content Development for E-Learning Systems. In: M. Driscoll, T. C. Reeves (Ed.): Proc. E-Learn 2002, World Conference on E-Learning in Corporate, Government, Healthcare & Higher Education AACE 2002.

Mittermeir R., Bollin A., Hitz M.: Konzeption feingranularer Module in PlaNet-ET. In: U. Beck, W. Sommer (Ed.): Tagungsband LearnTEC 2002, 10. Europäischer Kongress und Fachmesse für Bildungs- und Informationstechnologie, 2. 2002.

Bollin A., Mittermeir R.: AMEISE - A Media Education Initiative for Software Engineering. In: Forum Neue Medien Newsletter (April 2002).

[2001]

Bollin A.: Development and use of an automatic hand-in and testing environment for practical classes. In: CATE 2000 Conference, Cancun, Mexico. IASTED. Mai 2000.

Bollin A.: AMEISE Projekt-Management einmal anders. In: unisono - Zeitschrift der Universität Klagenfurt, 14. Jg. (Dezember 2001).

Bollin A.: Dialogue Programming for WWW-based Systems. In WebNet World Conference 99, Honolulu, Hawaii. IASTED, October 1999.

The list of publications can also be obtained from the central information system of the University of Klagenfurt at: <http://www.uni-klu.ac.at/uniklu/org/visitenkarte.jsp?target=frame&personalnr=2228>, or by following the link of my home-page at <http://www.ifi.uni-klu.ac.at/Andreas.Bollin> (partly in German).

TEACHING:

Correlated to my fields of interest I have been and am giving lectures and practical classes on the following topics:

- At the University of Klagenfurt this includes (since 2000):
 - Formal specification and verification
 - Object-oriented programming
 - E-Learning Platforms
 - Algorithms and data structures
 - Project Management
 - Introduction to the fields of informatics

- Supervisor of MSc theses (together with Roland Mittermeir):
 - Wohlfahrt R.: Komponenten-basierte Kurserstellung - Konzeption und Implementierung eines Autorenwerkzeugs für die Hyperwave eLearning Suite zur Erzeugung und Verwaltung von feingranularen Lerneinheiten. Mar 2004.
 - Wakounig D.: Reverse Engineering Regelbasierter Systeme. Aug 2003.
 - Jäger S.: Entwicklung eines elektronischen Tutors zur Analyse von Projektverläufen. Apr 2003.
 - Nusser M.: SW-Agenten zur Analyse von Projektverläufen. Apr 2003.

- External lectures include (entries marked with an asterisk mean cooperation)
 - Object-oriented programming using JAVA, Shkodre University, Albania, 2005.
 - Project Management (*). ENIT, Tunis, 2004.
 - Project Management (*). SEZ, Villach, Austria, 2004.
 - SW Development Projects in Java, Graz University of Technology, 1998, 1999.
 - SW Paradigm (*), Graz University of Technology, 1999.

Klagenfurt, 15 April 2005

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