

## [Curriculum Vitae

# Prof. Dr. Alexander Egyed

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## Salaried Positions

[2008-present] Full Professor at the **Johannes Kepler University (JKU)**, Linz, Austria and  
Head of **Institute for Systems Engineering and Automation (SEA)** at JKU.

## Honorary Positions

[2010-present] Research Faculty Fellow at the **IBM Toronto Software Lab**, Toronto, Canada

[2009-present] Visiting Professor at the **University College London (UCL)**, London, UK

[2005-present] Adjunct Professor at the **University of Southern California (USC)**, Los Angeles, USA

## Education

[Fall 2000] Ph.D. in Computer Science  
University of Southern California in Los Angeles, USA  
Thesis: "Heterogeneous View Integration and its Automation"  
Advisor: Dr. Barry Boehm

[Spring 1996] M.S. in Computer Science, Specialization in Software Engineering  
University of Southern California in Los Angeles, USA  
Advisor: Dr. Barry Boehm

[Fall 1994] B.Sc. in Informatics, Specialization in Applied Informatics (German: Dipl.-Ing.)  
Johannes Kepler University in Linz, Austria  
Thesis: "Client-Server-Development and GUI with the CASE Tool 'Systems Engineer'"  
Advisor: Dr. Gerhard Chroust

## Experience

### Industrial

[2000-2007] Research Scientist at **Teknowledge Corporation** in 4640 Admiralty Way, Suite 1010, Marina  
Del Rey, CA 90292, USA (Contact: Dr. Robert Balzer)

[Fall 1997] Intern at **Rational Software Corporation** in 2906 W. 37<sup>th</sup> Avenue, Vancouver, British  
Columbia V6N 2T9, Canada (Contact: Dr. Philippe Kruchten)

[1995] Programmer at **HDVA (Heeresdatenverarbeitungsamt)** in Amtsgebäude Stiftgasse, Stiftgasse  
2A, 1070 Vienna, Austria  
(Contact: DI Johann Siegl)

[1992-1995] Part-time, lead developer of FLUP (a financial-services software product supporting over twenty Austrian Veterinarians)

[Summer 1994] Intern at **VOEST Alpine Stahl** in Voest-Alpine-Strasse 3, 4020 Linz, Austria

[Summer 1992] Intern at **Siemens PSE** in Petersbrunnstrasse 19, 5020 Salzburg, Austria

**Academic**

[2008-] Full Professor at the **Johannes Kepler University (JKU)**, Linz, Austria

[2007-2008] Research Fellow at the **University College London (UCL)**, London, UK under Dr. Anthony Finkelstein.

[1996-2000] Research Assistant and Teaching Assistant at the **University of Southern California**, Los Angeles, CA, USA under Dr. Barry Boehm.

**Staff**

Current Staff

2009-	Dr. Roberto Lopez Herrejon (Post Doctoral Researcher, JKU)
2009-	Alexander Reder (PhD Student, JKU)
2009-	Thomas Schartmüller (Programmer/Technician, JKU)
2009-	Gerfried Lehner (Programmer/Technician, JKU)
2009-	Stephanie Eibensteiner (Administration, JKU)
2008-	Alexander Nöhner (PhD Student, JKU)
2008-	Dr. Paul Grünbacher (Associate Professor, JKU)
2010-	Achraf Ghabi (Student)
2010-	Wilms Sebastian (Student)
2010-	Michael Pecherstorfer (Student)
2010-	Christian Hanusch (Student)

Visiting Staff

2009-2010	Leticia Montalvillo Mendizabal (Spain)
2010	Raúl Mazo Peña (Université Paris Panthéon Sorbonne, France)

Former Staff

2009-2010	Benedikt Burgstaller (PhD Student, JKU)
2008-2010	Dr. Iris Groher, JKU, Austria (former Post Doctoral Researcher, JKU)
2008-2009	Florian Graf, City University, UK (former Programmer, JKU)
2008	Dr. Norbert Seyff, City University, UK (former PhD Student, JKU)
2008	Dagmar Reinmann † (former Administrator, JKU)
2003-2004	Sven Johann, Adesso, Germany (former Programmer, Teknowledge)
2002-2003	Tom Pelkey (former Programmer, Teknowledge)

**Grants and Projects**

**Principal Investigator**

- [2010-2012] Co-Principal Investigator “Consistency and Composition for Managing Variability in Multi-View Systems” (Other PIs: Roberto Lopez Herrejon) funded by the European Union FP7-PEOPLE-2009-IEF, Proposal 254965, Amount: €22.174. This work investigates the role of consistency management during variability modeling (aka product lines).
- [2010] Principal Investigator “Detecting and Tracking Inconsistencies in Software Design Models” funded by the IBM under a Strategic Research Grant, Amount: \$13.000. This work adapts our consistency checking technology to the IBM Rational Software Modeler product.
- [2009] Co Principal Investigator “Best-Practice-Analysis of Mechatronic Products and Processes at Siemens VAI,” (Other PIs: Klaus Zeman, Gustav Pomberger und Rudolf Scheidl) funded by Siemens Corporate Research, Amount: €90.000. This work performed a best-practice analysis of three Siemens VAI products based on eight evaluation criteria.
- [2008-2011] Principal Investigator for “Inconsistencies and their Impact on Software Design Models,” funded by Austrian FWF under agreement P21321-N15, Amount: €91.000. This work investigated the side of effect of fixing inconsistencies in software design models and the impact of decisions made. Fixing design models becomes easier if errors in design models are investigated concurrently (rather than one at the time).
- [2008] Co Principal Investigator “Integrated Model Based Mechatronic Product Development,” (Other PIs: Klaus Zeman, Gustav Pomberger und Rudolf Scheidl) funded by Siemens Corporate Research, Amount: €48.000
- [2007-2008] Co Principal Investigator for “How to Fix Inconsistencies in Design Models,” (Other PI: Anthony Finkelstein) funded by UK EPSRC under agreement EP/F032110/1, Amount: £63.000. This work investigated the role of inconsistencies in software design models and identified ways for fixing them.
- [2003-2005] Co Principal Investigator for “Model-Based COTS Incorporation” (other PI: Robert Balzer) funded by the DARPA MoBIES II program under contract F30602-00-C-0218, Amount: \$820.000.
- [1994-1995] Principal Investigator for “Revoking Design Decisions in Event-Triggered Life-Cycle Models,” funded by the Austrian FWF (Kurt Goedel Research Grant), Amount: \$13,500

**Staff Member as Principal Investigator**

- [2010-] PI Paul Grünbacher “DOPLER Refactoring” funded by Siemens VAI Grant under contract PRO71343002, Amount: €120.000.

**Investigator**

- [2005-2007] Investigator for “HURT Systems Integration,” (Lead PI: Dwight Cass) subcontracted from Northrop-Grumman Company, under subaward agreement 861305, indirectly funded by the DARPA HURT program FA8650-04-C-7142, Amount: \$1.500.000. This work involved building a system for autonomously controlling teams of unmanned air vehicle (UAV). This work was done with Northrop-Grumman as the lead and Honeywell, Sarnoff, and other large software development companies as subcontractors. My role in this project was in helping the software engineers understand this rather complex software system which consisted of distributed clients and embedded devices (e.g., unmanned vehicles, sensors, and camera).
- [2004-2006] Investigator for “Architectural Differencing, Wrappers, Diagnosis, Recovery, Adaptivity and Trust Management,” (Lead PI: Howard Shrobe) subcontracted from the Massachusetts Institute of Technology (MIT) under subaward agreement 5710001719, indirectly funded by the DARPA SRS/AWD RAT program, Amount: \$800.000. This work demonstrated how to “harden” an existing legacy software system to detect intrusion (attack) and prevent errors. This work was

done with the Massachusetts Institute of Technology (MIT). My role in this project was to compare the actual execution of the software system with the expected execution.

- [2000-2002] Investigator for “Architectural Differencing”, (Lead PI: Robert Balzer) funded by the DARPA ANTS program under contract F30602-99-1-0524, Amount: undisclosed.
- [2000-2003] Investigator for “Model-Based Integration through GUI Monitoring”, (PI: Robert Balzer) funded by the DARPA MoBIES I program, contract F30602-00-C-0218, Amount: \$1,300,000.
- [1997-2000] Investigator for DARPA “Evolution and Design of Complex Systems” (Lead PI: Barry Boehm) funded by the DARPA EDCS program, contract F30602-94-C-0195.

## Recognitions and Awards

- [2010] IBM Research Faculty Fellow awarded by IBM Canada in recognition to the research on consistency management which is relevant and critical to their research priorities.
- [2007] Recognized as the 10<sup>th</sup> Best Scholar in Software Engineering by Ren, J. and Taylor, R. N. in “Automatic and Versatile Publications Ranking For Research Institutions And Scholars,” Communications of the ACM, June 2007, Vol. 50, No. 6.
- [2007] Recognition of Service Award from the ACM (Association for Computing Machinery) for Chairing the Program Committee of the 22<sup>nd</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE), Atlanta, GA, USA
- [2002] Bold Stroke Avionics Software Family (led by Boeing Comp.) was inducted in the SPLC 2002 Hall of Fame for Successful Product Lines. While at Teknowledge, I worked on its model-based integration (MoBIES I and II grants).
- [2001] Paper on “A Scenario-Driven Approach to Traceability” was selected as one of the ‘best of’ papers of the International Conference on Software Engineering (ICSE) and was subsequently published in the IEEE Transactions on Software Engineering.
- [2001] Paper on “Software Model Connectors: Bridging Models across the Software Lifecycle” was selected as one of the ‘best of’ papers of the International Conference on Software Engineering and Knowledge Engineering (SEKE) to be published in the Journal of Systems and Software.
- [1999] Outstanding Achievement Award from the University of Southern California, Los Angeles, USA.
- [1998] INCOSE Student Paper Award received during the 8<sup>th</sup> International Conference of Systems Engineering, Vancouver, Canada.
- [1994] “Mit Erfolg” (German: success) Award from the Johannes Kepler University, Austria.

## Publications

### Refereed Book Chapters

- [1] **A. Egyed**, P. Grünbacher, M. Heindl, and S. Biffel: “Value-Based Requirements Traceability: Lessons Learned”, in Design Requirements Engineering: A Ten-Year Perspective, editors: Lyytinen, K.J.; Loucopoulos, P.; Mylopoulos, J.; Robinson, W., Springer Verlag, 2009, pp. 240-257
- [2] K. Stirewalt, **A. Egyed**, B. Fischer: “Proceedings of the 22<sup>nd</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE 2007)”, November 5-9, 2007, Atlanta, Georgia, USA ACM 2007, ISBN 978-1-59593-882-4

- [3] B. Boehm, **A. Egyed**, J. Kwan, D. Port, A. Shah, and R. Madachy: “Using the WinWin Spiral Model: A Case Study” in *Software Engineering: Barry W. Boehm’s Lifetime Contributions to Software Development, Management, and Research* (reprinted from *IEEE Computer*), edited by Richard W. Selby, IEEE Computer Society, 2007, pp. 503-522.
- [4] **A. Egyed**: “Tailoring Software Traceability to Value-Based Needs,” in *Value-Based Software Engineering (VBSE)*, editors: S. Biffi, A. Aurum, B. Boehm, H. Erdogmus, and P. Grünbacher, Springer Verlag, 2006, pp. 287-308.
- [5] **A. Egyed**: “Automatically Discovering Transitive Relationships in Class Diagrams,” in *Model-Driven Software Development (MDS2)*, editors: Sami Beydeda, Matthias Book, and Volker Gruhn, Springer Verlag, 2005, pp. 179-198.
- [6] **A. Egyed**, B. Horling, R. Becker, and R. Balzer: “Visualization and Debugging Tools,” *Distributed Sensor Networks: A multiagent perspective*, editors: Victor Lesser, Charles Ortiz, and Milind Tambe, Kluwer Academic Publishers, 2003, pp. 33-41.

### Refereed Journal Papers

- [1] A. Egyed: “Automatically Detecting and Tracking Inconsistencies in Software Design Models,” *IEEE Transactions on Software Engineering (TSE)*, Preprint, accepted for publication, TBA
- [2] W. Shen, K. Wang, and **A. Egyed**: “An Efficient and Scalable Approach to Correct Class Model Refinement,” *IEEE Transactions on Software Engineering (TSE)*, Volume 35, Number 4, July/August 2009, pp. 515-533
- [3] **A. Egyed** and D. Wile: “Support for Managing Design-Time Decisions,” *IEEE Transactions on Software Engineering (TSE)*, Volume 32, Number 5, May 2006. pp. 299-314.
- [4] **A. Egyed** and R. Balzer: “Integrating COTS Software into Systems through Instrumentation and Reasoning,” *International Journal of Automated Software Engineering (JASE)*, Volume 13, Number 1, 2006, pp. 41-64.
- [5] **A. Egyed**, and P. Grünbacher: “Supporting Software Understanding with Automated Requirements Traceability,” *International Journal of Software Engineering and Knowledge Engineering (JSEKE)*, Volume 15, Number 5, 2005, pp. 783-810.
- [6] **A. Egyed** and P. Grünbacher: “Identifying Requirements Conflicts and Cooperation: How Quality Attributes and Automated Traceability Can Help,” *IEEE Software*, Volume 21, Number 6, November/December 2004, pp. 50-58.
- [7] P. Grünbacher, **A. Egyed**, N. Medvidovic: “Reconciling Software Requirements and Architectures with Intermediate Models,” *Journal for Software and Systems Modeling (SoSyM)*, Volume 3, Number 3, August 2004, pp. 235-253.
- [8] N. Medvidovic, P. Grünbacher, **A. Egyed**, B. Boehm: “Bridging Models across the Software Life-Cycle,” *Journal for Software Systems (JSS)*, Volume 68, Issue 3, December 2003, pp.199-215.
- [9] **A. Egyed**: “A Scenario-Driven Approach to Trace Dependency Analysis,” *IEEE Transactions on Software Engineering (TSE)*, Volume 29, Number 2, February 2003, pp. 116-132.
- [10] **A. Egyed**: “Automated Abstraction of Class Diagrams,” *ACM Transactions on Software Engineering and Methodology (TOSEM)*, Volume 11, Number 4, October 2002, pp. 449-491.
- [11] **A. Egyed**, N. Medvidovic, and C. Gacek: “A Component-Based Perspective of Software Mismatch Detection and Resolution,” *IEE Software Engineering*, Volume 147, Issue 6, December 2000, pp. 225-236.
- [12] **A. Egyed** and B. Boehm: “Comparing Software System Requirements Negotiation Patterns”, *Systems Engineering Journal*, Volume 6, Number 1, June 1999, pp. 1-14.

- [13] B. Boehm and **A. Egyed**: “Optimizing Software Product Integrity through Life-Cycle Process Integration”, *Journal for Computer Standards and Interfaces*, Volume 21, Number 1, May 1999, pp. 63-75.
- [14] B. Boehm, **A. Egyed**, D. Port, A. Shah, J. Kwan, and R. Madachy: “A Stakeholder Win-Win Approach to Software Engineering Education”, *Annals of Software Engineering*, Volume 6 (1998), April 1999, pp. 295-321.
- [15] B. Boehm, **A. Egyed**, J. Kwan, D. Port, A. Shah, and R. Madachy: “Using the WinWin Spiral Model: A Case Study”, *IEEE Computer*, Volume 31, Number 7, July 1998, pp. 33-44.

### **Refereed Conference Papers**

*Conferences play a vital role in my field and some have acceptance rates above those of the top journals. I listed acceptance information where available. Almost all conference papers are long, 10-page contributions.*

- [1] M. Vierhauser, P. Grünbacher, **A. Egyed**, R. Rabiser, and W. Heider: “Flexible and Scalable Consistency Checking on Product Line Variability Models”, *Proceedings of the 25<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE)*, Antwerp, Belgium, September 2010, pp. TBA (34 papers accepted out of 191).
- [2] **A. Egyed**, P. Grünbacher, F. Graf “Effort and Quality of Recovering Requirements-to-Code Traces: Two Exploratory Experiments,” in *Proceedings of the 18<sup>th</sup> International IEEE Requirements Engineering Conference (RE)*, Sydney, Australia, September 2010, pp. TBA (24 papers accepted out of 151).
- [3] P. Hehenberger, **A. Egyed**, and K. Zeman: “Consistency Checking of Mechatronic Design Models,” in *Proceedings of the ASME 2010 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE)*, Montreal, Canada, August 2010, pp. TBA.
- [4] R. E. Lopez-Herrejon and **A. Egyed**: “Detecting Inconsistencies in Multi-View Models With Variability,” in *6<sup>th</sup> European Conference on Modelling Foundations and Applications (ECMFA)*, Paris, France, June 2010, pp. TBA (31% of papers selected).
- [5] S. Trujillo, J. M. Garate, R. E. Lopez-Herrejon, X. Mendiadua, A. Rosado, **A. Egyed**, Charles W. Krueger and J. de Sosa: “Coping with Variability in Model-Based Systems Engineering: An Experience in Green Energy,” in *6<sup>th</sup> European Conference on Modelling Foundations and Applications (ECMFA)*, Paris, France, June 2010, pp. TBA (31% of papers selected).
- [6] R. E. Lopez-Herrejon and **A. Egyed**: “On the Need of Safe Software Product Line Architecture” *Proceedings of the 4<sup>th</sup> European Conference Software Architecture (ECSA)*, August 2010, Copenhagen, Denmark, pp. TBA.
- [7] I. Groher, A. Reder, **A. Egyed**: “Incremental Consistency Checking of Dynamic Constraints,” *13<sup>th</sup> International Conference on Fundamental Approaches to Software Engineering (FASE)* March 2010, Paphos, Cyprus, pp. 203-217 (24 papers accepted out of 96).
- [8] R. Lopez-Herrejon and **A. Egyed**: “On the Need of Safe Software Product Line Architecturesm,” in *Proceedings of 4<sup>th</sup> European Conference on Software Architecture (ECSA)*, August, 2010, Copenhagen, Denmark, pp. TBA.
- [9] I. Groher and **A. Egyed**: “Selective Backtracking of Model Changes,” *Proceedings of the 31<sup>st</sup> International Conference on Software Engineering (ICSE)*, May 2009, Vancouver, Canada, pp. 231-234.
- [10] **A. Egyed**, E. Letier, and A. Finkelstein: “Generating and Evaluating Choices for Fixing Inconsistencies in UML Models”, *Proceedings of the 22<sup>nd</sup> ACM/IEEE International Conference on Automated Software Engineering (ASE)*, L’Aquila, Italy, September 2008, pp. 99-108 (34 papers accepted out of 280 submitted)

- [11] **A. Egyed**: “Fixing Inconsistencies in UML Design Models,” Proceedings of the 29<sup>th</sup> International Conference on Software Engineering (ICSE), Minneapolis, MN, May 2007, pp. 292-301 (50 papers accepted out of 334 submitted).
- [12] H. Shrobe, R. Laddaga, R. Balzer, N. Goldman, D. Wile, M. Tallis, T. Hollebeek, and **A. Egyed**: “Self-Adaptive Systems for Information Survivability: PMOP and AWD RAT,” Proceedings of the 1<sup>st</sup> IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO), Boston, MA, July 9-11, 2007, pp. 332-335.
- [13] **A. Egyed**: “UML/Analyzer: A Tool for the Instant Consistency Checking of UML Models,” Tool Demonstration, Proceedings of the 29<sup>th</sup> International Conference on Software Engineering (ICSE), Minneapolis, MN, May 2007, pp. 793-796 (12 papers accepted out of 56 submitted).
- [14] **A. Egyed**, G. Binder, and P. Grünbacher: “STRADA: A Tool for Scenario-based Feature-to-Code Trace Detection and Analysis,” Tool Demonstration, Proceedings of the 29<sup>th</sup> International Conference on Software Engineering (ICSE), Minneapolis, MN, May 2007, pp. 41-42.
- [15] H. Shrobe E., R. Laddaga, R. Balzer, N. Goldman, D. Wile, M. Tallis, T. Hollebeek, **A. Egyed**: “AWDRAT: A Cognitive Middleware System for Information Survivability,” Proceedings of the 21<sup>st</sup> National Conference on Artificial Intelligence (AAAI) and the 18<sup>th</sup> Innovative Applications of Artificial Intelligence Conference (IAAI), Boston, MA, July, 2006.
- [16] **A. Egyed**: “Instant Consistency Checking for the UML,” Proceedings of the 28<sup>th</sup> International Conference on Software Engineering (ICSE), Shanghai, China, May 2006, pp. 381-390 (36 papers accepted out of 395 submitted).
- [17] M. Heindl, F. Reinisch, S. Biffel, and **A. Egyed**: “Value-Based Selection of Requirements Engineering Tool Support,” EUROMICRO-SEAA, 2006, pp. 266-273.
- [18] **A. Egyed**, S. Biffel, M. Heindl, and P. Grünbacher: “Determining the Cost-Quality Trade-Off for Automated Software Traceability,” Proceedings of the 20<sup>th</sup> ACM/IEEE International Conference on Automated Software Engineering (ASE), Long Beach, CA, November 2005, pp. 360-363.
- [19] V. Jakobac, **A. Egyed**, and N. Medvidovic: “Improving System Understanding via Interactive, Tailorable Source Code Analysis,” Proceedings of the 8<sup>th</sup> International Conference on Fundamental Approaches to Software Engineering (FASE), Edinburgh, Scotland, UK, April 2005, (25 papers accepted out of 99 submitted).
- [20] **A. Egyed**, W. Shen, and K. Wang: “Maintaining Life Perspectives during the Refinement of UML Class Structures,” Proceedings of the 8<sup>th</sup> International Conference on Fundamental Approaches to Software Engineering (FASE), Edinburgh, Scotland, UK, April 2005, (25 papers accepted out of 99).
- [21] **A. Egyed**: “Resolving Uncertainties during Trace Analysis,” Proceedings of the 12<sup>th</sup> ACM SIGSOFT Symposium on Foundations of Software Engineering (FSE), Irvine, CA, November 2004, pp. 3-12 (25 papers accepted out of 169).
- [22] **A. Egyed**: “Dynamic Deployment of Executing and Simulating Software Components,” Proceedings of the 2<sup>nd</sup> IFIP/ACM Working Conference on Component Deployment (CD), Edinburgh, Scotland, UK, May 2004, pp. 113-128 (16 papers accepted out of 34).
- [23] S. Johann and **A. Egyed**: “Instant and Incremental Transformation of Models,” Proceedings of the 19<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), Linz, Austria, September 2004, pp. 362-365 (short paper, 55 out of 183).
- [24] D. Wile and **A. Egyed**: “An Externalized Infrastructure for Self-Healing Systems,” Proceedings of the 4<sup>th</sup> Working IEEE/IFIP Conference on Software Architecture (WICSA), Oslo, Norway, June 2004, pp. 285-288 (short paper, 35 out of 82).

- [25] **A. Egyed**: “Consistent Adaptation and Evolution of Class Diagrams during Refinement,” Proceedings of the 7<sup>th</sup> International Conference on Fundamental Approaches to Software Engineering (FASE), Barcelona, Spain, March 2004, pp. 37-53 (22 papers accepted out of 91).
- [26] **A. Egyed**: “Compositional and Relational Reasoning During Class Abstraction,” Proceedings of the 6<sup>th</sup> International Conference on the Unified Modeling Language (UML), San Francisco, USA, October 2003, pp. 121-137 (25 papers accepted out of 143).
- [27] **A. Egyed** and P. Grünbacher: “Automating Requirements Traceability: Beyond the Record and Replay Paradigm,” Proceedings of the 17<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), Edinburgh, Scotland, UK, September 2002, pp. 163-171 (19 papers accepted out of 94).
- [28] **Egyed A.** and B. Balzer: “Unfriendly COTS Integration – Instrumentation and Interfaces for Improved Plugability,” Proceedings of the 16<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), San Diego, CA, November 2001, pp.223-231 (32 papers accepted out of 164).
- [29] P. Grünbacher, **A. Egyed**, and N. Medvidovic: “Reconciling Software Requirements and Architectures - The CBSP Approach,” Proceedings of the 5<sup>th</sup> IEEE International Symposium on Requirements Engineering (RE), Toronto, Canada, August 2001, pp. 202-211 (26 papers accepted out of 127).
- [30] **A. Egyed**, and D. Wile: “Statechart Simulator for Modeling Architectural Dynamics,” Proceedings of the 2<sup>nd</sup> IEEE/IFIP Conference on Software Architecture (WICSA), Amsterdam, The Netherlands, August 2001, pp. 87-96 (18 papers accepted out of 47).
- [31] N. Medvidovic, P. Grünbacher, **A. Egyed**, and B. Boehm: “Software Model Connectors: Bridging Models across the Software Lifecycle,” Proceedings of the 13<sup>th</sup> International Conference on Software Engineering and Knowledge Engineering (SEKE), Buenos Aires, Argentina, June 2001, pp. 387-396.
- [32] **A. Egyed**: “A Scenario-Driven Approach to Traceability,” Proceedings of the 23<sup>rd</sup> International Conference on Software Engineering (ICSE), Toronto, Canada, May 2001, pp. 123-132 (47 papers accepted out of 268). (**Voted one of the best papers of ICSE 2001**)
- [33] **A. Egyed**: “Scalable Consistency Checking between UML Diagrams: The ViewIntegra Approach,” Proceedings of the 16<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), San Diego, CA, September 2001, pp. 387-390 (short paper, 28 out of 164).
- [34] **A. Egyed** and N. Medvidovic: “A Formal Approach to Heterogeneous Software Modeling,” Proceedings of the 3<sup>rd</sup> International Conference on Foundational Aspects of Software Engineering (FASE), Berlin, Germany, March 2000, pp. 178-192 (27 papers accepted out of 60).
- [35] **A. Egyed**: “Semantic Abstraction Rules for Class Diagrams,” Proceedings of the 15<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), Grenoble, France, September 2000, pp. 301-304 (short paper, 25 out of 123).
- [36] **A. Egyed** and C. Gacek: “Automatically Detecting Mismatches during Component-Based and Model-Based Development,” Proceedings of the 14<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), Cocoa Beach, Florida, October 1999, pp. 191-198 (25 papers accepted out of 123).
- [37] **A. Egyed** and N. Medvidovic: “Extending Architectural Representation in UML with View Integration,” Proceedings of the 2<sup>nd</sup> International Conference on the Unified Modeling Language (UML), Fort Collins, CO, October 1999, pp. 2-16 (44 papers accepted out of 166).
- [38] B. Boehm, D. Port, **A. Egyed**, and M. Abi-Antoun,: “The MBASE Life Cycle Architecture Milestone Package: No Architecture Is An Island,” Proceedings of the 1<sup>st</sup> Working IFIP International Conference on Software Architecture (WICSA), San Antonio, TX, February 1999, pp. 511-528.
- [39] **A. Egyed** and P. Kruchten: “Rose/Architect: a tool to visualize architecture,” Proceedings of the 32<sup>nd</sup> Hawaii International Conference on System Sciences (HICSS), Maui, HI, January 1999.

- [40] **Egyed A.** and B. Boehm: "Telecooperation Experience with the WinWin System," Proceedings of the 15<sup>th</sup> IFIP World Computer Congress (WCC), Vienna, Austria and Budapest, Hungary, September 1998, pp. 37-46.
- [41] B. Boehm and **A. Egyed**: "Improving the Life-Cycle Process in Software Engineering Education," Proceedings of the 1<sup>st</sup> European Software Day co-located with the 24<sup>th</sup> Euromicro conference, Västerås, Sweden, August 1998, pp. 23-35.
- [42] **A. Egyed** and B. Boehm: "A Comparison Study in Software Requirements Negotiation," Proceedings of the 6<sup>th</sup> International Conferences of Systems Engineering (INCOSE), Vancouver, Canada, July 1998, pp. 667-674.
- [43] B. Boehm and **A. Egyed**: "WinWin Requirements Negotiation Processes: A Multi-Project Analysis," Proceedings of the 5<sup>th</sup> International Conference on Software Processes (ICSP), Lisle, IL, June 1998, pp.125-136.
- [44] B. Boehm and **A. Egyed**: "Software Requirements Negotiation: Some Lessons Learned," Proceedings of the 20<sup>th</sup> International Conference on Software Engineering (ICSE), Kyoto, Japan, April 1998, pp. 503-506.
- [45] B. Boehm, **A. Egyed**, J. Kwan, R. Madachy: "Developing Multimedia Applications with the WinWin Spiral Model," Proceedings of the 5<sup>th</sup> European Software Engineering Conference held jointly with the 5<sup>th</sup> ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Zurich, Switzerland, September 1997, pp. 20-39.
- [46] **A. Egyed** and B. Boehm: "Analysis of Software Requirements Negotiation Behavior Patterns," Proceedings of the 7<sup>th</sup> International Conferences of Systems Engineering (INCOSE), Los Angeles, CA, July 1997, pp. 269-276.

### Refereed Workshop Papers

- [1] A. Nöhrer and **A. Egyed** "Conflict Resolution Strategies during Product Configuration," in Proceedings of 4<sup>th</sup> International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Linz, Austria, January 2010, pp. TBA
- [2] M. Vierhauser, D. Dhungana, W. Heider, R. Rabiser, and **A. Egyed** "Tool Support for Incremental Consistency Checking on Variability Models," in Proceedings of 4<sup>th</sup> International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Linz, Austria, January 2010, pp. TBA
- [3] R. Lopez-Herrejon, **A. Egyed**, S. Trujillo, and M. Azanza "Using Incremental Consistency Management for Conformance Checking in Feature-Oriented Model-Driven Engineering," in Proceedings of 4<sup>th</sup> International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Linz, Austria, January 2010, pp. TBA
- [4] P. Hehenberger, **A. Egyed**, and K. Zeman: "Hierarchical Design Models during the Development of Mechatronic Systems," Proceedings of the VDI Mechatronik 2009, Heidelberg, Germany, May 2009.
- [5] R. Balzer, **A. Egyed**, N. Goldman, T. Hollebeek, M. Tallis, and D. Wile: "Adapting COTS Applications: an Experience Report," Proceedings of the Second International Workshop on Incorporating COTS Software into Software Systems: Tools and Techniques (IWICSS), May 2007.
- [6] **A. Egyed**, S. Biffel, M. Heindl, and P. Grünbacher: "A Value-Based Approach for Understanding Cost-Benefit Trade-Offs During Automated Software Traceability," Proceedings of the 3<sup>rd</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2005, Long Beach, CA, November 2005.
- [7] **A. Egyed**: "Architecture Differencing for Self Management," Proceedings of the 2<sup>nd</sup> Workshop on Self-Managed Systems, co-located with FSE 2004, Newport Beach, CA, November 2004.

- [8] **A. Egyed**, S. Johann, and R. Balzer: "Data and State Synchronicity Problems while Integrating COTS Software into Systems," Proceedings of the 4<sup>th</sup> International Workshop on Adoption-Centric Software Engineering, co-located with ICSE 2004, Edinburgh, Scotland, UK, May 2004.
- [9] S. Johann and **A. Egyed**: "State Consistency Strategies for COTS Integration," Proceedings of the 1<sup>st</sup> International Conference on Incorporating COTS Software into Software Systems, co-located with ICCBSS 2004, Redondo Beach, CA, February 2004.
- [10] P. Grünbacher and **A. Egyed**: "Towards Understanding Implications of Trace Dependencies among Quality Requirements," Proceedings of the 2<sup>nd</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2003, Montreal, Canada, October 2003.
- [11] N. Medvidovic, **A. Egyed**, and P. Grünbacher: "Stemming Architectural Erosion by Coupling Architectural Discovery and Recovery," Proceedings of the 2<sup>nd</sup> Second International Workshop from Software Requirements to Architectures (STRAW), co-located with ICSE 2003, Portland, Oregon, May 2003.
- [12] **A. Egyed**: "Reasoning about Trace Dependencies in a Multi-Dimensional Space," Proceedings of the 1<sup>st</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2002, Edinburgh, Scotland, UK, September 2002.
- [13] **A. Egyed**: "Transformation, Ambiguity, and Trivialization," Proceedings of the 2<sup>nd</sup> International Workshop on Living with Inconsistencies (IWLWI), co-located with ICSE 2001, Toronto, Canada, May 2001.
- [14] **A. Egyed** and N. Medvidovic: "Consistent Architectural Refinement and Evolution using the Unified Modeling Language," Proceedings of the 1<sup>st</sup> Workshop on Describing Software Architecture with UML, co-located with ICSE 2001, Toronto, Canada, May 2001, pp. 83-87.
- [15] **A. Egyed**, P. Grünbacher, and N. Medvidovic: "Refinement and Evolution Issues in Bridging Requirements and Architectures," Proceedings of the 1<sup>st</sup> International Workshops From Requirements to Architecture (STRAW), co-located with ICSE 2001, Toronto, Canada, May 2001, pp. 42-47.
- [16] **A. Egyed**: "Validating Consistency between Architecture and Design Descriptions," Proceedings of 1<sup>st</sup> Workshop on Evaluating Software Architecture Solutions (WESAS), Irvine, CA, May 2000.
- [17] **A. Egyed** and R. Hilliard: "Architectural Integration and Evolution in a Model World," Proceedings of 4<sup>th</sup> International Software Architecture Workshop (ISAW) co-located with ICSE 2000, Limerick, Ireland, June 2000.
- [18] P. Grünbacher, **A. Egyed**, and N. Medvidovic: "Dimensions of Concerns in Requirements Negotiation and Architecture Modeling," Proceedings of 2<sup>nd</sup> Workshop on Multi-dimensional Separation of Concerns in Software Engineering (MDSOC) co-located with ICSE 2000, Limerick, Ireland, June 2000.
- [19] **A. Egyed**, N. Mehta, and N. Medvidovic: "Software Connectors and Refinement in Family Architectures," Proceedings of 3<sup>rd</sup> International Workshop on Development and Evolution of Software Architectures for Product Families (IWSAPF), Las Palmas de Gran Canaria, Spain, March 2000 (also published in Springer Lecture Notes no. 1951).
- [20] N. Medvidovic, **A. Egyed**, and D. Rosenblum: "Round-Trip Software Engineering Using UML: From Architecture to Design and Back," Proceedings of the 2<sup>nd</sup> Workshop on Object-Oriented Reengineering (WOOR) co-located with the 7<sup>th</sup> European Software Engineering Conference held jointly with the 7<sup>th</sup> ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Toulouse, France, September 1999, pp. 1-8.
- [21] **A. Egyed**: "Using Patterns to Integrate Architectural Views in UML," Proceedings of the 3rd Ground Systems Architecture Workshop (GSAW'99), El Segundo, CA, March 1999.

### Proceedings Editor

- [1] K. Stirewalt, **A. Egyed**, B. Fischer (Eds.): 22<sup>nd</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE 2007), November 5-9, 2007, Atlanta, Georgia, USA ACM 2007.
- [2] **A. Egyed** and D. E. Perry (Eds.): 1<sup>st</sup> International Workshop on Incorporating COTS Software into Software Systems, February 1, 2004, Redondo Beach, CA, USA.
- [3] B.W. Boehm, C. Gacek, and **A. Egyed** (Eds.): 10<sup>th</sup> Focused Workshop on Software Engineering and Systems Engineering, Technical Report, University of Southern California, Los Angeles, CA June 1998.
- [4] B.W. Boehm, C. Gacek, and **A. Egyed** (Eds.): 9<sup>th</sup> Focused Workshop on Software Architecture II, with Barry Boehm and Cristina Gacek, Technical Report, University of Southern California, Los Angeles, CA, November 1997.
- [5] B. W. Boehm, S. Chulani, and **A. Egyed** (Eds.): Proceedings for 8<sup>th</sup> Focused Workshop on Rapid Application Development, Technical Report, University of Southern California, Los Angeles, CA, June 1996.
- [6] B. W. Boehm, M. Lee, and **A. Egyed** (Eds.): Proceedings for 6<sup>th</sup> Focused Workshop on Groupware for Software Engineering, Technical Report, University of Southern California, Los Angeles, CA, June 1995.

### Non-Refereed Publications

- [1] A. Egyed and B. Fischer: "Guest editors' introduction," Automated Software Engineering: Vol. 16, No. 1, 2009, pp. 1-2
- [2] Y. Bontemps and **A. Egyed**: "Scenarios and State Machines: Models, Algorithms, and Tools: A Summary of the 4<sup>th</sup> Workshop," ACM SIGSOFT Software Engineering Notes, Vol. 30, No. 5. ACM Press, New York, USA, September 2005.
- [3] **A. Egyed**, H. A. Müller, and D.E. Perry: "Integrating COTS into the Development Process," IEEE Software July/August 2005, Vol. 22, No. 4, pp. 2-5.
- [4] Reusable Software in Autonomous Negotiating Teams, eBook.
- [5] Y. Bontemps and **A. Egyed**: "Forth Workshop on Scenarios and State Machines: Models, Algorithms, and Tools," Proceedings of the 27<sup>th</sup> International Conference on Software Engineering, St. Louis, USA, May 2005, pp. 697.
- [6] **A. Egyed** and D.E. Perry: "First International Workshop on Incorporating COTS into Software Systems," in Proceedings of the 3<sup>rd</sup> International Conference on COTS-Based Software Systems, Redondo Beach, California, USA, February 2004, pp. 6-7.
- [7] **A. Egyed**, M. Glinz, I. Krüger, T. Systä, S. Uchitel, A. Zündorf : "Second Workshop on Scenarios and State Machines: Models, Algorithms, and Tools," Proceedings of the 25<sup>th</sup> International Conference on Software Engineering, Portland, Oregon, USA, May 2003, pp. 783-784.
- [8] **A. Egyed**, T. Systä, S. Uchitel, and A. Zündorf : "A Summary of the ICSE 2002 Workshop on Scenarios and State Machines: Models, Algorithms, and Tools," ACM SIGSOFT Software Engineering Notes, Vol. 27, No. 5, ACM Press, New York, USA, 2002.
- [9] **A. Egyed**: "UML/Analyzer – a system for defining and analyzing the conceptual integrity of UML models," ACM SIGSOFT Software Engineering Notes, Vol. 25, No. 1, ACM Press, New York, USA, January 2000.
- [10] B. Boehm, D. Port, M. Abi-Antoun, and **A. Egyed**: "Guidelines for the Life Cycle Objectives (LCO) and the Life Cycle Architecture (LCA) deliverables for Model-Based Architecting and Software Engineering (MBase)," Technical Report USCCSE-98-519, Center for Software Engineering, University of Southern California, Los Angeles, CA 90089-0781, 1999.

## Theses

- [1] A. Egyed: “Heterogeneous View Integration and its Automation,” Technical Report, Center for Software Engineering, University of Southern California, Los Angeles, CA 90089-0781, April 1999 (PhD Thesis as part of Doctoral Program).
- [2] A. Egyed: “Integrating Architectural Views in UML,” Technical Report USCCSE-99-514, Center for Software Engineering, University of Southern California, Los Angeles, CA 90089-0781, April 1999 (Qualifying Report as part of Doctoral Program).
- [3] A. Egyed: “Client-Server-Anwendungsentwicklung und GUI mit dem CASE Tool Systems Engineer,” Technical Report, Department for Systems Engineering and Automation, Johannes Kepler University, Linz, Austria, October 1994 (Master’s Thesis).

## Ph.D., M.S., and B.S. Committee

- Habilitation Committee Member
  - [2009] Dr. Gerhard Weiß on “Agent Orientation in Computer Science – Exploring the Agent-Oriented Perspective on Computer-Based Systems”
  - [2008] Dr. Wieland Schwinger on „On Models and Ontologies – Engineering Issues in Context-Aware Applications“
- Doctoral Students Advisor
  - [2009-] Benedikt Burgstaller on Software Dynamism
  - [2009-] Alexander Reder on Detecting and Fixing Inconsistencies
  - [2008-] Alexander Nöhrer on Design Decisions
- Master Student Advisor
  - [2010] Michael Vierhauser on “Consistency Checking in Product Lines”
  - [2010] Wu Lei on “Undo and Redo of Persistent Model Changes”
  - [2010] Erich Altreiter on “Requirements Conflict and Cooperation”
- Bachelor Student Advisor
  - [2008-] Carina Punz on “Uncertainties in Requirements to Code Trace analysis”
  - [2008-] Thomas Schartmüller on “Hyperlinked Project Data for Software Engineering Experiments”
- Doctoral Students Committee Member
  - [2007] David M. Woollard “Supporting Production Workflows Through First-Class Connectors,” University of Southern California, USA (in progress, passed screening exam in 2007)
  - [2006] Chiyong Seo “Energy-Awareness in Distributed Java-Based Software Systems,” University of Southern California, USA (in progress, passed qualifying exam in 2006)
  - [2006] Jesal Bhuta “Framework for Intelligent Assessment and Resolution of Commercial-Off-The-Shelf Product Incompatibilities,” University of Southern California, USA, (in progress, passed qualifying exam in 2006)
  - [2005] Vladimir Jacobak “Facilitating the Reasoning of an OO Software System’s Architecture,” University of Southern California, USA, 2005 (graduated)
- Master’s Thesis Committee Member and Co-Advisor

- [2006] Gernot Binder “Identifying Model to Code Traceability through Testing,” Johannes Kepler University, Austria (in progress)
- [2004] Sven Johann “Incremental Transformation of Models,” University of Applied Sciences Mannheim, Kaiserslautern, Germany (graduated)

## Professional Services

### Member

- [2009-] Secretary and Treasurer of the Center of Excellence for Software Traceability (COEST)  
[www.traceabilitycenter.org/](http://www.traceabilitycenter.org/)
- [2007-] Editorial Board Member for the International Journal of Software and Informatics,  
<http://www.ijsi.org>.
- [2007-] Steering Committee Member for the Automated Software Engineering Conference series.  
<http://www.ase-conferences.org/olbib/>

### Grant Proposal Reviewing

- [2006] Panelist for the National Science Foundation (NSF) (Sol Greenspan).
- [2003] Panelist for the National Science Foundation (NSF) (Sol Greenspan).

### Editor

- [2009] Guest Editor for the Journal of Automated Software Engineering (JASE) together with Bernd Fischer
- [2007] Editor of the Proceedings for the 22<sup>nd</sup> International Conference on Automated Software Engineering (ASE) together with Bernd Fischer.
- [2005] Guest Editor for IEEE Software on “Incorporating COTS Software into the Development Process” together with Hausi Müller and Dewayne Perry.

### Chair

- [2010] Co-Chair and Co-Organizer of the 3<sup>rd</sup> International Workshop on Living with Inconsistencies (ILWI) together with Roberto Lopez-Herrejon, Bashar Nuseibeh, Goetz Botterweck, Marscha Chechik, and Zhenjiang Hu – co-located with ASE 2010
- [2009] Session Chair for International Conference on Software Engineering (ICSE)
- [2008] Session Chair for International Conference on Software Engineering (ICSE)
- [2007] Co-Chair and Co-Organizer of the 1<sup>st</sup> International Workshop on Living with Uncertainties (IWLWA) together with Marsha Chechik, Betty Cheng, Alex Orso, and Kevin Sullivan – co-located with ASE 2007.
- [2007] Co-Chair and Co-Organizer of the 2<sup>nd</sup> International Workshop on Incorporating COTS Software into Software Systems (IWICSS) together with Hausi Müller, Dewayne Perry, Dennis B. Smith, and Scott Tilley – co-located with ICSE 2007.
- [2007] Co-Program Chair for the 22<sup>nd</sup> International Conference on Automated Software Engineering (ASE) together with Bernd Fischer.
- [2006] Co-Doctoral Symposium Chair for the 21<sup>st</sup> International Conference on Automated Software Engineering (ASE) together with Bernd Fischer.

- [2005] Co-Chair and Co-Organizer for the 4<sup>th</sup> International Workshop on Scenarios and State Machines: Models, Algorithms, and Tools (SCESM) together with Yves Bontemps – co-located with ICSE 2005.
- [2005] Co-Tool Demonstration Chair for the 20<sup>th</sup> International Conference on Automated Software Engineering (ASE) together with Thomas Alspaugh.
- [2004] Co-Chair and Co-Organizer of the 1<sup>st</sup> International Workshop on Integrating COTS into Software Systems: Tools and Techniques (IWICSS) together with Dewayne Perry – co-located with ICCBSS 2004.
- [2004] Publicity Chair for the 19<sup>th</sup> International Conference on Automated Software Engineering (ASE).
- [2002] Co-Chair and Co-Organizer for the 1<sup>st</sup> International Workshop on Scenarios and State Machines: Models, Algorithms, and Tools” together with Tarja Systä, Francis Bordeleau, Martin Glinz, Stefan Leue, Sebastian Uchitel, Jon Whittle, and Albert Zündorf – co-located with ICSE 2002.

**Expert Advisor**

- [2010-] Expert Advisor to the NSF MRI Proposal on Traceability Instrumentation Funding by Jonathan Maletic, Denys, Jane Keyes, Olly Gotel, and Jane Huang

**Reviewer (Journal)**

IEEE Transactions on Software Engineering (TSE)	1999-2010
ACM Transactions on Software Engineering and Methodology (TOSEM)	2004-2009
Journal Information & Software Technology (IST)	2004-2009
Journal on Systems and Software (JSS)	2005-2010
Journal on Software Maintenance and Evolution (JSME)	2007-2008
Journal Software and System Modeling (SoSyM)	2002-2010
IEEE Software	2005-2007
Journal on Automated Software Engineering (JASE)	2000, 2006, 2009
Requirements Engineering Journal	2002
IEE Software Magazine	2006
Journal Computer Standards & Interfaces (CS&I)	1998-2000
Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS)	2009
Journal on Empirical Software Engineering (EMSE)	2010
ACM Computing Survey	2010

**Program Committee (Conferences), Expert Panel, or Book Reviewer**

- [2011] Program Committee member for the 33<sup>rd</sup> International Conference on Software Engineering (ICSE 2011)
- [2010] Program Committee member for the 1<sup>st</sup> Software und Service Engineering für Mobile Dienste (SSEMD), co-located with Informatik 2010, Leipzig, Germany.
- [2010] Program Committee member for the 18<sup>th</sup> International Requirements Engineering Conference (RE 2010)
- [2010] Program Committee member for the 1<sup>st</sup> International Symposium on Architecting Critical Systems (ISARCS 2010)
- [2010] Program Committee member for the 13<sup>th</sup> International Conference on Fundamental Approaches to Software Engineering (FASE)

- [2010] Program for the Formal Research Demo of the 32<sup>nd</sup> International Conference on Software Engineering (ICSE)
- [2010] Program for the Formal Research Demo of the 25<sup>th</sup> International Conference on Automated Software Engineering (ASE)
- [2010] Program Committee for the 3<sup>rd</sup> International Workshop on Academic Software Development Tools and Techniques (WASDeTT)
- [2009] Program Committee member for the 12<sup>th</sup> ACM/IEEE International Conference on Model Driven Engineering Languages and Systems (MODELS)
- [2009] Program Committee member for the 8<sup>th</sup> Working International Conference on Software Architecture (WICSA) and the 3<sup>rd</sup> European Conference on Software Architecture (ECSA)
- [2009] Program Committee member for the International Conference on Foundational Aspects of Software Engineering (FASE)
- [2009] Program Committee member for the Formal Research Demo of the 31<sup>st</sup> International Conference on Software Engineering (ICSE)
- [2009] Program Committee member for the 5<sup>th</sup> Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE)
- [2009] Program committee member for the Software Process and Product Improvement (SPPI) track of the EUROMICRO 2009 conference on Software Engineering and Advanced Applications
- [2008] Program Committee member for the International Conference on Model Driven Engineering Languages and Systems (MoDELS)
- [2008] Expert Research Panel for the 23<sup>rd</sup> International Conference on Automated Software Engineering (ASE)
- [2008] Workshop Program Committee member for the 30<sup>th</sup> International Conference on Software Engineering (ICSE)
- [2008] Tool Demonstration Program Committee member for the 30<sup>th</sup> International Conference on Software Engineering (ICSE)
- [2008] Program committee member for the 8<sup>th</sup> Working International Conference on Software Architecture (WICSA)
- [2008] Program committee member for the Formal Tools Demonstration track of the 30<sup>th</sup> International Conference on Software Engineering (ICSE)
- [2008] Program committee member for the Software Process and Product Improvement (SPPI) track of the EUROMICRO 2008 conference on Software Engineering and Advanced Applications
- [2007] Program committee member for the 4<sup>th</sup> Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE)
- [2007] Program committee member for the 2<sup>nd</sup> Workshop on Event-Based Information Technology Systems (EBITS), co-located with the ARES 2007 conference
- [2007] Program committee member for the 6<sup>th</sup> International Workshop on Scenarios and State Machines (SCESM) co-located with the ICSE 2007 conference
- [2007] Program committee member for the 6<sup>th</sup> Working IEEE/IFIP Conference on Software Architecture (WICSA)
- [2007] Program committee member for the 33<sup>rd</sup> EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA), Track on Software Process and Product Improvement (SPPI)

- [2006] External Panel Member for the 28<sup>th</sup> International Conference on Software Engineering (ICSE)
- [2006] Program committee member for the 1<sup>st</sup> Workshop on Quality in Modeling, Co-located with the ACM/IEEE 9<sup>th</sup> International Conference on Model Driven Engineering Languages and Systems (MoDELS)
- [2005] Program committee member for the 5<sup>th</sup> Working IEEE/IFIP Conference on Software Architecture (WICSA)
- [2005] Program committee member for the 3<sup>rd</sup> Traceability in Emerging Forms of Software Engineering (TEFSE)
- [2005] Program committee member for the 20<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE)
- [2005] Program Committee member for the 31<sup>st</sup> Workshop on Software Process and Product Improvement
- [2004] Reviewer of book chapters for the Value-Based Software Engineering (VBSE), Springer Verlag.
- [2004] Reviewer of book chapters for the Model-Driven Software Development (MDSD2), Springer Verlag.
- [2004] Program committee member for the 1<sup>st</sup> Workshop on Software Architecture Description & UML
- [2004] Program committee member for the 19<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE).
- [2004] Program Committee member for the 30<sup>th</sup> Workshop on Software Process and Product Improvement.
- [2003] Program committee member for the 2<sup>nd</sup> International Workshop on Traceability of Emerging Forms of Software Engineering (TEFSE).
- [2003] Program committee member for the 18<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE).
- [2003] Program committee member for the 5<sup>th</sup> International Workshop on Learning Software Organizations (LSO).
- [2003] Program Committee member for the 29<sup>th</sup> Workshop on Software Process and Product Improvement.
- [2002] Program Committee for the 4<sup>th</sup> International Workshop on Learning Software Organizations (LSO).
- [2002] Program committee member for the 17<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE).
- [2002] Program Committee for the 28<sup>th</sup> Workshop on Software Process and Product Improvement.
- [2001] Program Committee for the 1<sup>st</sup> International Workshop on Model-Based Requirements Engineering (MBRE).
- [2001] Program Committee Member for 27<sup>th</sup> Workshop on Software Process and Product Improvement.
- [2000] Reviewer for the Doctoral Symposium of the Automated Software Engineering Conference (ASE).
- [2000] Program Committee Member for 26<sup>th</sup> Workshop on Software Process and Product Improvement.
- [1999] Conference Committee Member for the 21<sup>st</sup> International Conference on Software Engineering (ICSE).
- [1999] Program Committee Member for the 25<sup>th</sup> Workshop on Software Process and Product Improvement.
- [1999] Program Committee Member for the 3<sup>rd</sup> Ground Systems Architecture Workshop in El Segundo, CA.
- [1998] Program Committee Member for the 24<sup>th</sup> Workshop on Software Process and Product Improvement.
- [1998] Program Committee Member for the 2<sup>nd</sup> Ground Systems Architecture Workshop in El Segundo, CA.

[1997] Program Committee Member for the 1<sup>st</sup> Ground Systems Architecture Workshop in El Segundo, CA.

## Keynotes

- “Detecting and Fixing Inconsistencies during Model-Driven Software Development” at the IBM Software Developer Platform Event ‘As Real as it gets’ in Zürich-Altstetten, September 2009.
- “On the Role of Software Modeling: Beyond the Obvious” IBM Workshop on Software Experience, Linz, Austria, April 2009.

## Invited Seminars

- Guest Speaker at the IFIP Working Group 2.9 on Software Requirements Engineering, 2010 in La Jolla, CA.
- “Detecting, Tracking, and Fixing Errors in Software Design Models” at the IBM Research GmbH, Zurich Research Laboratory, September 2009
- “Model-Driven Software Development – Bridging the Gap between Requirements, Model, and Code” at the Rational Software & Application Development Day, Vienna, Austria, June 2009.
- “Detecting, Tracking, and Fixing Software Design Errors” at the Technical University of Vienna, Austria, May 2008.
- “Detecting and Tracking of Inconsistencies in Software Design Models” at the University of Cambridge, UK, February 2008.
- “Detecting and Tracking Inconsistencies in Software Design Models” at the Open University, Milton Keynes, UK, December 2007.
- “Detecting and Tracking Inconsistencies in Software Design Models” at the University of Texas (UT), Austin, November 2007.
- “Detecting and Tracking Inconsistencies in Software Design Models” at the George Mason University (GMU), Fairfax, VA, April 2007.
- “Detecting and Tracking Inconsistencies in Software Design Models” at the North Carolina State University (NCSU), Raleigh, NC, April 2007.
- “Detecting and Tracking Inconsistencies in Software Design Models” at the Johannes Kepler University (JKU), Linz, Austria, March 2007.
- “Integrating Software Modeling,” at the University of Oxford, UK, February 2007.
- “Traceability in the Software Lifecycle,” at the NASA IV&V Facility in Fairmont, WV, July 2006.
- “Design Traceability through Scenario Observations,” at the University of Newcastle upon Tyne, England, UK, September 2002.
- “Dynamic Simulation and Simulating Dynamism,” at Technical University Munich (TUM), Munich, Germany, January 2002.
- “A Scenario-Driven Approach to Software Model Traceability,” at Carnegie Mellon University (CMU), Pittsburgh, PA, April 2001.
- “Model Integration and its Automation,” at Jet Propulsion Lab (JPL), Pasadena, CA, February 2001.

- “A View Integration Framework for Consistency Checking of UML Models,” at the University of Maryland (UMD), College Park, MD, April 2000.
- “A View Integration Framework for Consistency Checking of UML Models,” at the Southern California Software Process Improvement Network (SC SPIN), Los Angeles, CA, April 2000.
- “A View Integration Framework for Consistency Checking of UML Models,” at the USC Information Science Institute (ISI), Marina Del Rey, CA, February 2000.
- “A Framework for Scaleable Consistency Checking,” at the Johannes Kepler University, March 2000.
- “Experiences with the WinWin Groupware System,” at the University of California, Irvine, June 1999.
- “Experiences with the WinWin Groupware System,” at the Joint Meeting of the Los Angeles ACM Chapter and the Special Interest Group in Programming Languages (SIGPLAN), November 1998.

## **Presentations at Conferences and Workshops**

- 31<sup>st</sup> International Conference on Software Engineering (ICSE), Vancouver, Canada, 2009 (poster presentation)
- 23<sup>rd</sup> International Conference on Automated Software Engineering (ASE), L’Aquila, Italy, 2008 (paper presentation)
- 29<sup>th</sup> International Conference on Software Engineering (ICSE), Minneapolis, MN 2007 (paper presentation, tool demo presentation, and poster presentation).
- 28<sup>th</sup> International Conference on Software Engineering (ICSE), Shanghai, China, May 2006 [Chair: Leon Osterweil] (paper presentation).
- 20<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), Long Beach, CA, November 2005 [Chair: David Redmiles] (short paper/poster presentation).
- 3<sup>rd</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2005, Long Beach, November 2003 (paper presentation).
- 12<sup>th</sup> ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE), Newport Beach, CA, USA, November 2004 (paper presentation).
- 2<sup>nd</sup> Workshop on Self-Managed Systems (WOSS), Newport Beach, CA, USA, November 2004 (paper presentation).
- 2<sup>nd</sup> IFIP/ACM Working Conference on Component Deployment (CD), Edinburgh, Scotland, UK, May 2004 (paper presentation).
- 4<sup>th</sup> International Workshop on Adoption-Centric Software Engineering (ACSE), Edinburgh, Scotland, UK, May 2004 (paper presentation).
- 3<sup>rd</sup> International Conference on COTS-Based Software Systems (ICCBSS), Redondo Beach, CA, February 2004 (workshop summary).
- 6<sup>th</sup> International Conference on the Unified Modeling Language (UML), San Francisco, USA, October 2003 (paper presentation).
- 2<sup>nd</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2003, Montreal, Canada, October 2003 (paper presentation).
- 2<sup>nd</sup> Second International Workshop from Software Requirements to Architectures (STRAW), co-located with ICSE 2003, Portland, Oregon, May 2003 (paper presentation).

- 17<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), Edinburgh, Scotland, UK, September, 2002 [Chair: Julian Richardson] (paper presentation).
- 1<sup>st</sup> International Workshop on Traceability, co-located with ASE 2002, Edinburgh, Scotland, UK, September 2002 (paper presentation).
- 16<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), San Diego, CA, November 2001 [Chair: Debra Richardson] (paper presentation).
- 5<sup>th</sup> IEEE International Symposium on Requirements Engineering (RE), Toronto, Canada, August 2001 [Chair: Bashar Nuseibeh] (paper presentation).
- 2<sup>nd</sup> Working International Conference on Software Architecture (WICSA), Amsterdam, The Netherlands, August 2001 [Chair: Philippe Kruchten] (paper presentation).
- 23<sup>rd</sup> International Conference on Software Engineering (ICSE), Toronto, Canada, May 2001 [Chair: Hausi Müller] (paper presentation).
- 2<sup>nd</sup> International Workshop on Living with Inconsistencies (IWLWI), co-located with ICSE 2001, Toronto, Canada, May 2001 [Chairs: Steve Easterbrook and Marsha Chechik] (paper presentation).
- 1<sup>st</sup> Workshop on Describing Software Architecture with UML, co-located with ICSE 2001, Toronto, Canada, May 2001 [Chairs: Alan Brown, Wojtek Kozaczynski, Philippe Kruchten, and Grant Larsen] (paper presentation).
- 1<sup>st</sup> International Workshops From Requirements to Architecture (STRAW), co-located with ICSE 2001, Toronto, Canada, May 2001 [Chairs: Jaelson Castro and Jeff Kramer] (paper presentation).
- 1<sup>st</sup> Workshop on Evaluating Software Architecture Solutions (WESAS), Irvine, CA, May 2000 [Chair: Richard Taylor] (presentation).
- 3<sup>rd</sup> International Conference on Foundational Aspects of Software Engineering (FASE), Berlin, Germany, March 2000 [Chair: Tom Maibaum] (paper presentation).
- 4<sup>th</sup> International Workshop on Software Architectures for Product Families (IWSAPF), Las Palmas, Gran Canaria, Spain, March 2000 [Chair: Henk Obbink] (paper presentation).
- 2<sup>nd</sup> International Conference on the Unified Modeling Language (UML), Fort Collins, CO, October 1999 [Chair: Robert France] (paper presentation).
- 14<sup>th</sup> IEEE International Conference on Automated Software Engineering (ASE), Cocoa Beach, FL, October 1999 [Chair: Dorothy Setliff] (paper presentation).
- 2<sup>nd</sup> Workshop on Object-Oriented Reengineering (WOOR) co-located with the 7<sup>th</sup> European Software Engineering Conference held jointly with the 7<sup>th</sup> ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Toulouse, France, September 1999, [Chairs: Serge Demeyer and Harald Gall] (paper presentation).
- 21<sup>st</sup> International Conference on Software Engineering (ICSE), Los Angeles, CA, May 1999 [Chair: Barry Boehm] (formal demonstration).
- 3<sup>rd</sup> Ground System Architecture Workshop (GSAW), El Segundo, CA, March 1999 [Chair: Judy Kerner] (presentation).
- 32<sup>nd</sup> Hawaii International Conference on Systems Sciences (HICSS), Wailea, Hawaii, January 1999 (paper presentation).
- 15<sup>th</sup> IFIP World Computer Congress on “The Global Information Society on the Way to the Next Millennium,” Vienna (Austria) and Budapest (Hungary), September 1998 (paper presentation).

- 1<sup>st</sup> European Software Day as part of the 24<sup>th</sup> Euromicro Conference, Västerås, Sweden, August 1998 [Chair: Gerhard Chroust] (paper presentation).
- 8<sup>th</sup> Annual International Symposium on “People, Teams and Systems”, International Council on Systems Engineering (INCOSE), Vancouver, Canada, June 1998 [Chair: Jas Madhur] (paper presentation).
- 10<sup>th</sup> Focused Workshop on Software Engineering and Systems Engineering, University of Southern California, Los Angeles, CA, June 1998 [Chair: Barry Boehm] (presentation).
- 20<sup>th</sup> International Conference on Software Engineering (ICSE) on “Forging New Links”, Kyoto, Japan, April 1998 [Chair: Koji Torii] (paper presentation).
- 9<sup>th</sup> Focused Workshop on Software Architecture II, University of Southern California, Los Angeles, CA, November 1997 [Chair: Barry Boehm] (presentation and demonstration).
- 7<sup>th</sup> Annual International Symposium on “Systems Engineering: A Necessary Science”, International Council on Systems Engineering (INCOSE), Los Angeles, CA, August 1997 (paper presentation).

## Administrative Responsibilities

- Co-Chair Strategy Commission “Lehramt” : educating teachers

## Teaching

Courses	2005	2006	2007	2008-2010
Software Architecture	USC	USC		
Software Engineering			JKU	JKU
Software-Intensive Systems				JKU
Seminar on Model-Based Software Development				JKU
Introduction to Computer Science				JKU

USC...University of Southern California

JKU... Johannes Kepler University

Plus various guest lectures in courses: Seminar in Computer Science Research (USC, 2006), Software Analysis and Formal Methods (USC, 1999), User Interfaces and Software Engineering (UCI, 1999)

## Software Development

I developed a range of software packages. The following lists a few significant ones that are (or have been) used by people other than myself.

- Model Analyzer: helps identify, visualize, and understand constraint violations in software models, assists in their continuous tracking and ultimate resolution (fixing).
- MoBIES ACL Translator and Exporter: supports the capture, visualization, and sharing of the Boeing Bold Stroke product line avionics component model. Used by Boeing Company, Vanderbilt University and Carnegie Mellon University.

- UML Interface: provides an UML-compliant API and change notification mechanism for IBM Rational Rose (a premiere, commercial UML modeling tool). Used by Boeing Company and Carnegie Mellon University.
- ANTS Visualization, Debugging, and Analysis Tool: supports the visualization of autonomous negotiating agents on the ANTS infrastructure (a sensor network). Used by MITRE Corporation, SRI, and the University of Massachusetts.
- FLUP: commercial tool that supports cost/billing computations for Austrian veterinarians. Used by over a dozen veterinarians.
- HURT Visualization and Debugging tool: uses introspection to visualize arbitrary ontology-based data sources in terms of their contents and changes over time (history). Used by Northrop-Grumman Company and Honeywell.
- Class Abstraction tool: simplifies complex UML class structures by using transitive reasoning rules.
- UML/Analyzer tool: performs batch and incremental consistency checking on UML class, sequence, and statechart diagrams.
- Ambiguous Reasoning tool: identifies infeasible design choices in UML models by evaluating known consistency and conformance constraints.
- SDS Simulator tool: open/closed simulator for a variant of Harel's statechart diagrams.
- Trace/Analyzer tool: computes model-to-model trace dependencies based on model-to-code input dependencies.

## Professional Societies

- ACM (Association for Computing Machinery)
- ACM SIGSOFT (Special Interest Group on Software Engineering).
- IEEE (Institute of Electrical and Electronics Engineers)
- IEEE Computer Society.

## Collaborations

Ongoing and past collaborations with researchers and practitioners from industry and academia

### Industry Collaborations

- Aerospace Corporation
- Boeing Corporation
- Honeywell
- IBM
- Integrated Systems and Internet Solutions
- Lockheed-Martin
- Northrop-Grumman Company
- Mitre Corporation
- Rational Software Corporation
- Siemens AG
- SoHaR Incorporated
- Teknowledge Corporation

### **Academic Collaborations**

- Carnegie Mellon University
- Fraunhofer Institute in Germany
- Johannes Kepler University in Austria
- Massachusetts Institute of Technology
- Technical University of Vienna
- University College London
- University of California at Irvine
- University of Michigan
- University of South Carolina
- University of Southern California
- University of Southampton
- University of Texas at Austin
- Vanderbilt University
- Vienna Technical University
- Western Michigan University

### **Languages**

English and German.