# Curriculum Vitae

# Prof. Dr. Alexander Egyed

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Research: http://www.alexander-egyed.com/

Institute: http://www.isse.jku.at/

University: http://www.jku.at/

## Salaried Position

[2015-present] Vice Rector for Research at the **Johannes Kepler University** (JKU), Linz, Austria.

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

## Honorary Positions

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

[2008-2010] Visiting Professor at the **University College London** (UCL), London, UK

[2005-2008] Adjunct Professor at the **University of Southern California** (USC), Los Angeles, USA

## Research Area

Centered broadly in the area of software and systems engineering, with a strong focus on all aspects of modeling. Extensive experiences improving design modeling (such as the UML), variability, and handling traceability among requirements, design models, and code.

## Excerpt of Most Relevant Professional Services

- Editorial Board Member for IEEE Transactions for Software Engineering (TSE)

- Editorial Board Member for Software and System Modeling (SoSyM)

- Steering Committee Member for the International Conference of Automated Software Engineering (ASE) conference series

- Steering Committee Member for the European Joint Conferences on Theory and Practice of Software (ETAPS) multi-conference series

- Steering Committee Member for the International Conference on Model Driven Engineering Languages and Systems (MoDELS)

- PC Chair (Application Track) for the 17th International Conference on Model Driven Engineering Languages and Systems (MoDELS)

- PC Co-Chair for the 22nd International Conference on Software Engineering (ASE)

- PC Co-Chair for the 18<sup>th</sup> International Conf. on Fundamental Approaches to Software Engineering (FASE)

## Academic Search Engines

ORCID:                           http://orcid.org/0000-0003-3128-5427#sthash.azfW3uq6.dpuf

Google Scholar:            https://scholar.google.com/citations?user=tN-tEGIAAAAJ&hl=en&oi=ao

AMiner:                         http://arnetminer.org/person/-1410419.html

Microsoft Academic Search:

## Metrics

| | | |
|---|---|---|
| Publications in refereed Books: | 9 | |
| Publications in refereed Journals: | 28 | |
| Publications in refereed Proceedings: | 128 | |
| Proceedings Editor: | 8 | |
| Number of Citations: | 4265 | (Google Scholar) |
| h-Index: | 33 | (Google Scholar) |
| i10-Index: | 89 | (Google Scholar) |

## Keynotes

- "Collaborative Engineering across Disciplines and Tools", at Flanders MAKE Seminar on Improving systems engineering of mechatronic systems, March 2016.

- "Software Engineering and its industrial Transition", at the Research Studios Austria (RSA), Linz, Austria, January 2016

- "Model-Driven Engineering and the Impact of a Change" at the 38<sup>th</sup> Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Cesme, Turkey, September 2012.

- "Models and their Consistent Evolution" at the 7<sup>th</sup> Models and Evolution Workshop (ME) co-located with the 15<sup>th</sup> International Conference on Model Driven Engineering Languages and Systems (MoDELS), Innsbruck, Austria, September 2012.

- "Fine-Tuning Model Transformation" at the International Conference on Model Transformation (ICMT), Zürich, Switzerland, June 2011.

- "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.

## Recognitions and Awards

[2015] Best Paper Award for "Exploiting Traceability Uncertainty Between Software Architectural Models and Performance Analysis Results", 9<sup>th</sup> European Conference on Software Architecture (ECSA), Dubrovnik, Croatia, 2015.

[2015] Nominated for Best Paper Award for "Extracting Variability-Safe Feature Models from Source Code Dependencies in System Variants" at the Genetic and Evolutionary Computation Conference (GECCO), Madrid, Spain.

[2014] Recognized among the Top 30 authors in software engineering literature by João M. Fernandes in "Authorship Trends in Software Engineering," Springer Scientometrics, May 2014, Volume 101, Issue 1, pp 257-271.

[2014] Recognized among the Top 50 authors in software engineering according to the Microsoft Academic Field Rating.
(http://academic.research.microsoft.com/RankList?entitytype=2&topDomainID=2&subDomainID=4&last=5&start=1&end=100)

[2014] Recognized ACM and IEEE Senior Member, an honor bestowed only to those who have made significant contributions to the profession.

[2014] Spotlight in IEEE Computer about our IEEE TSE paper on "Determining the Cause of a Design Model Inconsistency". The IEEE Computer is the premiere magazine for all banches of technical sciences and engineering and this magazine will report on our paper.

[2014] Best Paper Award for "Inconsistency Resolution in Merging Versions of Architectural Models" received at the 11th Working IEEE/IFIP Conference on Software Architecture (WICSA), Sydney, Australia.

[2013] Recognized as Distinguished Referee by ACM Transactions on Software Engineering and Methodology (TOSEM).

[2012] Paper on "Constraint-Driven Modeling through Transformation" was selected as one of the Top Papers of the 5th International Conference on the Theory and Practice of Model Transformation (ICMT) to the Tool Conference Series, Prague, Czech Republic.

[2012] Paper on "Assessing the Effect of Requirements Traceability for Software Maintenance" was selected as one of the top papers of the 28th International Conference on Software Maintenance (ICSM), Italy for a special journal issue.

[2012] Paper on "Computing Repair Trees for Resolving Inconsistencies in Design Modelswas selected as one of the top papers of the 27th International Conference on Automated Software Engineering (ASE), Germany for a special journal issue.

[2011] Best Paper Award for "Constraint Programming Approach for Checking Conformance in Feature Models" received at the 35th Annual International Computer Software and Applications Conference (COMPSAC), Munich, Germany.

[2011] IBM Research Fellowship awarded by IBM Canada in recognition to the research on consistency management which is relevant and critical to their research priorities.

[2010] Paper on "Selective and Consistent Undoing of Model Changes" was selected as one of the top papers of the International Conference on Model Driven Engineering Languages and Systems (MoDELS), Norway for a special journal issue.

[2007] Recognized as the 10th 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 22nd 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 top papers of the International Conference on Software Engineering (ICSE), Canada for a special journal issue.

[2001] Paper on "Software Model Connectors: Bridging Models across the Software Lifecycle" was selected as one of the top papers of the International Conference on Software Engineering and Knowledge Engineering (SEKE) for a special journal issue.

[1999] Outstanding Achievement Award from the University of Southern California, Los Angeles, USA.

[1998] INCOSE Student Paper Award received during the 8th International Conference of Systems Engineering, Vancouver, Canada.

[1994] "Mit Erfolg" (German: success) Award from the Johannes Kepler University, Austria.

## Rankings and other Facts

- The Communications of the ACM (June 2007) recognized Dr. Egyed as the 10th best scholar in software engineering worldwide. This article ranked thousands of software research scholars worldwide according to their quality and quantity of publications.

- According to ArnetMiner.org, Dr. Egyed ranks a Top 50 software engineering scholar based on his H-Index (out of 7500 researcher) and his publication count

- Microsoft Academic Search ranks Dr. Egyed among the Top 120 scholars in their 'field rating.' [observed December 2013] and one of the Top 20 publishers

- Dr. Egyed has over 3700 citations (H Index=30) according to Google Scholar or over 2600 citations (H Index=26) according to ArnetMiner.

- The paper on "Instant Consistency Checking for the UML" (the foundation of this project) is listed among the Top 150 software engineering papers in terms of citations published in the last 5 years (out of roughly 45,000 papers listed there).

- The Johannes Kepler University (JKU) now ranks ~34 in research institutions in software engineering in the world (out of roughly 3,400 institutions covering the research output of the last 5 years)

- The JKU Master's in Software Engineering ranks 1st in Computer Science in Austria and 3rd among all technical studies.

- The ACM Digital Library reveals that 34 papers from the PI available there have been downloaded 13,917 times in total (average download per article 397) http://dl.acm.org/author_page.cfm?id=81100210169&coll=DL&dl=ACM&CFID=544563281&CFTOKEN=37442697

- The PI's research web site at http://www.alexander-egyed.com/ attracted over 125,000 page views since 2006 according to StatCounter.

## In the News (Selected)

- OÖ Nachrichten Feb. 17, 2016: „Kepler-Universität Linz mitten in der Weltspitze" (translation: JKU in the Middle of the World Elite) http://www.nachrichten.at/nachrichten/wirtschaft/Kepler-Universitaet-Linz-mitten-in-der-Weltspitze;art15,2152392

- Bezirksrundschau Feb. 18, 2016: „Microsoft-Ranking: JKU rückt auf Rang 16 vor" (translation: JKU advances to Top 16 in Microsoft Ranking" http://www.meinbezirk.at/linz/wirtschaft/kepler-uni-rueckt-im-microsoft-ranking-auf-rang-16-vor-d1639079.html

- OÖ ORF und OÖ Nachrichten Oct. 1, 2015: „Neuer Rektor will „europäische Spitzenuni" (translation: new Rector wants to join the best Universities in Europe)
  http://ooe.orf.at/news/stories/2734684/ und
  http://www.nachrichten.at/oberoesterreich/Neuer-Rektor-will-JKU-an-die-europaeische-Spitze-fuehren;art4,1989693

- OÖ Nachrichten Sep. 30, 2015: "Alexander Egyed: Ein „Überflieger" in der Forschung" (translation: Egyed at the Top in Research)
  http://www.nachrichten.at/oberoesterreich/Alexander-Egyed-Ein-Ueberflieger-in-der-Forschung;art4,1987943

- OÖ Nachrichten Sep. 29, 2015: "Egyed wird neuer Vizerektor für Forschung an der JKU" (translation: Egyed is the new Vice Rector for Research at JKU)
  http://www.nachrichten.at/anzeigen/karriere/campus/Egyed-wird-neuer-Vizerektor-fuer-Forschung-an-der-JKU;art121,1986685

- OÖ Nachrichten Jan. 31, 2014: "Informatik-Ranking: Kepler-Uni im internationalen Spitzenfeld" (translation: Computer Science Ranking: Kepler University among the Best)
  http://www.nachrichten.at/nachrichten/wirtschaft/Informatik-Ranking-Kepler-Uni-im-internationalen-Spitzenfeld;art15,1293552

- APA Jan. 30, 2014: "JKU: Software Engineering in Top 50 weltweit"
  http://science.apa.at/site/bildung/detail.html?key=SCI_20140130_SCI39411351816716020

- Bezirksrundschau Jan. 31, 2014: "JKU: Software Engineering in Top 50 weltweit"
  http://www.meinbezirk.at/linz/wirtschaft/jku-software-engineering-in-top-50-weltweit-d828087.html

- Hitech Jan. 31, 2014: "Forschung mit Weltruf "
  http://www.hitech.at/2014/01/31/forschung-mit-weltruf/

- Österreich Journal Jan. 31, 2014: "JKU: Software Engineering in Top 50 weltweit"
  http://www.oe-journal.at/index_up.htm?http://www.oe-journal.at/Aktuelles/!2014/0114/W5/23101Ajku.htm

- JKU Univation: „Präsenz ist wichtig",about University Rankings, Issue 3/14, 2014

- ORF Apr. 2011: Showcase for a ORF News Broadcast about Computer Science at the JKU Linz

- OÖ Nachrichten, Mar. 19, 2011: "Alexander Egyed: Auf der Liste der besten Forscher der Software-Gurus" (translation: On the List of the Best Researchers among the Software Gurus), by Sigrid Brandstätter, http://www.nachrichten.at/ratgeber/beruf_bildung/art121,576955.

- "Alexander Egyed – IBM Research Faculty Fellow", JKU Univation (Campus Magazine), 2/10.

- OÖ Bezirksblicke Apr. 13, 2011: "Linzer Universität weltweit unter TOP 100 bei Software Engineering. 2804 Institutionen wurden bewertet"
  http://www.ooe-bezirksblicke.at/index.php/linz/70-linz/1366-linzer-universitaet-unter-top-100-weltweit-bei-software-engineering-2804-institutionen-wurden-bewertet

- Österreich Journal Apr. 14, 2011: "JKU unter den Top 100 im Bereich Software Engineering"
  http://www.oe-journal.at/index_up.htm?http://www.oe-journal.at/Aktuelles/!2011/0411/W2/41304jku.htm

- Stellenboerse.de: "JKU unter den Top 100 im Bereich Software Engineering"
  http://www.stellenboersen.de/uni-oesterreich/linz/uni-linz/110413software-engineering-jku.html

## Contributions

- Contributions to Inception and Lead Organisation for the Linz Institute of Technology (LIT) – a funding agency with a budget of €4 Mio per year with

## Boards

- Kompetenzzentrum Holz GmbH

## Education

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|---|---|
| [Fall 2000] | Ph.D. in Computer Science<br>University of Southern California in Los Angeles, USA<br>Thesis: "Heterogeneous View Integration and its Automation"<br>Advisor: Dr. Barry Boehm |
| [Spring 1996] | M.S. in Computer Science, Specialization in Software Engineering<br>University of Southern California in Los Angeles, USA |
| [Fall 1994] | B.Sc. in Informatics, Specialization in Applied Informatics (German: Dipl.-Ing.)<br>Johannes Kepler University in Linz, Austria<br>Thesis: "Client-Server-Development and GUI with the CASE Tool 'Systems Engineer'"<br>Advisor: Dr. Gerhard Chroust |

## Experience

**Industrial**

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|---|---|
| [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. 37th Avenue, Vancouver, British Columbia V6N 2T9, Canada (Contact: Dr. Philippe Kruchten) |
| [1995] | Programmer at **HDVA (Heeresdatenverarbeitungsamt)** in Amtsgebäude Stiftgasse, Stiftgasse 2A, 1070 Vienna, Austria<br>(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**

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|---|---|
| [2008-present] | Full Professor at the **Johannes Kepler University** (JKU), Linz, Austria |
| [2007-2008] | Research Fellow at the **University College London** (UCL), London, UK |
| [1996-2000] | Research Assistant and Teaching Assistant at the **University of Southern California**, Los Angeles, CA, USA |

# Staff

Current Staff

| | |
|---|---|
| 2014- | Dr. Andreas Demuth (Post Doc and former PhD Student, JKU) |
| 2013- | Markus Riedl (PhD Student, JKU) |
| 2013- | Lukas Linsbauer (PhD Student, JKU) |
| 2013- | Stefan Fischer (PhD Student, JKU) |
| 2010- | Sebastian Wilms (PhD Student, JKU) |
| 2009- | Thomas Schartmüller (Programmer/Technician, JKU) |
| 2009- | Dr. Roberto Lopez Herrejon (Post Doctoral Researcher, JKU) |
| 2008- | Dr. Paul Grünbacher (Associate Professor, JKU) |

Former Visitors (who stayed for longer periods of times)

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|---|---|
| 2016 | Ruben Heradio Gil (Universidad Nacional de Educacion a Distancia, Spain) |
| 2015 | David Fernandez Amoros (Universidad Nacional de Educacion a Distancia, Spain) |
| 2014-2015 | Wesley Klewerton Guez Assunção (Federal University of Parana, Brasil) |
| 2013 | Gustavo G. Pascual (University of Málaga, Spain) |
| 2012-2013 | Aitor Bilbao Urresti (Mondragon Unibertsitatea Arrasate, Spain) |
| 2012 | Michael Winikoff (University of Otago, New Zealand) |
| 2012 | Hoa Dam (University of Wollongong, Australia) |
| 2012 | David Fernandez Amoros (Universidad Nacional de Educacion a Distancia, Spain) |
| 2012 | Ruben Heradio Gil (Universidad Nacional de Educacion a Distancia, Spain) |
| 2011-2012 | Ugaitz Amozarrain Perez (Mondragon Unibertsitatea Arrasate, Spain) |
| 2011, 2012 | Edward Mauricio Alférez Salinas (Universidade Nova de Lisboa, Portugal) |
| 2011-2012 | Hongyu Kuang (Nanjing University, China) |
| 2009-2010 | Leticia Montalvillo Mendizabal (Mondragon Unibertsitatea Arrasate, Spain) |
| 2010 | Raúl Mazo Peña (Université Paris Panthéon Sorbonne, France) |

Former Staff

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|---|---|
| 2010-2015 | Achraf Ghabi (PhD Student, JKU) – now at Celum, Austria |
| 2009-2013 | Dr. Alexander Reder (former PhD) – now at VoestAlpine Group-IT GmbH |
| 2008-2013 | Dr. Alexander Nöhrer (former PhD) – now Software Architekt at I-New, Austria |
| 2012 | Evelyn Haslinger (PhD Student, JKU, dropped out) |
| 2011-2013 | Andreas Demuth (PhD Student, JKU) post doc at isse |
| 2012-2013 | Aitor Bilbao Urresti (Exchange Student, Spain) |
| 2010-2013 | Ellora Rexhaj (Secretary) |
| 2010-2012 | Jasmine Hochholzer (Secretary) |
| 2010-2012 | Dr. Patrick Mäder (Post Doctoral Researcher, JKU) |
| 2009-2012 | Gerfried Lehner (Programmer/Technician, JKU) |
| 2011-2012 | Andreas Gruber (PhD Student, JKU, dropped out) |
| 2009 | Stephanie Eibensteiner (Administration, JKU) |
| 2010 | Christian Hanusch  (Programmer, part-time) |

| 2009-2010 | Benedikt Burgstaller (PhD Student, dropped out) |
|-----------|------------------------------------------------|
| 2011 | Martina Karrer (PhD Student, dropped out) |
| 2008-2010 | Dr. Iris Groher, JKU, Austria (Post Doctoral Researcher, JKU) |
| 2008-2009 | Florian Graf, City University, UK (Programmer, JKU) |
| 2008 | Dr. Norbert Seyff , City University, UK (PhD Student, JKU) |
| 2008 | Dagmar Reinmann  (Administrator, JKU) |
| 2003-2004 | Sven Johann, Adesso, Germany (Programmer, Teknowledge) |
| 2002-2003 | Tom Pelkey (Programmer, Teknowledge) |

## Grants and Projects

Funding received: roughly €2 Mio since 2008 (average €425K per year). Roughly 80% of the funding comes from basic scientific research grants (FWF, EU) and the remaining 20% from applied research grants in cooperation with industry (notably ACCM, IBM, Siemens).

[2016]      Co-Principal Investigator "C4S: Coordination-Centric Change and Consistency Support", funded by the Austrian FWF und the State of Upper Austria under agreement, Amount: €???. This work investigates changes and consistency on engineering processes.

[2016]      Co-Principal Investigator "Testing Variability-Rich Systems", funded by the Austrian Academy of Science (ÖAW), Amount: €108,000. This work investigates the role of testing in systems where variants exist.

[2015-2018] Principal Investigator "AutoTest (Trumpf, Omicron, Engel)", funded by the Software Competence Center Hagenberg (SCCH), Amount: €191,400. This work investigates the role of product line testing with three software companies.

[2014]      Principal Investigator "EPlan / Java Consistency Checking", funded by the Flanders' Mechatronics Technology Centre (FMTC) and Van Hoecke Automation, Amount: €12,500

[2013-2017] Principal Investigator "Guiding Software Design Evolution by Constraint Transformation," funded by Austrian FWF under agreement P 25513-N15, Amount: €322,113. This work allows for a novel design evolution based on constraint transformation rather than model transformation in case of uncertainties.

[2013]      Principal Investigator "Collaborative Infrastructure for Maintaining Consistency among Mechatronical Design Models,"  funded by the ACCM Strategic Research Grant C210101, Amount €40,000. This work builds the infrastructure that allows multiple engineers to collaborate using a joint, server-based modeling platform.

[2013-2014] Principal Investigator "Trumpf Test Configuration Management", funded by the Software Competence Center Hagenberg (SCCH), Amount: €23,000

[2013-2016] Principal Investigator "Consistency Change Propagation in Design Models" funded by Austrian FWF under agreement P 25289-N15, Amount: €333.826. This work investigates how consistency constraints can be used to help cope with changes.

[2012-2014] Co-Principal Investigator with Dr. Roberto E Lopez-Herrejon "Search Based Software Engineering for Variability Management" funded by Austrian FWF under agreement M 1421, Amount: €153.360. This work investigates variability as a search-based problem and tries to employ existing techniques to solve problems in context of product lines.

[2012]      Principal Investigator "Study on Model Consistency and Variability in Mechatronical Engineering" funded by the ACCM Strategic Research Grant A210101, Amount: €110,000.

This work investigates consistency checking, model transformation, and variability in context of mechatronical engineering.

[2011-]     Principal Investigator "Incremental, Multi-User Consistency Checking" funded by IBM CAS SRG Project 817, Amount: $29,000. This work investigates consistency checking for multiple, distributed software engineers.

[2011-2014]   Principal Investigator "Formal Analysis of Multi-Dimensional Model Dependencies" funded by Austrian FWF under agreement P 23115-N23, Amount: €221.508. This work investigates the traceability among diverse software artifacts and how to validate and/or auto complete such traceability based on constraints that span across them.

[2010-2012]   Co-Principal Investigator with Dr. Patrick Mäder "Impact of Design Changes onto Software Models and their Traces" funded by Austrian FWF under agreement M 1268-N23, Amount: €136.340. This work investigates the impact of changes during modeling with a particular emphasis on its effect on traceability and, in turn, the combined effect on modeling artifacts generally.

[2010-2012]   Co-Principal Investigator with Dr. Roberto E. Lopez-Herrejon "Consistency and Composition for Managing Variability in Multi-View Systems" funded by the European Union FP7-PEOPLE-2009-IEF, Proposal 254965, Amount: €222.174. 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 SRG-CAS-2010-04, 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.

[2009-2012]   Principal Investigator for "Inconsistencies and their Impact on Software Design Models," funded by Austrian FWF under agreement P21321-N15, Amount: €391.000. 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

**Other Institute Funding (written my members of my institute but without my involvement)**

[2013-2020]     Lead PI Dr. Paul Grünbacher "Monitoring and Evolution of Very-Large-Scale Software Systems" Chrsitain Doppler Labor, Amount: >€1,000,000

[2010-2011]     Lead PI Dr. Paul Grünbacher "DOPLER Refactoring" funded by Siemens VAI Grant under contract PRO71343002, Amount: €120,000.

**Investigator (I did not write these grant but was funded through them)**

[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/AWDRAT 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.

# Invited Panels

- Panelist on "Models -- DOs and DONTs" during the 13th International Conference on Model Driven Engineering Languages and Systems, Oslo, Norway, October 2010.

# Invited Seminars

- Effective Reuse across Many Variants of Software Systems", at the University of Luxemburg, Luxemburg, November 2015.

- "Enhancing Clone-and-Own with Systematic Reuse for Developing Software Variants", at the Pierre and Marie Curie University, Paris, France, February 2015.

- "Extraction and Composition for Clone-and-Own and Evolving Product Lines", at the University of Paderborn, November 2014.

- "Extraction and Composition for Clone-and-Own", at the Copenhagen Meeting on Variability, May 2014

- "Linking and Constraining Engineering Artifacts", at the University of Tübingen, Germany, February 2014.

- "Consistency and the Impact of Changes during Model-Driven Engineering ," at the University of Southern California, USA, July 2013.

- "Consistent Change Propagation during Model-Driven Engineering," at the University of Trento, Trento/Trient, Italy, September 2012.

- "Which Model Elements must be Fixed in case of Inconsistencies," at the University of Waterloo, Waterloo, Canada, November 2010.

- "Model Analyzer – Detecting, Tracking, and Fixing Inconsistencies in Software Models" at the Nanjing University, Nanjing, China, June 2010.

- "Where are Requirements implemented in the Source Code?" at the Nanjing University, Nanjing, China, June 2010

- "Model Analyzer – Detecting, Tracking, and Fixing Inconsistencies in Software Models" at the Hangzhou University, Hangzhou, China, June 2010.

- 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.

## Publications

**Refereed Book Chapters**

[1] Roberto E. Lopez-Herrejon, Javier Ferrer, Francisco Chicano, Alexander Egyed, and Enrique Alba: "Evolutionary Computation for Software Product Line Testing: An Overview and Open Challenges", Computational Intelligence and Quantitative Software Engineering, Volume 617 of the series Studies in Computational Intelligence pp 59-87

[2] Olly Gotel, Jane Cleland-Huang, Jane Hayes, Andrea Zisman, **Alexander Egyed**, Paul Grünbacher; Alex Dekhtyar, Giuliano Antoniol, Jonathan Maletic, and Patrick Mäder: "Traceability Fundamentals," in Software and Systems Traceability, editors: J. Cleland-Huang, O. Gotel, and A. Zisman, Springer Verlag, 2012, pp. 3-22

[3] Olly Gotel, Jane Cleland-Huang, Jane Hayes, Andrea Zisman, **Alexander Egyed**, Paul Grünbacher; Alex Dekhtyar, Giuliano Antoniol, and Jonathan Maletic: "The Grand Challenge of Traceability," in Software and Systems Traceability, editors: J. Cleland-Huang, O. Gotel, and A. Zisman, Springer Verlag, 2012, pp. 343-410

[4] **Alexander Egyed**, Paul Grünbacher, Matthias Heindl, and Stefan Biffl: "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

[5] Kurt Stirewalt, **Alexander Egyed**, Bernd Fischer: "Proceedings of the 22nd 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

[6] Barry W. Boehm, **Alexander Egyed**, Julie Kwan, Daniel Port, A. Shah, and Ray 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.

[7] **Alexander Egyed**: "Tailoring Software Traceability to Value-Based Needs," in Value-Based Software Engineering (VBSE), editors: Stefan Biffl, A. Aurum, Barry W. Boehm, H. Erdogmus, and Paul Grünbacher, Springer Verlag, 2006, pp. 287-308.

[8] **Alexander Egyed**: "Automatically Discovering Transitive Relationships in Class Diagrams," in Model-Driven Software Development (MDSD2), editors: Sami Beydeda, Matthias Book, and Volker Gruhn, Springer Verlag, 2005, pp. 179-198.

[9] **Alexander Egyed**, Bryan Horling, Raphen Becker, and Robert 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] Lukas Linsbauer, Roberto E. Lopez-Herrejon, and **Alexander Egyed**: "Variability Extraction and Modeling for Product Variants", Journal Software & Systems Modeling (SoSyM), to appear.

[2] HongYu: "Can Method Data Dependencies Support the Assessment of Traceability between Requirements and Source Code?", Journal of Software: Evolution and Process

[3] Hoa Khanh Dam, Alexander Egyed, Michael Winikoff, Alexander Reder, and Roberto E. Lopez-Herrejon,: "Consistent Merging of Model Versions", Journal of Systems and Software (JSS), to appear.

[4] Achraf Ghabi and **Alexander Egyed**: "Exploiting Traceability Uncertainty among Artifacts and Code", Journal of Systems and Software (JSS), Volume 108, 2015, pp.178-192.

[5] Daniela Lettner, Peter Hehenberger, Alexander Nöhrer, Klaus Anzengruber, Paul Grünbacher, Michael Mayrhofer, and **Alexander Egyed**: "Variability and Consistency in Mechatronic Design", Journal Concurrent Engineering: Research and Applications, Volume 23, Issue 3, 2015, pp. 213-225.

[6] Andreas Demuth, Roberto E. Lopez-Herrejon, and **Alexander Egyed**: "Co-evolution of Metamodels and Models through Consistent Change Propagation",  Journal of Systems and Software (JSS), to appear

[7] Gustavo G. Pascual, Roberto E. Lopez-Herrejon, Monica Pinto, Lidia Fuentes, **Alexander Egyed**: "Applying Multiobjective Evolutionary Algorithms to Dynamic Software Product Lines for Reconfiguring Mobile Applications", Journal of Systems and Software (JSS), Volume 103, 2015, pp. 392-411.

[8] Roberto Erick Lopez-Herrejon, Lukas Linsbauer, José A. Galindo, José Antonio Parejo, David Benavides, Sergio Segura, and **Alexander Egyed**: "An Assessment of Search-Based Techniques for Reverse Engineering Feature Models", Journal of Systems and Software (JSS), Volume 103, 2015, pp. 353-369.

[9] Roberto E. Lopez-Herrejon, Lukas Linsbauer, and **Alexander Egyed**: A systematic mapping study of search-based software engineering for software product lines", Information and Software Technology, Volume 61, May 2015, pp. 33-51

[10] Patrick Mäder und **Alexander Egyed**: "Do Developers Benefit From Requirements Traceability When Evolving and Maintaining a Software System?", Empirical Software Engineering Journal (ESE), Volume 20, Issue 2, 2015, pp. 413-441.

[11] Mauricio Alférez, Roberto E. Lopez-Herrejón, Ana Moreira, Vasco Amaral, and **Alexander Egyed**: "Consistency Checking in Early Software Product Line Specifications - The VCC Approach", Journal of Universal Computer Science (JUCS), Volume 20, Issue 5, 2014, pp. 640-665.

[12] Alexander Reder and **Alexander Egyed**: "Determining the Cause of a Design Model Inconsistency," IEEE Transactions on Software Engineering (TSE), Volume 39, Issue 11, 2013, pp 1531-1548.

[13] Andreas Demuth, Roberto E. Lopez-Herrejon, and **Alexander Egyed**: "Constraint-driven Modeling through Transformation," Journal Software and Systems Modeling (SoSyM), Volume 14, Number 2, pp. 573-596.

[14] Alexander Nöhrer and **Alexander Egyed**: "C2O configurator: a tool for guided decision-making," Journal of Automated Software Engineering (JASE), Volume 20, Issue 2, June 2013, pp 265-296.

[15] **Alexander Egyed**: "Automatically Detecting and Tracking Inconsistencies in Software Design Models," IEEE Transactions on Software Engineering (TSE), Volume 37, Number 2, March/April 2011, pp. 188-204.

[16] Wuwei Shen, Kun Wang, and **Alexander 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

[17] Howard Shrobe, Robert Laddaga, Robert Balzer, Neil Goldman, David S. Wile, Marcello Tallis, Tim Hollebeek, **Alexander Egyed**, "AWDRAT: A Cognitive Middleware System for Information Survivability," AI Magazine (AIM), vol. 28, no. 3, pp. 73-91, 2007

[18] **Alexander Egyed** and David S. Wile: "Support for Managing Design-Time Decisions," IEEE Transactions on Software Engineering (TSE), Volume 32, Number 5, May 2006. pp. 299-314.

[19] **Alexander Egyed** and Robert 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.

[20] **Alexander Egyed** and Paul 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.

[21] **Alexander Egyed** and Paul 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.

[22] Paul Grünbacher, **Alexander Egyed**, Nenad 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.

[23] Nenad Medvidovic, Paul Grünbacher, **Alexander Egyed**, Barry W. Boehm: "Bridging Models across the Software Life-Cycle," Journal for Software Systems (JSS), Volume 68, Issue 3, December 2003, pp.199-215.

[24] **Alexander Egyed**: "A Scenario-Driven Approach to Trace Dependency Analysis," IEEE Transactions on Software Engineering (TSE), Volume 29, Number 2, February 2003, pp. 116-132.

[25] **Alexander Egyed**: "Automated Abstraction of Class Diagrams," ACM Transactions on Software Engineering and Methodology (TOSEM), Volume 11, Number 4, October 2002, pp. 449-491.

[26] **Alexander Egyed**, Nenad Medvidovic, and Cristina Gacek: "A Component-Based Perspective of Software Mismatch Detection and Resolution," IEE Software Engineering, Volume 147, Issue 6, December 2000, pp. 225-236.

[27] **Alexander Egyed** and Barry W. Boehm: "Comparing Software System Requirements Negotiation Patterns", Systems Engineering Journal, Volume 6, Number 1, June 1999, pp. 1-14.

[28] Barry W. Boehm and **Alexander 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.

[29] Barry W. Boehm, **Alexander Egyed**, Daniel Port, A. Shah, Julie Kwan, and Ray Madachy: "A Stakeholder Win-Win Approach to Software Engineering Education", Annals of Software Engineering, Volume 6 (1998), April 1999, pp. 295-321.

[30] Barry W. Boehm, **Alexander Egyed**, Julie Kwan, Daniel Port, A. Shah, and Ray Madachy: "Using the WinWin Spiral Model: A Case Study", IEEE Computer, Volume 31, Number 7, July 1998, pp. 33-44.

**Full Length, Refereed Conference Papers (Journal Equivalent)**

*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, 10-15 page contributions and thus in software engineering these long publications are considered equivalent to journal publications.*

*See http://scholar.google.com/citations?view_op=top_venues&hl=en&vq=eng_softwaresystems*

[1] Michael Vierhauser, Rick Rabiser, Paul Grünbacher, and **Alexander Egyed**: "Developing a DSL-Based Approach for Event-Based Monitoring of Systems of Systems: Experiences and Lessons Learned", 30th International Conference on Automated Software Engineering (ASE), Lincoln, Nebraska, USA, 2015

[2] Catia Trubiani, Achraf Ghabi, and **Alexander Egyed**: "Exploiting Traceability Uncertainty between Software Architectural Models and Performance Analysis Results", 9th European Conference on Software Architecture (ECSA 2015), Dubrovnik, Croatia, 2015

[3] Stefan Fischer, Lukas Linsbauer, Roberto Lopez-Herrejon, **Alexander Egyed** and Rudolf Ramler: "Bridging the Gap between Software Variability and System Variant Management: Experiences from an Industrial Machinery Product Line", 41st Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Madeira, Portugal, 2015 (33% acceptance rate)

[4] Lukas Linsbauer, Stefan Fischer, Roberto Erick Lopez-Herrejon and **Alexander Egyed**: "Using Traceability for Incremental Construction and Evolution of Software Product Portfolios", 8th International Symposium on Software and Systems Traceability, Florence, Italy, 2015.

[5] Wesley K. G. Assunção, Roberto E. Lopez-Herrejon, Lukas Linsbauer, Silvia R. Vergilio, and Alexander Egyed: "Extracting Variability-Safe Feature Models from Source Code Dependencies in System Variants," Genetic and Evolutionary Computation Conference (GECCO), Madrid, Spain, July 2015, pp. ???.

[6] Andreas Demuth, Markus Riedl-Ehrenleitner, Alexander Nöhrer, Peter Hehenberger, Klaus Zeman, and Alexander Egyed: „DesignSpace -- An Infrastructure for Multi-User/Multi-Tool Engineering," 30th Symposium On Applied Computing (SAC), Salamanca, Spain, ??

[7] Stefan Fischer, Lukas Linsbauer, Roberto Erick Lopez-Herrejon and **Alexander Egyed**: "Enhancing Clone-and-Own with Systematic Reuse for Developing Software Variants," 30th International Conference on Software Maintenance and Evolution, Victoria, British Columbia, Canada, pp. ??? (19% acceptance rate)

[8] Roberto Erick Lopez-Herrejon, Javier Ferrer, Francisco Chicano, **Alexander Egyed** and Enrique Alba: "Comparative Analysis of Classical Multi-Objective Evolutionary Algorithms and Seeding Strategies for Pairwise Testing of Software Product Lines" 2014 IEEE Congress on Evolutionary Computation (CEC), Beijing, China, July 2014, pp. 387-396.

[9] Roberto E. Lopez Herrejon, Javier Ferrer, Francisco Chicano, Evelyn N. Haslinger, **Alexander Egyed**, and Enrique Alba: "A Parallel Evolutionary Algorithm for Prioritized Pairwise Testing of Software Product Lines," Genetic and Evolutionary Computation Conference (GECCO), Vancouver, Canada, July 2014, pp. 1255-1262.

[10] Andreas Demuth, Roberto E. Lopez-Herrejon and **Alexander Egyed**: "Automatic and Incremental Product Optimization for Software Product Lines," 7th International Conference on Software Testing, Verification and Validation (ICST), Cleveland, Ohio, USA, March 2014, pp. 31-40 (28% acceptance rate)

[11] Markus Riedl-Ehrenleitner, Andreas Demuth, and **Alexander Egyed**: Towards Model-and-Code Consistency Checking", 38th Annual Computer Software and Applications Conference (COMPSAC), Vasteras, Sweden, July 2014, pp. 85-90

[12] Lukas Linsbauer, Roberto Erick Lopez-Herrejon, and **Alexander Egyed**: "Feature Model Synthesis with Genetic Programming", 6th International Symposium on Search-Based Software Engineering (SSBSE), Fortaleza, Brazil, August 2014, pp. 153-167

[13] Hoa Khanh Dam, Alexander Reder, and **Alexander Egyed**: "Inconsistency Resolution in Merging Versions of Architectural Models", 11th Working IEEE/IFIP Conference on Software Architecture (WICSA), Sydney, Australia, pp. 153-162

[14] Andreas Demuth, Roberto E. Lopez-Herrejon, and **Alexander Egyed**: "Supporting the Co-Evolution of Metamodels and Constraints through Incremental Constraint Management", Proceedings of the 16th International Conference on Model-Driven Engineering Languages & Systems (MoDELS), Miami, Florida, October 2013, pp. 287-303 (23% acceptance rate)

[15] Lukas Linsbauer, Roberto E. Lopez-Herrejon, and **Alexander Egyed:** "Recovering Traceability between Features and Code in Product Variants," Proceedings of the 17th International Software Product Line Conference (SPLC), Tokyo, Japan, August 2013, pp. 131-140

[16] Evelyn N. Haslinger, Roberto Erick Lopez-Herrejon and **Alexander Egyed**: "On Extracting Feature Models from Sets of Valid Feature Combinations", Proceedings of the 16th International Conference on Fundamental Approaches to Software Engineering (FASE), Rome, Italy, March 2013, pp. 53-67 (23% acceptance rate)

[17] Patrick Mäder and **Alexander Egyed**: "Assessing the Effect of Requirements Traceability for Software Maintenance", Proceedings of the 28th International Conference on Software Maintenance (ICSM), Riva del Garda, Italy, September 2012, pp. 171-180 (25% acceptance rate)

[18] Hongyu Kuang, Patrick Mäder, Achraf Ghabi, Hao Hu, Jian Lv, and **Alexander Egyed**: "Do Data Dependencies in Source Code complement Control Dependencies for Understanding Requirements Traceability?", Proceedings of the 28th International Conference on Software Maintenance (ICSM), Riva del Garda, September 2012, pp. 181-190 (25% acceptance rate)

[19] Alexander Reder and **Alexander Egyed**: "Incremental Consistency Checking for Complex Design Rules and Larger Model Changes", Proceedings of the 15th International Conference on Model-Driven Engineering Languages & Systems (MoDELS), Innsbruck, Austria, September 2012, pp. 202-218 (23% acceptance rate)

[20] Achraf Ghabi and **Alexander Egyed**: "Exploiting Traceability Uncertainty between Architectural Models and Code", Proceedings of the Joint 10th Working Conference on Software Architecture & 6th European Conference on Software Architecture (WICSA/ECSA), Helsinki, Finland, August 2012, pp. 171-180 (20% acceptance rate).

[21] Alexander Reder and **Alexander Egyed**: "Computing Repair Trees for Resolving Inconsistencies in Design Models", Proceedings of the 27th International Conference on Automated Software Engineering (ASE), Essen, Germany, September 2012, pp. 220-229 (15% acceptance rate)

[22] Achraf Ghabi and **Alexander Egyed**: "Code Patterns for Automatically Validating Requirements-to-Code Traces", Proceedings of the 27th International Conference on Automated Software Engineering (ASE), Essen, Germany, September 2012, pp. 200-209 (15% acceptance rate)

[23] Alexander Nöhrer, Armin Biere, and **Alexander Egyed**: "A Comparison of Strategies for Tolerating Inconsistencies during Decision Making," Proceedings of the 16th International Software Product Line Conference (SPLC), Salvador, Brazil, September 2012, pp. 11-20 (28% acceptance rate)

[24] Olly Gotel, Jane Cleland-Huang, Jane Huffman Hayes, Andrea Zisman, **Alexander Egyed**, Paul Grünbacher, and Giuliano Antoniol: "The Quest for Ubiquity: A Roadmap for Software and Systems Traceability Research" Proceedings of the 20th Requirements Engineering Conference (RE), Chicago, Illinois, September 2012, pp. 71-80 (24% acceptance rate)

[25] Roberto Erick Lopez-Herrejon, Jose Galindo, David Benavides, Sergio Segura and **Alexander Egyed**: "Reverse Engineering Feature Models With Evolutionary Algorithms: An Exploratory Study", in 4th International Symposium on Search-Based Software Engineering (SSBSE), Riva del Garda, Italy, September 2012, pp. 168-182 (44% acceptance rate).

[26] Andreas Demuth, Roberto Lopez-Herrejon, and **Alexander Egyed**: "Constraint-Driven Modeling through Transformation," 5th International Conference on Theory and Practice of Model Transformations (ICMT), Prague, Czech Republic, May 2012, pp. 248-263. (32% acceptance rate)

[27] Harald Vogl, Klaus Lehner, Paul Grünbacher, and **Alexander Egyed**: "Reconciling requirements and architectures with the CBSP approach in an iPhone app project," Proceedings of the 19th International Conference on Requirements Engineering (RE), Industrial Track, Trento, Italy, August 2011, pp. 273-278 (26% acceptance rate)

[28] Roberto E. Lopez-Herrejon, Leticia Montalvillo, and **Alexander Egyed**: "From Requirements to Features: An Exploratory Study of Feature-Oriented Refactoring," Proceedings of the 14th International Conference (SPLC), Munich, Germany, September 2011, pp. 181-190

[29] Alexander Nöhrer and **Alexander Egyed**: "Optimizing User Guidance during Decision-Making," Proceedings of the 14th International Conference (SPLC), Munich, Germany, September 2011, pp. 25-34

[30] **Alexander Egyed**, Andreas Demuth, Achraf Ghabi, Roberto Lopez-Herrejon, Patrick Mäder, Alexander Nöhrer, and Alexander Reder: "Fine-Tuning Model Transformation: Change Propagation in Context of Consistency, Completeness, and Human Guidance," Proceedings of the 4th International Conference on Theory and Practice on Model Transformation (ICMT), Zürich, Switzerland, June 2011, pp. 1-14

[31] Raul Mazo, Roberto E. Lopez-Herrejón, Camille Salinesi, Daniel Diaz, **Alexander Egyed**: "Conformance Checking with Constraint Logic Programming: The Case of Feature Models," Proceedings of the 35th Computer Software and Applications Conference (COMPSAC), Munich, Germany, July 2011, pp. 456-465 (20% acceptance rate – this paper received the **Best Paper Award**)

[32] Mauricio Alférez, Roberto E. Lopez-Herrejón, Ana Moreira, Vasco Amaral, and **Alexander Egyed**: "Supporting Consistency Checking between Features and Software Product Line Use Scenarios," Proceedings of the 12th International Conference on Software Reuse (ICSR), Pohang, Korea, June 2011, pp. 20-35 (40% acceptance rate)

[33] Roberto E. Lopez-Herrejon and **Alexander Egyed**: "C2MV2: Consistency and Composition For Managing Variability in Multi-View Systems," Proceedings of the 15th European Conference on Software Maintenance and Reengineering (CSMR), Oldenburg, Germany, March 2011, pp. 347-350

[34] Peter Hehenberger, **Alexander Egyed** and Klaus Zeman, "Understanding the Relationship of Information in Mechatronic Design Modeling," Proceedings of the 13th International Conference on Computer Aided Systems Theory (EUROCAST), Las Palmas, Spain , February 2011, pp. 113-120.

[35] Iris Groher and **Alexander Egyed**: "Selective and Consistent Undoing of Model Changes", Proceedings of the 13th International Conference on Model Driven Engineering Languages and Systems (MoDELS), Oslo, Norway, October 2010, pp. 123-137 (43 papers accepted out of 207)

[36] Michael Vierhauser, Paul Grünbacher, **Alexander Egyed**, Rick Rabiser, and Wolfgang Heider: "Flexible and Scalable Consistency Checking on Product Line Variability Models", Proceedings of the 25th International Conference on Automated Software Engineering (ASE), Antwerp, Belgium, September 2010, pp. 63-72 (34 papers accepted out of 191).

[37] David S. Wile, Robert Balzer, Neil Goldman, **Alexander Egyed**, Marcello Tallis and Tim Hollebeek: "Adapting COTS Products – The Fine Line between Development and Maintenance" Industrial Track, Proceedings of the 26th IEEE International Conference on Software Maintenance (ICSM), Timisoara, Romania, September 2010, pp. TBA (9 papers accepted out of 21 submitted).

[38] Alexander Nöhrer and **Alexander Egyed**: "C2O-A Tool for Guided Decision-Making," Tool Demonstration, Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering (ASE), Antwerp, Belgium, September 2010, pp. 363-364(18 papers accepted out of 44)

[39] Alexander Reder and **Alexander Egyed**: "Model/Analyzer: A Tool to Detect, Visualize and Fix Inconsistencies for UML," Tool Demonstration, Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering (ASE), Antwerp, Belgium, September 2010, pp. 347-348 (18 papers accepted out of 44)

[40] **Alexander Egyed**, Paul Grünbacher, Florian Graf "Effort and Quality of Recovering Requirements-to-Code Traces: Two Exploratory Experiments," in Proceedings of the 18th International IEEE Requirements Engineering Conference (RE), Sydney, Australia, September 2010, pp. TBA (24 papers accepted out of 151).

[41] Peter Hehenberger, **Alexander Egyed**, and Klaus 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.

[42] Roberto E. Lopez-Herrejon and **Alexander Egyed**: "Detecting Inconsistencies in Multi-View Models With Variability," in 6th European Conference on Modelling Foundations and Applications (ECMFA), Paris, France, June 2010, pp. 217-232 (31% of papers selected).

[43] Salvador Trujillo, Jose Miguel Garate, Roberto Erick Lopez-Herrejon, Xabier Mendialdua, Albert Rosado, **Alexander Egyed**, Charles W. Krueger, Josune de Sosa: "Coping with Variability in Model-Based Systems Engineering: An Experience in Green Energy," in 6th European Conference on Modelling Foundations and Applications (ECMFA), Paris, France, June 2010, pp. 293-304 (31% of papers selected).

[44] Roberto E. Lopez-Herrejon and **Alexander Egyed**: "On the Need of Safe Software Product Line Architecture" Proceedings of the 4th European Conference Software Architecture (ECSA), August 2010, Copenhagen, Denmark, pp. 493-496.

[45] Iris Groher, Alexander Reder, Alexander Egyed: "Incremental Consistency Checking of Dynamic Constraints," 13th International Conference on Fundamental Approaches to Software Engineering (FASE) March 2010, Paphos, Cyprus, pp. 203-217 (24 papers accepted out of 96).

[46] **Alexander Egyed,** E. Letier, and A. Finkelstein: "Generating and Evaluating Choices for Fixing Inconsistencies in UML Models", Proceedings of the 22nd International Conference on Automated Software Engineering (ASE), L'Aquila, Italy, September 2008, pp. 99-108 (34 papers accepted out of 280 submitted)

[47] **Alexander Egyed**: "Fixing Inconsistencies in UML Design Models," Proceedings of the 29th International Conference on Software Engineering (ICSE), Minneapolis, MN, May 2007, pp. 292-301 (50 papers accepted out of 334 submitted).

[48] Howard Shrobe, Robert Laddaga, Robert Balzer, Neil Goldman, David S. Wile, Marcello Tallis, Tim Hollebeek, and **Alexander Egyed**: "Self-Adaptive Systems for Information Survivability: PMOP and AWDRAT," Proceedings of the 1st IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO), Boston, MA, July 9-11, 2007, pp. 332-335.

[49] **Alexander Egyed**, Paul Grünbacher, Matthias Heindl, and Stefan Biffl: "Value-Based Requirements Traceability: Lessons Learned" Proceedings of the 15th IEEE International Requirements Engineering Conference (RE), New Delhi, India, October 2007, pp. 115-118

[50] Howard Shrobe E., Robert Laddaga, Robert Balzer, Neil Goldman, David S. Wile, Marcello Tallis, Tim Hollebeek, **Alexander Egyed**: "AWDRAT: A Cognitive Middleware System for Information Survivability, " Proceedings of the 21st National Conference on Artificial Intelligence (AAAI) and the 18th Innovative Applications of Artificial Intelligence Conference (IAAI), Boston, MA, July, 2006.

[51] **Alexander Egyed**: "Instant Consistency Checking for the UML," Proceedings of the 28th International Conference on Software Engineering (ICSE), Shanghai, China, May 2006, pp. 381-390 (36 papers accepted out of 395 submitted).

[52] Matthias Heindl, F. Reinisch, Stefan Biffl, and **Alexander Egyed**: "Value-Based Selection of Requirements Engineering Tool Support," 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO-SEAA), Dubrovnik, Croatia, August 2006, pp. 266-273.

[53] Valdimir Jakobac, **Alexander Egyed**, and Nenad Medvidovic: "Improving System Understanding via Interactive, Tailorable Source Code Analysis," Proceedings of the 8th International Conference on Fundamental Approaches to Software Engineering (FASE), Edinburgh, Scotland, UK, April 2005, (25 papers accepted out of 99 submitted).

[54] **Alexander Egyed**, Wuwei Shen, and Kun Wang: "Maintaining Life Perspectives during the Refinement of UML Class Structures," Proceedings of the 8th International Conference on Fundamental Approaches to Software Engineering (FASE), Edinburgh, Scotland, UK, April 2005, (25 papers accepted out of 99).

[55] **Alexander Egyed**: "Resolving Uncertainties during Trace Analysis," Proceedings of the 12th Symposium on Foundations of Software Engineering (FSE), Irvine, CA, November 2004, pp. 3-12 (25 papers accepted out of 169).

[56] **Alexander Egyed**: "Dynamic Deployment of Executing and Simulating Software Components," Proceedings of the 2nd Working Conference on Component Deployment (CD), Edinburgh, Scotland, UK, May 2004, pp. 113-128 (16 papers accepted out of 34).

[57] David S. Wile and **Alexander Egyed**: "An Externalized Infrastructure for Self-Healing Systems," Proceedings of the 4th Working Conference on Software Architecture (WICSA), Olso, Norway, June 2004, pp. 285-288 (short paper, 35 out of 82).

[58] **Alexander Egyed**: "Consistent Adaptation and Evolution of Class Diagrams during Refinement," Proceedings of the 7th International Conference on Fundamental Approaches to Software Engineering (FASE), Barcelona, Spain, March 2004, pp. 37-53 (22 papers accepted out of 91).

[59] **Alexander Egyed**: "Compositional and Relational Reasoning During Class Abstraction," Proceedings of the 6th International Conference on the Unified Modeling Language (UML), San Francisco, USA, October 2003, pp. 121-137 (25 papers accepted out of 143).

[60] **Alexander Egyed** and Paul Grünbacher: "Automating Requirements Traceability: Beyond the Record and Replay Paradigm," Proceedings of the 17th IEEE International Conference on Automated Software Engineering (ASE), Edinburgh, Scotland, UK, September 2002, pp. 163-171 (19 papers accepted out of 94).

[61] **Alexander Egyed** and Robert Balzer: "Unfriendly COTS Integration – Instrumentation and Interfaces for Improved Plugability," Proceedings of the 16th IEEE International Conference on Automated Software Engineering (ASE), San Diego, CA, November 2001, pp.223-231 (32 papers accepted out of 164).

[62] Paul Grünbacher, **Alexander Egyed**, and Nenad Medvidovic: "Reconciling Software Requirements and Architectures - The CBSP Approach," Proceedings of the 5th International Symposium on Requirements Engineering (RE), Toronto, Canada, August 2001, pp. 202-211 (26 papers accepted out of 127).

[63] **Alexander Egyed**, and David S. Wile: "Statechart Simulator for Modeling Architectural Dynamics," Proceedings of the 2nd Conference on Software Architecture (WICSA), Amsterdam, The Netherlands, August 2001, pp. 87-96 (18 papers accepted out of 47).

[64] Nenad Medvidovic, Paul Grünbacher, **Alexander Egyed**, and Barry W. Boehm: "Software Model Connectors: Bridging Models across the Software Lifecycle," Proceedings of the 13th International Conference on Software Engineering and Knowledge Engineering (SEKE), Buenos Aires, Argentina, June 2001, pp. 387-396.

[65] **Alexander Egyed**: "A Scenario-Driven Approach to Traceability," Proceedings of the 23rd 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)**

[66] **Alexander Egyed** and Nenad Medvidovic: "A Formal Approach to Heterogeneous Software Modeling," Proceedings of the 3rd International Conference on Foundational Aspects of Software Engineering (FASE), Berlin, Germany, March 2000, pp. 178-192 (27 papers accepted out of 60).

[67] **Alexander Egyed** and Cristina Gacek: "Automatically Detecting Mismatches during Component-Based and Model-Based Development," Proceedings of the 14th International Conference on Automated Software Engineering (ASE), Cocoa Beach, Florida, October 1999, pp. 191-198 (25 papers accepted out of 123).

[68] **Alexander Egyed** and Nenad Medvidovic: "Extending Architectural Representation in UML with View Integration," Proceedings of the 2nd International Conference on the Unified Modeling Language (UML), Fort Collins, CO, October 1999, pp. 2-16 (44 papers accepted out of 166).

[69] Barry W. Boehm, Daniel Port, **Alexander Egyed**, and Marwan Abi-Antoun,: "The MBASE Life Cycle Architecture Milestone Package: No Architecture Is An Island," Proceedings of the 1st Working IFIP International Conference on Software Architecture (WICSA), San Antonio, TX, February 1999, pp. 511-528.

[70] **Alexander Egyed** and Philippe Kruchten: "Rose/Architect: a tool to visualize architecture," Proceedings of the 32nd Hawaii International Conference on System Sciences (HICSS), Maui, HI, January 1999.

[71] **Egyed A.** and Barry W. Boehm: "Telecooperation Experience with the WinWin System," Proceedings of the 15th IFIP World Computer Congress (WCC), Vienna, Austria and Budapest, Hungary, September 1998, pp. 37-46.

[72] **Alexander Egyed** and Barry W. Boehm: "A Comparison Study in Software Requirements Negotiation," Proceedings of the 6th International Conferences of Systems Engineering (INCOSE), Vancouver, Canada, July 1998, pp. 667-674.

[73] Barry W. Boehm and **Alexander Egyed**: "WinWin Requirements Negotiation Processes: A Multi-Project Analysis," Proceedings of the 5th International Conference on Software Processes (ICSP), Lisle, IL, June 1998, pp.125-136.

[74] Barry W. Boehm and **Alexander Egyed**: "Software Requirements Negotiation: Some Lessons Learned," Proceedings of the 20th International Conference on Software Engineering (ICSE), Kyoto, Japan, April 1998, pp. 503-506.

[75] Barry W. Boehm, **Alexander Egyed**, Julie Kwan, Ray Madachy: "Developing Multimedia Applications with the WinWin Spiral Model," Proceedings of the 5th European Software Engineering Conference held jointly with the 5th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Zurich, Switzerland, September 1997, pp. 20-39.

[76] **Alexander Egyed** and Barry W. Boehm: "Analysis of Software Requirements Negotiation Behavior Patterns," Proceedings of the 7th International Conferences of Systems Engineering (INCOSE), Los Angeles, CA, July 1997, pp. 269-276.

**Short, Refereed Conference Papers (e.g., Tool Contributions)**

[1] Stefan Fischer, Lukas Linsbauer, Roberto E. Lopez-Herrejon, and Alexander Egyed: „The ECCO Tool: Extraction and Composition for Clone-and-Own", accepted for ICSE???

[2] Multi-Objective Optimal Test Suite Computation for Software Product Line Pairwise Testing???

[3] Lukas Linsbauer, Florian Angerer, Paul Grünbacher, Daniela Lettner, Herbert Prähofer, Roberto E. Lopez-Herrejon, and Alexander Egyed: "Recovering Feature-to-Code Mappings in Mixed-Variability Software Systems," 2014 IEEE International Conference on Software Maintenance and Evolution (ICSME), ???

[4] Roberto E. Lopez-Herrejon and Alexander Egyed: "SBSE4VM: Search Based Software Engineering for Variability Management," 17th European Conference on Software Maintenance and Reengineering (CSMR), Genova, Italy, March 2013, pp. 441-444

[5] Andreas Demuth, Roberto Lopez-Herrejon and **Alexander Egyed**: "Automatically Generating and Adapting Model Constraints to Support Co-Evolution of Design Models", Proceedings of the 27th International Conference on Automated Software Engineering (ASE), Essen, Germany, September 2012, pp. 302-305

[6] Evelyn Nicole Haslinger and Roberto E. Lopez-Herrejon and **Alexander Egyed**: "Reverse Engineering Feature Models from Programs' Feature Sets", 18th Working Conference on Reverse Engineering (WCRE), Limerick, Ireland, October 2011, pp. 308-312

[7] Achraf Ghabi and **Alexander Egyed**: "Observations on the Connectedness between Requirements-to-Code Traces and Calling Relationships for Trace Validation," Proceedings of the 26th International Conference on Automated Software Engineering (ASE), Lawrence, Kansas, November 2011, pp. 416-419 (short paper)

[8] Patrick Mäder and **Alexander Egyed**: "Do Software Engineers benefit from Source Code Navigation with Traceability? –An Experiment in Software Change Management," Proceedings of the 26th International Conference on Automated Software Engineering (ASE), Lawrence, Kansas, November 2011, pp. 444-447 (short paper)

[9] Andreas Demuth, Roberto E. Lopez-Herrejon, **Alexander Egyed**: Cross-layer modeler: a tool for flexible multilevel modeling with consistency checking." Proceedings of the 19th Symposium on the Foundations of Software Engineering (FSE), Szeged, Hungary, September 2011, pp. 452-455 (tool paper)

[10] Alexander Nöhrer, Alexander Reder, and **Alexander Egyed**: "Positive Effects of Utilizing Relationships Between Inconsistencies for more Effective Inconsistency Resolution (NIER Track)," Proceedings of the 33rd International Conference on Software Engineering (ICSE), New Ideas and Emerging Results Track, Honolulu, Hawaii, May 2011, pp. 864-867 (23% acceptance rate)

[11] X. Bai, L. Huang, H. Zhang, and **Alexander Egyed**: "GoPoMoSA: A Goal-oriented Process Modeling and Simulation Advisor," Proceedings of the International Conference on Software and Systems Process (ICSSP), Honolulu, Hawaii, May 2011, pp. 194-198 (short paper)

[12] B. Burgstaller and **Alexander Egyed**: "Understanding Where Requirements are Implemented" Early Research Achievement Track, Proceedings of the 26th IEEE International Conference on Software Maintenance (ICSM), Timisoara, Romania, September 2010, pp. 1-5 (short paper, 18 papers accepted out of 43 submitted).

[13] Iris Groher and **Alexander Egyed**: "Selective Backtracking of Model Changes," Proceedings of the 31st International Conference on Software Engineering (ICSE), May 2009, Vancouver, Canada, pp. 231-234.

[14] **Alexander Egyed**: "UML/Analyzer: A Tool for the Instant Consistency Checking of UML Models," Tool Demonstration, Proceedings of the 29th International Conference on Software Engineering (ICSE), Minneapolis, MN, May 2007, pp. 793-796 (12 papers accepted out of 56 submitted).

[15] **Alexander Egyed**, G. Binder, and Paul Grünbacher: "STRADA: A Tool for Scenario-based Feature-to-Code Trace Detection and Analysis," Tool Demonstration, Proceedings of the 29th International Conference on Software Engineering (ICSE), Minneapolis, MN, May 2007, pp. 41-42.

[16] **Alexander Egyed**, Stefan Biffl, Matthias Heindl, and Paul Grünbacher: "Determining the Cost-Quality Trade-Off for Automated Software Traceability," Proceedings of the 20th International Conference on Automated Software Engineering (ASE), Long Beach, CA, November 2005, pp. 360-363.

[17] Sven Johann and **Alexander Egyed**: "Instant and Incremental Transformation of Models," Proceedings of the 19th International Conference on Automated Software Engineering (ASE), Linz, Austria, September 2004, pp. 362-365 (short paper, 55 out of 183).

[18] **Alexander Egyed**: "Scalable Consistency Checking between UML Diagrams: The ViewIntegra Approach," Proceedings of the 16th IEEE International Conference on Automated Software Engineering (ASE), San Diego, CA, September 2001, pp. 387-390 (short paper, 28 out of 164).

[19] **Alexander Egyed**: "Semantic Abstraction Rules for Class Diagrams," Proceedings of the 15th International Conference on Automated Software Engineering (ASE), Grenoble, France, September 2000, pp. 301-304 (short paper, 25 out of 123).

**Refereed Workshop Papers**

[1] Stefan Fischer, Roberto Erick Lopez-Herrejon, Rudolf Ramler and Alexander Egyed: "A Preliminary Empirical Assessment of Similarity for Combinatorial Iteraction Testing of Software Product Lines", SBST Workshop???

[2] Roberto E. Lopez-Herrejon, Lukas Linsbauer, Wesley K. G. Assunção, Stefan Fischer, Silvia R. Vergilio, **Alexander Egyed**: "Genetic Improvement for Software Product Lines: An Overview and a Roadmap", 1st International Genetic Improvement Workshop (GI), Madrid, Spain 2015.

[3] Andreas Demuth, Markus Riedl-Ehrenleitner, Roland Kretschmer, Peter Hehenberger, Klaus Zeman and **Alexander Egyed**: "Towards Flexible and Efficient Process and Workflow Support in Enterprise Modeling" International Workshop on Advanced Information Systems Engineering (CAiSE), Stockholm, Sweden, 2015, pp. 270-281

[4] Andreas Demuth, Markus Riedl-Ehrenleitner, and **Alexander Egyed**: "Towards Flexible, Incremental, and Paradigm-agnostic Consistency Checking in Multi-level Modeling Environments", 1st International Workshop on Multi-Level Modeling (MULTI), Valencia, Spain, 2014.

[5] Roberto Erick Lopez-Herrejon, Stefan Fischer, Rudolf Ramler and **Alexander Egyed**: "A First Systematic Mapping Study on Combinatorial Interaction Testing for Software Product Lines", 4th International Workshop on Combinatorial Testing (IWCT), Graz, Austria, 2015

[6] Andreas Demuth, Roberto E. Lopez-Herrejon and **Alexander Egyed**: "Co-evolution of Metamodels and Models through Consistent Change Propagation", International Workshop on Models and Evolution (ME), Valencia, Spain, 2013.

[7] Roberto E. Lopez Herrejon and **Alexander Egyed** "Towards Interactive Visualization Support for Pairwise Testing Software Product Lines," 1st IEEE International Working Conference on Software Visualization (VISSOFT), Eindhoven, NL, 2013

[8] Christoph Dorn and **Alexander Egyed**: "Towards Collaboration-centric Pattern-based Software Development Support," Proceedings of the 6th International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE), San Francisco, CA, 2013,

[9] Evelyn Haslinger, Roberto E. Lopez-Herrejon, and **Alexander Egyed**: "Using Feature Model Knowledge to Speed Up the Generation of Covering Arrays," Proceedings of the 7th International Workshop on Variability Modeling of Software-Intensive Systems (VAMOS), Pisa, Italy, 2013, pp. 16-24

[10] Alexander Nöhrer, Armin Biere, and **Alexander Egyed**: "Managing SAT inconsistencies with HUMUS," Proceedings of the 5th International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Leipzig, Germany, 2012, pp. 83-91

[11] Roberto Lopez-Herrejon and **Alexander Egyed**: "Towards Fixing Inconsistencies in Models With Variability," Proceedings of the 5th International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Leipzig, Germany, 2012, pp. 93-100

[12] Cleland-Huang, J., Czauderna, A., Dekhtyar, A., Gotel O., Huffman Hayes, J., Keenan, E., Leach, G., Maletic, J. Poshyvanyk, D., Shin, Y., Zisman, A., Antoniol, G., Berenbach, B., **Egyed, A**., Maeder, P. "Grand Challenges, Benchmarks, and TraceLab: Developing Infrastructure for the Software Traceability

Research Community", in Proc. of 6th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), Honolulu, HI, USA, May 23, 2011

[13] Alexander Nöhrer and **Alexander Egyed**: "Utilizing the Relationships Between Inconsistencies for more Effective Inconsistency Resolution," in Proceedings of the 3rd Workshop on Living with Inconsistencies in Software Development (LWI), Antwerp, Belgium, September 2010, pp. 39-43.

[14] M. Alferez, R. E. Lopez-Herrejón, A. Moreira, V. Amaral and **Alexander Egyed**: "Towards Safe Composition in SPL Use Case Modeling"

[15] Alexander Nöhrer and **Alexander Egyed** "Conflict Resolution Strategies during Product Configuration," in Proceedings of 4th International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Linz, Austria, January 2010, pp. 107-114.

[16] M. Vierhauser, D. Dhungana, W. Heider, R. Rabiser, and **Alexander Egyed** "Tool Support for Incremental Consistency Checking on Variability Models," in Proceedings of 4th International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Linz, Austria, January 2010, pp. 171-174

[17] Roberto E. Lopez-Herrejon, **Alexander Egyed**, S. Trujillo, and M. Azanza "Using Incremental Consistency Management for Conformance Checking in Feature-Oriented Model-Driven Engineering," in Proceedings of 4th International Workshop on Variability Modelling of Software-Intensive Systems (VAMOS), Linz, Austria, January 2010, pp. 93-100

[18] Peter Hehenberger, **Alexander Egyed**, and Klaus Zeman: "Hierachical Design Models during the Development of Mechatronic Systems," Proceedings of the VDI Mechtronik 2009, Heidelberg, Germany, May 2009.

[19] Robert Balzer, **Alexander Egyed,** Neil Goldman, Tim Hollebeek, Marcello Tallis, and David S. 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.

[20] **Alexander Egyed**, Stefan Biffl, Matthias Heindl, and Paul Grünbacher: "A Value-Based Approach for Understanding Cost-Benefit Trade-Offs During Automated Software Traceability," Proceedings of the 3rd International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), Long Beach, CA, November 2005.

[21] **Alexander Egyed**: "Architecture Differencing for Self Management," Proceedings of the 2nd Workshop on Self-Managed Systems (WOSS), Newport Beach, CA, November 2004.

[22] **Alexander Egyed**, Sven Johann, and Robert Balzer: "Data and State Synchronicity Problems while Integrating COTS Software into Systems," Proceedings of the 4th International Workshop on Adoption-Centric Software Engineering, co-located with ICSE 2004, Edinburgh, Scotland, UK, May 2004.

[23] Sven Johann and **Alexander Egyed**: "State Consistency Strategies for COTS Integration," Proceedings of the 1st International Conference on Incorporating COTS Software into Software Systems, co-located with ICCBSS 2004, Redondo Beach, CA, February 2004.

[24] Paul Grünbacher and **Alexander Egyed**: "Towards Understanding Implications of Trace Dependencies among Quality Requirements, " Proceedings of the 2nd International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2003, Montreal, Canada, October 2003.

[25] Nenad Medvidovic, **Alexander Egyed**, and Paul Grünbacher: "Stemming Architectural Erosion by Coupling Architectural Discovery and Recovery," Proceedings of the 2nd Second International Workshop from Software Requirements to Architectures (STRAW), co-located with ICSE 2003, Portland, Oregon, May 2003.

[26] **Alexander Egyed**: "Reasoning about Trace Dependencies in a Multi-Dimensional Space," Proceedings of the 1st International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2002, Edinburgh, Scotland, UK, September 2002.

[27] **Alexander Egyed**: "Transformation, Ambiguity, and Trivialization," Proceedings of the 2nd International Workshop on Living with Inconsistencies (IWLWI), co-located with ICSE 2001, Toronto, Canada, May 2001.

[28] **Alexander Egyed** and Nenad Medvidovic: "Consistent Architectural Refinement and Evolution using the Unified Modeling Language," Proceedings of the 1st Workshop on Describing Software Architecture with UML, co-located with ICSE 2001, Toronto, Canada, May 2001, pp. 83-87.

[29] **Alexander Egyed**, Paul Grünbacher, and Nenad Medvidovic: "Refinement and Evolution Issues in Bridging Requirements and Architectures," Proceedings of the 1st International Workshops From Requirements to Architecture (STRAW), co-located with ICSE 2001, Toronto, Canada, May 2001, pp. 42-47.

[30] **Alexander Egyed**: "Validating Consistency between Architecture and Design Descriptions," Proceedings of 1st Workshop on Evaluating Software Architecture Solutions (WESAS), Irvine, CA, May 2000.

[31] **Alexander Egyed** and Rich Hilliard: "Architectural Integration and Evolution in a Model World," Proceedings of 4th International Software Architecture Workshop (ISAW) co-located with ICSE 2000, Limerick, Ireland, June 2000.

[32] Paul Grünbacher, **Alexander Egyed**, and Nenad Medvidovic: "Dimensions of Concerns in Requirements Negotiation and Architecture Modeling," Proceedings of 2nd Workshop on Multi-dimensional Separation of Concerns in Software Engineering (MDSOC) co-located with ICSE 2000, Limerick, Ireland, June 2000.

[33] **Alexander Egyed**, N. Mehta, and Nenad Medvidovic: "Software Connectors and Refinement in Family Architectures," Proceedings of 3rd 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).

[34] Nenad Medvidovic, **Alexander Egyed**, and David Rosenblum: "Round-Trip Software Engineering Using UML: From Architecture to Design and Back," Proceedings of the 2nd Workshop on Object-Oriented Reengineering (WOOR) co-located with the 7th European Software Engineering Conference held jointly with the 7th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Toulouse, France, September 1999, pp. 1-8.

[35] **Alexander Egyed**: "Using Patterns to Integrate Architectural Views in UML," Proceedings of the 3rd Ground Systems Architecture Workshop (GSAW'99), El Segundo, CA, March 1999.

[36] Barry W. Boehm and **Alexander Egyed**: "Improving the Life-Cycle Process in Software Engineering Education," Proceedings of the 1st European Software Day co-located with the 24th Euromicro conference, Västerås, Sweden, August 1998, pp. 23-35.

**Proceedings Editor**

[1] Timothy Lethbridge, Jordi Cabot, and **Alexander Egyed** (Eds.): Proceedings of the 18th International Conference on Model Driven Engineering Languages and Systems (MODELS), Ottawa, Canada, Oct. 2015

[2] **Alexander Egyed** and Ina Schäfer (Eds.): Proceedings of the 18th Fundamental Approaches to Software Engineering, Held as Part of the European Joint Conferences on Theory and Practice of Software (ETAPS), London, UK, April, 2015

[3] **Alexander Egyed**, Roberto E. Lopez-Herrejon, Bashar Nuseibeh, G. Botterweck, Marscha Chechik, and Z. Hu (Eds.): Proceedings of the 3rd Workshop on Living with Inconsistencies in Software Development (LWI 2010), September, 2010, Antwerp, Belgium, 2010.

[4] K. Stirewalt, **Alexander Egyed**, B. Fischer (Eds.): 22nd IEEE/ACM International Conference on Automated Software Engineering (ASE 2007), November 5-9, 2007, Atlanta, Georgia, USA ACM 2007.

[5] **Alexander Egyed** and D. E. Perry (Eds.): 1st International Workshop on Incorporating COTS Software into Software Systems, February 1, 2004, Redondo Beach, CA, USA.

[6] Barry W. Boehm, Cristina Gacek, and **Alexander Egyed** (Eds.): 10th Focused Workshop on Software Engineering and Systems Engineering, Technical Report, University of Southern California, Los Angeles, CA June 1998.

[7] Barry W. Boehm, Cristina Gacek, and **Alexander Egyed** (Eds.): 9th Focused Workshop on Software Architecture II, with Barry Boehm and Cristina Gacek, Technical Report, University of Southern California, Los Angeles, CA, November 1997.

[8] Barry W. Boehm, S. Chulani, and **Alexander Egyed** (Eds.): Proceedings for 8th Focused Workshop on Rapid Application Development, Technical Report, University of Southern California, Los Angeles, CA, June 1996.

[9] Barry W. Boehm, M. Lee, and **Alexander Egyed** (Eds.): Proceedings for 6th Focused Workshop on Groupware for Software Engineering, Technical Report, University of Southern California, Los Angeles, CA, June 1995.

**Non-Refereed Publications**

[1] **Alexander Egyed**, Paul Grünbacher, Hanspeter Mössenböck, Reinhold Plösch, Gustav Pomberger, and Rainer Weinreich: "Next Generation Software Technologies: Smart Engineering for Systems of Systems" in White Paper for Industry 4.0, Johannes Kepler University, Linz, Austria, 2015

[2] **Alexander Egyed**: "DesignSpace – Collaborative Engineering in the Cloud" White Paper, Johannes Kepler University, Linz, Austria, 2015

[3] **Alexander Egyed** and B. Fischer: "Guest editors' introduction," Automated Software Engineering: Vol. 16, No. 1, 2009, pp. 1-2

[4] J. Cleland-Huang, A. Dekhtyar, J. Huffman Hayes, G. Antoniol, B. Berenbach, **Alexander Egyed**, S. Ferguson, J. Maletic, and A. Zisman. "Grand Challenges of Traceability. Center of Excellence for Software Traceability," http://www.coest.org, 2006.

[5] Vladimir Jakobac and Nenad Medvidovic and Alexander Egyed: "Separating architectural concerns to ease program understanding", ACM SIGSOFT Software Engineering Notes, Vol. 30, No. 4, ACM Press, New York, USA, 2005.

[6] Y. Bontemps and **Alexander Egyed**: "Scenarios and State Machines: Models, Algorithms, and Tools: A Summary of the 4th Workshop," ACM SIGSOFT Software Engineering Notes, Vol. 30, No. 5, ACM Press, New York, USA, 2005.

[7] **Alexander 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.

[8] Reusable Software in Autonomous Negotiating Teams, eBook.

[9] Y. Bontemps and **Alexander Egyed**: "Forth Workshop on Scenarios and State Machines: Models, Algorithms, and Tools," Proceedings of the 27th International Conference on Software Engineering, St. Louis, USA, May 2005, pp. 697.

[10] **Alexander Egyed** and D.E. Perry: "First International Workshop on Incorporating COTS into Software Systems," in Proceedings of the 3rd International Conference on COTS-Based Software Systems, Redondo Beach, California, USA, February 2004, pp. 6-7.

[11] **Alexander 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 25th International Conference on Software Engineering, Portland, Oregon, USA, May 2003, pp. 783-784.

[12] **Alexander 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.

[13] **Alexander 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.

[14] Barry W. Boehm, Daniel Port, M. Abi-Antoun, and **Alexander 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] Alexander 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] Alexander 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] Alexander 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).

# Teaching

| Courses | Place and Time |
|---|---|
| Software Architecture | USC 2005-2006 |
| Software Engineering | JKU 2007- |
| Software-Intensive Systems | JKU 2008- |
| Software Processes and Tools | JKU 2011-2013 |
| Seminar on Special Topics in Software Engineering | JKU 2008- |
| Introduction to Computer Science | JKU 2009- |
| Model-Driven Engineering | JKU 2013- |
| Master Seminar | JKU 2008- |
| Bachelor Project | JKU 2008- |
| Dissertation Seminar | JKU 2008- |
| Programming Praktika | JKU 2008- |

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)

## Ph.D., M.S., and B.S. Advisor or Committee Member

- Doctoral Students Advisor (Graduated) - for current doctorial students, please see staff info above

  [2013]  Andreas Demuth on "Automatic Model-based Management of Design Constraints"

  [2013]  Alexander Reder on "Automated Consistency Management Framework for the Model Based Software Developmen,"

  [2012]  Alexander Nöhrer on "Inconsistencies in Decision Modeling"

- Master Student Advisor (Graduated)

  [2014]  Stefan Fischer on "Feature-Based Composition of Software-Systems"

  [2013]  Lukas Linsbauer on "Reverse Engineering Variability from Product Variants"

  [2013]  Markus Riedl on "Model-and-Code Consistency Checking"

  [2013]  Sebastian Wilms on "Instant Incremental Class Invariant Checking for Java Virtual Machines"

  [2013]  Egor Erofeev on "Traceability Decision Making in the Presence of Conflicts"

  [2013]  Franziska Öllerer on "Reasoning over UML Models With Ambiguities"

  [2012]  Evelyn Haslinger on "Reverse Engineering Feature Models from Program Configurations"

  [2011]  Andreas Gruber on "Consistency Checking of Software Design Models in Multi-User Environments"

  [2010 ]  Achraf Ghabi on "Automatic Approach to Validating Requirement-to-Code Traces"

  [2010]  Michael Vierhauser on "Consistency Checking in Product Lines"

  [2010]  Lei Wu on "Undo and Redo of Persistent Model Changes"

  [2010]  Erich Altreiter on "Requirements Conflict and Cooperation"

- Bachelor Student Advisor (Graduated)

  [2013]  Stefan Luger on "Constraint Generation and Partial Fixing for UML Models through Transformation"

  [2013]  Patrick Themessl-Huber on "Incremental Consistency Checking with SPARQL"

  [2012]  Lukas Linsbauer on "Extracting Traceability out of SPL Products"

  [2013]  Benedikt Aumayr on "Unit Tests From Runtime Observations"

  [2012]  Philipp Mitterer on "OCL-Parser and Editor for dynamic Meta Models"

  [2011]  Evelyn Haslinger on "Deriving Feature Models from Products"

  [2009]  Michael Herceg on "Relationship between Testing and Traceability"

  [2009]  Sebastian Wilms on "Computing the Cause for Design Errors"

  [2008]  Carina Punz on "Uncertainties in Requirements to Code Trace analysis"

  [2008]  Thomas Schartmüller on "Hyperlinked Project Data for Software Engineering Experiments"

- Habilitation Committee Member

[2015]  Dr. Rick Rabiser ???

[2015]  Dr. Evelyn Süss-Stepancik ???

[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 Committee (Defense, Qualifying, etc.)

[2015]  Jorge Barreiros, "???", New University of Lisbon, Portugal (Advisor: Ana Moreira)

[2015]  Kuschke Tobias, "???", University of Illmenau, Germany (Advisor: Patrick Mäder)

[2015]  Ines Hajri "???", University of Luxemburg, Luxemburg (Advisor: Lionel Briand)

[2013]  Christian Wirth "Dynamic Analysis of Multi-threaded Real-time PLC Applications Using Record and Replay," JKU, Austria (Advisor: Hanspeter Mössenböck)

[2012]  Pablo Trinidad Martin-Arroyo "Automatic the Analysis of Stateful Feature Models," Universidad de Sevilla, Spain (Advisor: Antonio Ruiz Cortés)

[2007]  David M. Woollard "Supporting Production Workflows Through First-Class Connectors," University of Southern California, USA (Advisor: Nenad Medvidovic)

[2006]  Chiyoung Seo "Energy-Awareness in Distributed Java-Based Software Systems," University of Southern California, USA (Advisor: Nenad Medvidovic)

[2006]  Jesal Bhuta "Framework for Intelligent Assessment and Resolution of Commercial-Off-The-Shelf Product Incompatibilities," University of Southern California, USA (Advisor: Barry Boehm)

[2005]  Vladimir Jacobak "Facilitating the Reasoning of an OO Software System's Architecture," University of Southern California, USA, 2005 (Advisor: Nenad Medvidovic)

## Presentations at Conferences and Workshops

- 13th International Conference on Model Driven Engineering Languages and System (MODELS), Oslo, Norway, October 2010 (paper presentation)

- 26th IEEE International Conference on Software Maintenance (ICSM), Timisoara, Romania, September 2010 (paper presentation).

- 26th IEEE International Conference on Software Maintenance (ICSM), Timisoara, Romania, September 2010  (Early Research Achievement Track poster and paper presentation).

- 31st International Conference on Software Engineering (ICSE), Vancouver, Canada, 2009 (poster presentation)

- 23rd International Conference on Automated Software Engineering (ASE), L'Aquila, Italy, 2008 (paper presentation)

- 29th International Conference on Software Engineering (ICSE), Minneapolis, MN 2007 (paper presentation, tool demo presentation, and poster presentation).

- 28th International Conference on Software Engineering (ICSE), Shanghai, China, May 2006 [Chair: Leon Osterweil] (paper presentation).

- 20th IEEE International Conference on Automated Software Engineering (ASE), Long Beach, CA, November 2005 [Chair: David Redmiles] (short paper/poster presentation).

- 3rd International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2005, Long Beach, November 2003 (paper presentation).

- 12th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE), Newport Beach, CA, USA, November 2004 (paper presentation).

- 2nd Workshop on Self-Managed Systems (WOSS), Newport Beach, CA, USA, November 2004 (paper presentation).

- 2nd IFIP/ACM Working Conference on Component Deployment (CD), Edinburgh, Scotland, UK, May 2004 (paper presentation).

- 4th International Workshop on Adoption-Centric Software Engineering (ACSE), Edinburgh, Scotland, UK, May 2004 (paper presentation).

- 3rd International Conference on COTS-Based Software Systems (ICCBSS), Redondo Beach, CA, February 2004 (workshop summary).

- 6th International Conference on the Unified Modeling Language (UML), San Francisco, USA, October 2003 (paper presentation).

- 2nd International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ASE 2003, Montreal, Canada, October 2003 (paper presentation).

- 2nd Second International Workshop from Software Requirements to Architectures (STRAW), co-located with ICSE 2003, Portland, Oregon, May 2003 (paper presentation).

- 17th IEEE International Conference on Automated Software Engineering (ASE), Edinburgh, Scotland, UK, September, 2002 [Chair: Julian Richardson] (paper presentation).

- 1st International Workshop on Traceability, co-located with ASE 2002, Edinburgh, Scotland, UK, September 2002 (paper presentation).

- 16th IEEE International Conference on Automated Software Engineering (ASE), San Diego, CA, November 2001 [Chair: Debra Richardson] (paper presentation).

- 5th IEEE International Symposium on Requirements Engineering (RE), Toronto, Canada, August 2001 [Chair: Bashar Nuseibeh] (paper presentation).

- 2nd Working International Conference on Software Architecture (WICSA), Amsterdam, The Netherlands, August 2001 [Chair: Philippe Kruchten] (paper presentation).

- 23rd International Conference on Software Engineering (ICSE), Toronto, Canada, May 2001 [Chair: Hausi Müller] (paper presentation).

- 2nd International Workshop on Living with Inconsistencies (IWLWI), co-located with ICSE 2001, Toronto, Canada, May 2001 [Chairs: Steve Easterbrook and Marsha Chechik] (paper presentation).

- 1st 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).

- 1st International Workshops From Requirements to Architecture (STRAW), co-located with ICSE 2001, Toronto, Canada, May 2001 [Chairs: Jaelson Castro and Jeff Kramer] (paper presentation).

- 1st Workshop on Evaluating Software Architecture Solutions (WESAS), Irvine, CA, May 2000 [Chair: Richard Taylor] (presentation).

- 3rd International Conference on Foundational Aspects of Software Engineering (FASE), Berlin, Germany, March 2000 [Chair: Tom Maibaum] (paper presentation).

- 4th International Workshop on Software Architectures for Product Families (IWSAPF), Las Palmas, Gran Canaria, Spain, March 2000 [Chair: Henk Obbink] (paper presentation).

- 2nd International Conference on the Unified Modeling Language (UML), Fort Collins, CO, October 1999 [Chair: Robert France] (paper presentation).

- 14th IEEE International Conference on Automated Software Engineering (ASE), Cocoa Beach, FL, October 1999 [Chair: Dorothy Setliff] (paper presentation).

- 2nd Workshop on Object-Oriented Reengineering (WOOR) co-located with the 7th European Software Engineering Conference held jointly with the 7th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Toulouse, France, September 1999, [Chairs: Serge Demeyer and Harald Gall] (paper presentation).

- 21st International Conference on Software Engineering (ICSE), Los Angeles, CA, May 1999 [Chair: Barry Boehm] (formal demonstration).

- 3rd Ground System Architecture Workshop (GSAW), El Segundo, CA, March 1999 [Chair: Judy Kerner] (presentation).

- 32nd Hawaii International Conference on Systems Sciences (HICSS), Wailea, Hawaii, January 1999 (paper presentation).

- 15th 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).

- 1st European Software Day as part of the 24th Euromicro Conference, Västerås, Sweden, August 1998 [Chair: Gerhard Chroust] (paper presentation).

- 8th Annual International Symposium on "People, Teams and Systems", International Council on Systems Engineering (INCOSE), Vancouver, Canada, June 1998 [Chair: Jas Madhur] (paper presentation).

- 10th Focused Workshop on Software Engineering and Systems Engineering, University of Southern California, Los Angeles, CA, June 1998 [Chair: Barry Boehm] (presentation).

- 20th International Conference on Software Engineering (ICSE) on "Forging New Links", Kyoto, Japan, April 1998 [Chair: Koji Torii] (paper presentation).

- 9th Focused Workshop on Software Architecture II, University of Southern California, Los Angeles, CA, November 1997 [Chair: Barry Boehm] (presentation and demonstration).

- 7th Annual International Symposium on "Systems Engineering: A Necessary Science', International Council on Systems Engineering (INCOSE), Los Angeles, CA, August 1997 (paper presentation).

## Professional Services

### Editorial Board (Journal)

[2013-] Editorial Board Member for IEEE Transactions for Software Engineering (TSE)
http://www.computer.org/portal/web/tse

[2013-] Editorial Board Member for Software and System Modeling (SoSyM)
http://www.sosym.org

[2010-] Editorial Board Member for the Central European Journal of Computer Science (CEJCS)
http://versita.com/cejcs/.

[2007-] Editorial Board Member for the International Journal of Software and Informatics (IJSI), http://www.ijsi.org.

## Guest Editor (Journal)

[2016] Guest Editor for the Journal of Software and Systems Modeling (SOSYM) together with Jordi Cabot
[2009] Guest Editor for the Journal of Automated Software Engineering (JASE) 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.

## Steering Committee Membership

[2014-] Steering Committee Member for the International Conference on Model Driven Engineering Languages and Systems (MoDELS)

[2014-] Steering Committee Member for the European Joint Conferences on Theory and Practice of Software (ETAPS)

[2007-] Steering Committee Member for the Automated Software Engineering Conference series. http://www.ase-conferences.org/olbib/

## Editor

[2015] Program Co-Chair for the 18th International Conference on Model Driven Engineering Languages and Systems (MODELS), Ottawa, Canada  together with Jordi Cabot
[2015] Program Co-Chair for the 17th International Conference on Fundamental Approaches to Software Engineering (FASE), London, UK together with Ina Schäfer
[2007] Editor of the Proceedings for the 22nd International Conference on Automated Software Engineering (ASE) together with Bernd Fischer.

## Chair

[2015] Program Co-Chair for the 18th International Conference on Model Driven Engineering Languages and Systems (MODELS), Ottawa, Canada  together with Jordi Cabot

[2015] Program Co-Chair for the 17th International Conference on Fundamental Approaches to Software Engineering (FASE), London, UK together with Ina Schäfer

[2013] Co-Chair and Co-Organizer of the Workshop on Flexible Modeling Tools (FlexiTools) together with Filipe Correia, Ademar Aguiar, Louis Rose, Dustin Wüest, Martin Glinz, and André van der Hoek  - co-located with SPLASH 2013

[2010] Co-Chair and Co-Organizer of the 3rd 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 1st 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 2nd 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] Program Co-Chair for the 22nd International Conference on Automated Software Engineering (ASE) together with Bernd Fischer.

[2006]  Co-Doctoral Symposium Chair for the 21st International Conference on Automated Software Engineering (ASE) together with Bernd Fischer.

[2005]  Co-Chair and Co-Organizer for the 4th 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 20th International Conference on Automated Software Engineering (ASE) together with Thomas Alspaugh.

[2004]  Co-Chair and Co-Organizer of the 1st 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 19th International Conference on Automated Software Engineering (ASE).

[2002]  Co-Chair and Co-Organizer for the 1st 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 and Others

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

[2009-]  Secretary and Treasurer of the Center of Excellence for Software Traceability (COEST) www.traceabilitycenter.org/

## Grant Proposal Reviewing

[2015]  Reviewer for Fonds National de la Recherche Luxembourg (FNR), Luxemburg

[2014]  Evaluation Panel Member for CHIST-ERA Call 2014 on Resilient Trustworthy Cyber-Physical Systems

[2014]  Reviewer for Croatian Science Foundation (HRZZ), Croatia

[2010]  Reviewer for NWO Physical Sciences, The Netherlands

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

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

## Faculty Reviews

[2013]  Scientific Evaluation for the Hiring Committee "PROFESSOR OF COMPUTER SCIENCE" at the University of Helsinki, Finland

## Reviewer

Over 600 paper reviews in journals, conferences, and workshops related to software engineering:

**Journals**

| IEEE Transactions on Software Engineering (TSE) | 1999-2015 |
|---|---|
| ACM Transactions on Software Engineering and Methodology (TOSEM) | 2004-2014, 2016 |
| Journal Information & Software Technology (IST) | 2004-2013, 2015, 2016 |
| Journal on Systems and Software (JSS) | 2005-2013, 2015 |
| Journal Software and System Modeling (SoSyM) | 2002-2015 |
| Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS) | 2009-2010 |
| Journal on Software Maintenance and Evolution (JSME) | 2007,2008,2010 |
| IEEE Software | 2005-2007, 2013 |

| Journal on Automated Software Engineering (JASE) | 2000, 2006, 2009, 2012, 2015 |
|---|---|
| Requirements Engineering Journal | 2002 |
| Journal of Software: Practice and Experience | 2008, 2011-2012 |
| IEE Software Magazine | 2006 |
| Journal Computer Standards & Interfaces (CS&I) | 1998-2000 |
| Journal on Empirical Software Engineering (EMSE) | 2010-2011 |
| ACM Computing Survey | 2010 |
| Journal of Software Quality | 2010-2011 |
| Journal of Computing | 2012 |
| Journal of Science of Computer Programming | 2012-13 |
| Journal of Robotics and Computer Integrated Manufacturing | 2012 |
| Journal of Computing and Information Technology (CIT) | 2015 |

**Major Conferences (Program Committees or Expert Reviewer Panels)**

| International Conference on Software Maintenance and Evolution (ICSME) | 2015 |
|---|---|
| International Conference on Model Driven Engineering Languages and Systems (MODELS) | 2008, 2009, 2011-2014 |
| International Conference on Automated Software Engineering (ASE) | 2002-05, 08, 12-13 |
| International Conference on Fundamental Approaches to Software Engineering (FASE) | 2009-2010, 2013, 2016 |
| International Conference on Software Architecture (WICSA) | 2005-2009 2012, 2014, 2015 |
| International Conference on Software Engineering (ICSE) | 2011 |
| International Requirements Engineering Conference (RE) | 2010-2011 |

**Other (Expert Panel, Books, Workshops)**

[2015]  Program Committee member for 1st International Workshop on UML Consistency Rules (WUCOR)

[2015]  Program Committee member for 8th International Symposium on Software and Systems Traceability

[2015]  Program Committee member for the 8th International Conference on Model Transformation (ICMT 2015)

[2015]  Program Committee member for the 8th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE 2015), co-located with ICSE

[2015]  Program Committee member for the Software Engineering track of the 30th ACM/SIGAPP Symposium On Applied Computing (SAC 2015), Salamanca, Spain

[2014]  Program Committee member of the 1st International Workshop on Multi-Level Modelling (MULTI 2014)

[2015]  Program Committee member for ICSE NEAR?

[2014]  Program for the Formal Research Demo of the 36nd International Conference on Software Engineering (ICSE)

[2013]  Program Committee member for the 2nd International Workshop on the Analysis of Model Transformations (AMT)

[2013]  Program Committee member for the 7th European Conference on Software Architecture (ECSA)

[2013]  Program Committee member for the 2nd International Workshop on Academics Tooling with Eclipse (ACME)

[2013]  Program Committee member for the 2nd International Workshop on the Twin Peaks of Requirements and Architecture (Twin Peaks)

[2013]  Program Committee member for the 4th International Symposium on Architecting Critical Systems (ISARCS 2013)

[2013]  Program Committee member for the 1st International Workshop on the Twin Peaks of Requirements and Architecture (Twin Peaks)

[2012]  Program Committee member for the 1st International Workshop on the Analysis of Model Transformations (AMT)

[2012]  Program Committee member for ICSE NEAR?

[2011]  Program Committee member for the 5th International Conferences on Model Transformation (ICMT), co-located with TOOLS 2012.

[2011]  Program Committee member for the 1st International Workshop on Traceability, Dependencies and Software Architecture (TDSA), co-located with ECSA 2011

[2011]  Program Committee member for the 1st International Workshop on Flexible Modeling Tools, co-located with ICSE 2011

[2011]  Program Committee member for the 6th Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), co-located with ICSE 2011

[2010]  Program Committee member for the 1st International Symposium on Architecting Critical Systems (ISARCS 2010)

[2010]  Program for the Formal Research Demo of the 32nd International Conference on Software Engineering (ICSE)

[2010]  Program for the Formal Research Demo of the 25th International Conference on Automated Software Engineering (ASE)

[2010]  Program Committee for the 3rd International Workshop on Academic  Software Development Tools and Techniques (WASDeTT)

[2009]  Program Committee member for the Formal Research Demo of the 31st International Conference on Software Engineering (ICSE)

[2009]  Program Committee member for the 5th 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]  Workshop Program Committee member for the 30th International Conference on Software Engineering (ICSE)

[2008]  Tool Demonstration Program Committee member for the 30th International Conference on Software Engineering (ICSE)

[2008]  Program committee member for the Formal Tools Demonstration track of the 30th 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 4th Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE)

[2007]  Program committee member for the 2nd Workshop on Event-Based Information Technology Systems (EBITS), co-located with the ARES 2007 conference

[2007]  Program committee member for the 6th International Workshop on Scenarios and State Machines (SCESM) co-located with the ICSE 2007 conference

[2007]  Program committee member for the 33rd EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA), Track on Software Process and Product Improvement (SPPI)

[2006]  External Panel Member for the 28th International Conference on Software Engineering (ICSE)

[2006]  Program committee member for the 1st Workshop on Quality in Modeling, Co-located with the ACM/IEEE 9th International Conference on Model Driven Engineering Languages and Systems (MoDELS)

[2005]  Program committee member for the 3rd Traceability in Emerging Forms of Software Engineering (TEFSE)

[2005]  Program Committee member for the 31st 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 1st Workshop on Software Architecture Description & UML

[2004]  Program Committee member for the 30th Workshop on Software Process and Product Improvement.

[2003]  Program committee member for the 2nd International Workshop on Traceability of Emerging Forms of Software Engineering (TEFSE).

[2003]  Program committee member for the 5th International Workshop on Learning Software Organizations (LSO).

[2003]  Program Committee member for the 29th Workshop on Software Process and Product Improvement.

[2002]  Program Committee for the 4th International Workshop on Learning Software Organizations (LSO).

[2002]  Program Committee for the 28th Workshop on Software Process and Product Improvement.

[2001]  Program Committee for the 1st International Workshop on Model-Based Requirements Engineering (MBRE).

[2001]  Program Committee Member for 27th 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 26th Workshop on Software Process and Product Improvement.

[1999]  Conference Committee Member for the 21st International Conference on Software Engineering (ICSE).

[1999]  Program Committee Member for the 25th Workshop on Software Process and Product Improvement.

[1999]  Program Committee Member for the 3rd Ground Systems Architecture Workshop in El Segundo, CA.

[1998]  Program Committee Member for the 24th Workshop on Software Process and Product Improvement.

[1998]  Program Committee Member for the 2nd Ground Systems Architecture Workshop in El Segundo, CA.

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

## Major contributions to the early careers of excellent researcher

- Prestigious DOC forte scholarship awarded by Austrian Academy of Sciences to PhD Student Evelyn Haslinger
- Prestigious Marie Curie scholarship awarded by EU FP7 to Dr. Roberto E. Lopez Herrejon
- Prestigious Lise Meitner scholarship awarded by Austrian Science Fund to Dr. Patrick Mäder

## Recommendation Letters

- LiGuo Huang (Tenure and Hiring Letters)

- Krzysztof Czarnecki (Tenure)

## Letter of Support (Grants)

- Jim Bieman, Betty Cheng, and Robert France, Model-Driven Development Repository(ReMoDD), NSF

- Duan Yucong, National Natural Science Foundation of China

## Administrative Responsibilities

- Co-Chair Regional Education Competence Center  (RECC) for Computer Science) (2015-)

- Reserve Member (Ersatzmitglied) of the JKU INF Stuko (2013-)

- Reserve Member (Ersatzmitglied) of the JKU Senate (2013-)

- Co-Chair Teacher's Education Curriculum Planing (Studienkommission Lehramt) (2011-)

- Co-Applicant of the Regional Education Competence Center (RECC) for Computer Science Awarded April 2015).

- Erasumus Exchange Advisor (2012-)

- Hiring Committee "Software Science" Professorship (2014-)

- Various Task Forces

    o   Industrie 4.0

    o   Strategiedokument Informatik

    o   Leistungsberichte

## 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
- EASST (European Association of Software Science and Technology)

# Collaborations

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

**Industry Collaborations**

- ACCM, Austria
- Aerospace Corporation, USA
- Boeing Corporation, USA
- Honeywell, USA
- IBM Rational, Canada
- Integrated Systems and Internet Solutions, USA
- KEBA, Austria
- Lockheed-Martin, USA
- Northrop-Grumman Company, USA
- Mitre Corporation, USA
- Rational Software Corporation, Canada
- SCCH, Austria
- Siemens AG, Germany
- SoHaR Incorporated, USA
- Teknowledge Corporation, USA
- Trumpf, Austria

**Academic Collaborations**

- Carnegie Mellon University, USA
- Fraunhofer Institute, Germany
- Massachusetts Institute of Technology, USA
- Mondragon Unibertsitatea Arrasate, Spain
- Nanjing University, China
- Southern Methodist University, USA
- Technical University of Vienna, Austria
- Universidad Nacional de Educacion a Distancia, Spain
- Universidade Nova de Lisboa, Portugal
- Université Paris Panthéon Sorbonne, France
- University College London, UK
- University of California at Irvine, USA
- University of Málaga, Spain
- University of Michigan, USA
- University of Otago, New Zealand
- University of South Carolina, USA
- University of Southern California, USA
- University of Southampton, UK
- University of Texas at Austin, USA
- University of Wollongong, Australia
- Vanderbilt University, USA
- Western Michigan University, USA

# Languages

English and German.