2019 BOARD NOMINEE

# Marsha Chechik

Professor, Computer Science
University of Toronto

CRA
Computing Research Association

## Awards and Honors and Year Received

- ACM Distinguished Member, 2018
- Bell University Labs Chair in Software Engineering, 2012-2016
- IBM Center for Advanced Studies, Toronto, Faculty Fellow, 2004-2018

## Involvement in CRA Activities

- I have not been (other than attending various mentoring events, earlier in my career).

## Other Relevant Experience

- Vice Chair, Department of Computer Science, University of Toronto, 2009-2011, 2012-2016

- Program Chair, International Conference on Software Engineering (ICSE'2018) and ICSE Steering Committee Member, 2016-present

- Program Chair, International Conference on Automated Software Engineering (ASE 2014) and ASE Steering Committee member, 2015-present

- Associate Editor in Chief, International Journal of Software and Systems Modeling (SoSyM), 2015-present

- Program Chair, International Conference on Foundations of Software Engineering (FSE'2021), ESEC/FSE Steering Committee member, 2018-present

## Research Interests

- software engineering
- software safety and assurance
- model-driven software engineering
- software specification and analysis
- software verification

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- product-line techniques
- requirements engineering
- model-checking

## Personal Statement

I have been trained in the US but have been on faculty in UofT, in Canada, for over 20 years. I have had major leadership positions in the international Software Engineering community as well as administrative roles within the University.

If elected, I would like to focus on the following issues:

- Improving the best practices support for hiring, retaining and promoting women to achieve the highest ranks in academia and research institutions

- Helping define a sustainable open access conference and journal publication model

- Improving access for Canada-based junior researchers to travel funding to attend conferences

Curriculum Vitae
MARSHA CHECHIK
April 2018

## I. Biographical Information

*Personal*


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University of Toronto
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Home
16 Thorndale Crescent
Toronto, ON M6P 1L1, Canada
Phone: (416) 604-7603

Citizenship: Canadian and US


*Degrees*

Ph.D., University of Maryland, December 1996 (Computer Science).
Thesis: *Analysis of Consistency between Requirements and Designs*
Advisor: Dr. John Gannon

M.S., University of Maryland, May 1994 (Computer Science).

B.S., University of Maryland Baltimore County, December 1991 (Computer Science/Mathematics, *summa cum laude*).

*Employment*

| | | |
|---|---|---|
| 4/17-12/17 | Visiting Professor | University of Waterloo |
| 2/13-5/13 | Visiting Professor | Stony Brook University, Dept. of Computer Science |
| 7/09-present | Professor | University of Toronto, Dept. of Computer Science |
| 7/09-present | Professor (cross-appointed) | University of Toronto, Dept. of Electrical and Computer Enginering |
| 6/02-7/09 | Associate Professor | University of Toronto, Dept. of Computer Science |
| 6/02-7/09 | Associate Professor (cross-appointed) | University of Toronto, Dept. of Electrical and Computer Enginering |
| 3/03-5/03 | Visiting Professor | Imperial College, London UK (sabbatical visit) |
| 10/02-2/03 | Visiting Scientist | Bell Laboratories, Murray Hill, NJ, USA (sabbatical visit) |
| 4/98-6/02 | Assistant Professor (cross-appointed) | University of Toronto, Dept. of Electrical and Computer Engineering |
| 7/97-6/02 | Assistant Professor | University of Toronto, Dept. of Computer Science |

| | | |
|---|---|---|
| 7/96-6/97 | Lecturer | University of Toronto, Dept. of Computer Science |
| 1/96-8/96 | Research Scientist | IT Division, Naval Research Lab, Washington, D.C. |
| 6/93-8/96 | Research Assistant | University of Maryland, Dept. of Computer Science |
| 9/92-5/93 | Teaching Assistant | University of Maryland, Dept. of Computer Science |
| 1/92-8/92 | Software Engineer | Roadnet Technologies, Maryland |
| 1/91-8/91 | Research Assistant | R & D Dept., Hewlett-Packard, Pennsylvania |
| 9/91-12/91 | Instructor | University of Maryland Baltimore County, Dept. of Mathematics |

*Honours and Awards*

2017
- Faculty Fellow, IBM Toronto, Centre for Advanced Studies
- International Conference on Computer Science and Software Engineering (CASCON'17) 10-year Most Influential Paper Award
- J. of Software and Systems Modeling (SoSyM) Best Paper Award

2016
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- Bell University Labs (BUL) Chair in Software Engineering
- Nominee, EASST award given at the European Joint Conferences on Theory and Practice of Software (ETAPS'16)

2015
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- Bell University Labs (BUL) Chair in Software Engineering
- Distinguished Service Award, MODELS'15
- Best paper award, International Conference on Model Transformations (ICMT'15)
- Distinguished Paper Award, International Conference on Automated Software Engineering (ASE'15)

2014
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- Bell University Labs (BUL) Chair in Software Engineering
- Winner of two silver medals in the Software Verification Competition (SV-COMP'14)

2013
- Bell University Labs (BUL) Chair in Software Engineering
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- Winner of 4 Gold and 1 Bronze medal in Software Verification Competition (SV-COMP'13)
- Best paper award, International Conference on Product Line Engineering (SPLC'13)

2012
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- SIGSOFT Distinguished Paper award, International Conference on Software Engineering (ICSE'12)
- Best Paper award, International Conference on Requirements Engineering (RE'12)

2011
- Faculty Fellow, IBM Toronto, Center for Advanced Studies

2010
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- NSERC Accelerator Supplement

2009
- IBM Faculty Award
- Faculty Fellow, IBM Toronto, Center for Advanced Studies

2008
- Faculty Fellow, IBM Toronto, Center for Advanced Studies

2007
- Elected member of IFIP 2.9: Working group on Requirements Engineering
- Best Student Paper award. International Conference on Computer Science and Software Engineering (CASCON'07).
- SIGSOFT Distinguished Paper award, International Conference on Software Engineering (ICSE'07)
- Computer Science Student Union Teaching Award
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- Rated 15th among the world's "top Software Engineering scholars". Source: Ren and Taylor, "Automatic and Versatile Publications Ranking for Research Institutions and Scholars". Communications of the ACM, Vol. 50, No. 6, June 2007, pp. 81-85.

2006
- Computer Science Student Union Teaching Award
- Faculty Fellow, IBM Toronto, Center for Advanced Studies
- IBM Faculty Award

2004
- Faculty Fellow, IBM Toronto, Center for Advanced Studies

2000
- University of Toronto Dean's Excellence Award

1998
- Service Award, Department of Computer Science, University of Toronto

1994
- ACM Award for the Outstanding M.S. Student in the DC Area
- Graduate School Travel Grant, University of Maryland

1991
- Dean's Scholarship, University of Maryland Baltimore County
- Senators Scholarship, State of Maryland
- Member of Phi Kappa Phi.
- Member of Pi Mu Epsilon - National Mathematics Honor Society
- Member of Upsilon Pi Epsilon - National Computer Science Honor Society

*Professional Activities*

Editorial positions
- **Guest Editor**, J. of Automated Reasoning, Special Issue on Best Papers from VSSTE'16.
- **Guest Editor**, J. of Logical Methods in Computer Science, Special Issue on Selected Papers from TACAS'16.
- **Guest Editor**, International J. on Software Tools for Technology Transfer (STTT), Special Issue on Selected Papers from TACAS'16.
- **Associate Editor**, Journal of Computer and Systems Science, 2014.
- **Associate Editor**, IEEE Transactions on Software Engineering, 2003 - 2007, 2010-2014.

- **Associate Editor**, Springer Journal on Software and System Modeling (SoSyM), 2009-present. **Associate Editor-in-Chief**, 2014-2015.
- **Guest Editor**, J. of Automated Software Engineering, Special Issue on Best Papers from ASE'14, 2016.
- **Guest Editor**, Information and Computation, Special Issue on Best Papers from CONCUR'08, published September 2010.
- **Guest Editor**, Requirements Engineering Journal, Special Issue on Model-Checking in Requirements Engineering, issue 4, volume 7, 2002.

Major conference organization positions

- **Program Committee Co-Chair**, International Conference on Software Engineering (ICSE'18), Gothenburg, Sweden, May 26-June 2, 2018.
- **Program Committee Co-Chair**, 8th Working Conference on Verified Software: Theories, Tools, and Experiments (VSTTE'16), Toronto, Canada July 17 - 18, 2016
- **Program Committee Co-Chair**, International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'16), Eindhoven, the Netherlands, April 4-8, 2016
- **Program Committee Co-Chair**, International Conference on Automated Software Engineering (ASE'14), Vasteras, Sweden, September 2014
- **Program Committee Co-Chair**, International Conference on Fundamental Approaches to Software Engineering (FASE'09), York, UK, March 2009.
- **Program Committee Co-Chair**, CASCON 2008, Toronto, Canada, October 2008.
- **Co-Chair (Program Committee and General)**, 19th International Conference on Concurrency Theory (CONCUR'08), Toronto, Canada, August 2008.

Steering committees

- **SC Member**, International Conference on Software Engineering (ICSE), 2015-present.
- **Member**, ICSE SC Technical Subcommittee
- **SC Member**, International Conference on Automated Software Engineering (ASE), 2017-present.
- **SC Member**, International Workshop on Modeling in Software Engineering (MiSE), 2013-present.
- **SC Member**, NECSIS Steering Committee, and **Theme Leader, Theme 4**, 2010-2016.
- **SC Member**, NSERC CREATE in Product-Line Engineering for Cyber-physical Systems, 2016-present.
- **SC Member**, ETAPS – European Joint Conferences on Theory and Practice of Software, 2007-2010, 2014-present
- **Member**, ETAPS publication model subcommittee, 2016-17
- **SC Member**, FASE – International Conference on Fundamental Approaches to Software Engineering, 2007-2011, elected Honorary Member in 2012 (continuing SC membership)
- **SC Chair**, FASE – International Conference on Fundamental Approaches to Software Engineering, 2009-2011
- **SC Member**, International Conference on Computer Science and Software Engineering (CASCON), 2005-2011.

Panels and Tutorials

- "Publishing Modeling Research", panel at International Workshop on Modeling in Software Engineering (MiSE'15)
- "Formal Methods in Software Product Lines – ready for Industrial Usage?", ETAPS'15 International Workshop on Formal Methods in Software Product Lines (FMSPLE'15), April 2015.
- New and Emerging Results (NIER'11) Track, International Conference on Software Engineering (ICSE'11), May 2011.
- "Career Paths for Women" (panel member), International Conference on Computer Science and Software Engineering (CASCON'10), November 2010.
- "Formal Methods: Too Little or Too Much" (panel member), International Conference on

Software Engineering (ICSE'06), May 2006.
- "Model-Checking: from Hardware to Software" (4-hour tutorial), Formal Methods (FM'06), August 2006 (with A. Gurfinkel).

Program committees. These are decision-making committees, unless stated "expert review board". Program Board is a new heurarchical structure sometimes practiced in conferences, where PB members are "meta-reviewers" acting like associate editors and meeting in person to form a program.

2019
- International Conference on Software Engineering (ICSE'19), Program Board member.
- International Conference on Fundamental Approaches to Software Engineering (FASE'19).

2018
- International Conference on Automated Software Engineering (ASE'18).
- International Conference on Software Product Lines (SPLC'18)
- International Conference on Model-Driven Engineering (MODELS'17), Program Board Member
- International Conference on Software Engineering Journal-First Publications (ICSE'18-JFP)
- 3rd Workshop on Models for Formal Analysis of Real Systems (MARS'18)
- MODELS'18 Doctoral Symposium
- International Conference on Requirements Engineering (RE'18), NEXT Track
- 14th European Conference on Modelling Foundations and Applications (ECMFA'18)
- International Workshop on Modeling in Software Engineering (MiSE'18)
- International Conference on Model Transformations (ICMT'18)
- International Conference on Software Language Engineering (SLE'18)

2017
- International Conference on Software Language Engineering (SLE'17)
- International Conference on Software Engineering (ICSE'17), Program Board Member.
- International Conference on Model-Driven Engineering (MODELS'17), Program Board Member
- International Conference on Automated Software Engineering (ASE'17)
- ACM SIGSOFT International Conference on Foundations of Software Engineering (FSE'17)
- MODELS'17 Workshop on the Globalization of Modeling Languages (GEMOC'17)
- STAF'17 Doctoral Symposium
- MODELS'17 Doctoral Symposium

2016
- International Conference on Automated Software Engineering (ASE'16)
- International Conference on Automated Software Engineering (ASE'16), Tools and Demos track
- International Conference on Computer Science and Software Engineering (CASCON'16)
- ACM SIGSOFT International Symposium on the Foundations of Software Engineering, Visions and Reflections Paper Track (FSE-VaR'16)
- International Workshop on Model-Driven Engineering, Logic and Optimization (MELO'16)
- International Conference on Model-Driven Engineering (MODELS'16), Program Board Member
- ETAPS'16 Workshop on Formal Methods in Software Product Lines (FMSPLE'16)
- International Conference on Requirements Engineering (RE'16), NEXT Track
- 12th European Conference on Modelling Foundations and Applications (ECMFA'16)
- International Workshop on Modeling in Software Engineering (MiSE'16)
- MODELS'16 Workshop on Globalization of Modeling Languages (GEMOC'16)
- MODELS'16 Workshop on Validation and Verification of Model Transformations (VOLT'16)
- International Conference on Software Language Engineering (SLE'16)

2015
- Fourth International Workshop on Validation and Verification of Model Transformations (VOLT'15)
- International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'15)

- MODELS'15 Workshop on the Analysis of Model Transformations (AMT'15)
- MODELS'15 Workshop on the Globalization of Modeling Languages (GEMOC'15)
- International Conference on Model-Driven Engineering (MODELS'15)
- International Conference on Automated Software Engineering (ASE'15)
- International Conference on Object-Oriented Software Development (Modularity'15)
- International Conference on Fundamental Approaches to Software Engineering (FASE'15)
- International Conference on Computer-Aided Verification (CAV'15)
- International Conference on Software Engineering (ICSE'15) – Student Research Competition
- International Workshop on CloudMDE'15

2014
- International Conference on Model-Driven Engineering (MODELS'14)
- MODELS'14 Workshop on the Analysis of Model Transformations (AMT'14)
- MODELS'14 Workshop on the Globalization of Modeling Languages (GEMOC'14)
- ICSE'14 Workshop on Modeling in Software Engineering (MiSE'14)
- ICSE'14 Workshop on Constraints in Software Testing, Verification and Analysis (CSTVA'14)
- 2nd IEEE International Workshop on Formal Methods Integration (IEEE FMi'14)
- International Conference on Computer Science and Software Engineering (CASCON'14)
- International Conference on Fundamental Approaches to Software Engineering (FASE'14)
- International Symposium on Formal Methods (FM'14)
- International Symposium on Runtime Verification (RV'14)
- Ershov Informatics Conference (PSI'14)
- International Symposium on Static Analysis and Testing (ISSTA'14)

2013
- Educators' Symposium (at MODELS'13)
- International Workshop on Model-Checking Software (SPIN'13)
- ACM SIGPLAN-SIGSOFT Workshop on Program Analysis for Software Tools and Engineering (PASTE'13)
- International Conference on Verified Software: Theories, Tools, and Experiments (VSTTE'13)
- Grace Hopper Conference (GHC'13)
- MODELS'13 Workshop on the Analysis of Model Transformations (AMT'13)
- Second International Workshop on Validation and Verification of Model Transformations (VOLT'13)
- International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'13)
- ICSE'13 Workshop on Modeling in Software Engienering (MiSE'13)
- ICSE'13 Mentoring Committee
- 8th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS'13, co-located with ICSE'13)
- International Conference on Automated Software Engineering (ASE'13)

2012
- MODELS'12 Workshop on Model-Driven Engineering, Verification and Validation (MoDeVVa'12)
- MODELS'12 Workshop on the Analysis of Model Transformations (AMT'12)
- First Workshop on MDE for and in the Cloud (CloudMDA'12, co-located with ECMFA'12)
- International Conference on Automated Software Engineering, Tools Track (ASE'12-Tools)
- International Conference on Automated Software Engineering (ASE'12)
- 7th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS'12, co-located with ICSE'12)
- ICSE International Workshop on Modeling in Software Engineering (MiSE'12)
- ICSE International Workshop on Formal Methods in Software Engineering: Rigorous and Agile Approaches (FormSER'12)
- SIGSOFT International Confererence on Foundations of Software Engineering (FSE'12)

- 18th International Symposium on Formal Methods (FM'12)
- New Ideas and Emerging Results Track, International Conference on Software Engineering (NIER at ICSE'12)
- ICSE'12 Mentoring Committee
- International Conference on Fundamental Approaches to Software Engineering (FASE'12)
- International Conference on Computer Science and Software Engineering (CASCON'12)
- First International Workshop on Validation and Verification of Model Transformations (VOLT'12)

2011
- 1st International Workshop on Verification, Analysis, and Testing of Service Systems (VATSS'11), at FSE'11.
- International Workshop on Quality Assurance for Service-Based Applications (QASBA'11), at ECOWS'11.
- New Ideas and Emerging Results Track, International Conference on Software Engineering (ICSE'11)
-International Conference on Fundamental Approaches to Software Engineering (FASE'11)
- International Conference on Testing and Analysis (ISSTA'11)
- International Conference on Requirements Engineering (RE'11)
- International Conference on Computer Science and Software Engineering (CASCON'11)
- NASA Formal Methods Conference (NFM'11)
- International Conference on Model-Driven Engineering (MODELS'11)
- International Conference on Automated Software Engineering (ASE'11)

2010
- 1st International Symposium on Personal Web
- 12th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS'10), Safety and Verification Track (in memory of Amir Pnueli)
- International Conference on Software Engineering and Formal Methods (SEFM'10)
- International Conference on Automated Software Engineering (ASE'10)
- International Conference on Software Engineering (ICSE'10)

2009
- International Workshop on Specification and Verification of Component-Based Systems (SAVCBS'09)
- International Workshop on Modeling in Software Engineering (MiSE'09)
- International Workshop on Model-Checking Software (SPIN'09)
- International Conference on Requirements Engineering (RE'09)
- International Conference on Fundamental Approaches to Software Engineering (FASE'09)
- International Conference on Automated Software Engineering (ASE'09)

2008
- International Conference on Automated Software Engineering (ASE'08). Expert review board
- 8th ACM SIGPLAN-SIGSOFT Workshop on Program Analysis for Software Tools and Engineering (PASTE'08)
- ICSE'08 Workshop on Models in Software Engineering (MiSE'08)
- 46th International Conference on Objects, Models, Components, Patterns (TOOLS-EUROPE'08)
- 19th International Conference on Concurrency Theory (CONCUR'08)
- International Conference on Computer Science and Software Engineering (CASCON'08)

2007
- International Workshop on Automated Formal Methods (AFM'07)
- 12th International Workshop on Formal Methods for Industrial Critical Systems (FMICS'07)
- International Conference on Automated Software Engineering (ASE'07)
- International Conference on Verification, Model-Checking and Abstract Interpretation

(VMCAI'07)
- International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'07)
- International Conference on Computer Science and Software Engineering (CASCON'07)

2006
- International Conference on Automated Software Engineering (ASE'06)
- International Conference on Computer Science and Software Engineering (CASCON'06)
- IFIP International Conference on Theoretical Computer Science (TCS'06)
- IEEE Symposium on Requirements Engineering (RE'06)

2005
- International Conference on Fundamental Approaches to Software Engineering (FASE'05)
- 16th International Conference on Concurrency Theory (CONCUR'05)
- 1st International Workshop on Foundations of Software Engineering (FSEN'05)
- 10th International Workshop on Formal Methods for Industrial Critical Systems (FMICS'05)
- International Conference on Computer Science and Software Engineering (CASCON'05)
- IEEE Symposium on Requirements Engineering (RE'05)

2003
- 23rd International Conference on Distributed Computing Systems (ICDCS'03)
- International Conference on Automated Software Engineering (ASE'03)

2002
- International Workshop on Model-Checking Software (SPIN'02)

2001
- IEEE Symposium on Requirements Engineering (RE'01)
- International Workshop on Model-Checking Software (SPIN'01)
- IEEE Conference on Engineering Complex Computer Systems (ICECCS'01)

2000
- International Conference on Software Theory and Practice (ICS'00)
- 3rd SIGSOFT Workshop on Formal Methods in Software Practice (FMSP'00)

1999
- International Conference on Computer Science and Software Engineering (CASCON'99)

1998
- International Conference on Computer Science and Software Engineering (CASCON'98)

Organizing committees

2018
- **Co-Chair**, Dagstuhl Seminar 19191: "Software Evolution in Time and Space: Unifying Version and Variability Management".

2017
- **Co-Chair**, International Workshop on Modeling in Software Engineering (MiSE'17), Buenos-Aires, Argentina, May 2017.
- **Member**, SIGSOFT Outstanding Research Award Committee, 2017.

2015
- **Co-Chair**, International Workshop on Modeling in Software Engineering (MiSE'15), Firenze, Italy, May 2015.
- **Co-Chair, Doctoral Symposium**, International Conference on Model-Driven Engineering (MODELS'15), Ottawa, July 2015.

2013

- **Co-Chair**, International Workshop on Modeling in Software Engineering (MiSE'13), at ICSE'13, May 2013, San Fransisco, USA
- **Co-Chair, Doctoral Symposium**, International Conference on Foundations of Software Engineering (FSE'13), St. Petersburgh, Russia, August 2013
- **Co-Chair, Doctoral Symposium**, International Conference on Automated Software Engineering (ASE'13), Moutainview, CA, November 2013

2012
- **Co-Chair**, CASCON'12 Workshop on Research on Software Analytics, November 2012
- **Co-Chair**, CASCON'12 NECSIS Exemplar Workshop, November 2012
- **Co-Chair**, ECMFA'12 Workshop on Modeling and Cloud (CloudMDE'12), 2012
- **Co-Chair**, Annual NECSIS Workshop, June 2012.

2011
- **Co-Chair, Workshops**, International Conference on Foundations of Software Engineering (ESEC/FSE'11), Szeged, Hungary, September 2011

2010
- **Workshops Co-Chair**, International Conference on Computer Science and Software Engineering (CASCON'10)
- **Workshop Co-Chair**, CASCON 2011 Workshop "Accelerate service integration in your BPM/SOA applications", Markham, Ontario, November 2010.
- **Workshop Co-Chair**, ASE 2010 3rd International Workshop on Living with Inconsistency in Software Development (LWI'10), Antwerp, Belgium, September 2010.
- **Member**, Doctoral Symposium at International Conference on Automated Software Engineering (ASE'10), Antwerp, Belgium, September 2010.

2009
- **Member**, RE'09 Tools and Demos track, Atlanta, Georgia, August-September 2009.

2008
- **Co-Organizer**, CASCON'08 Workshop on Cybersecurity, Markham, Ontario, October 2008.
- **Member**, Workshops Committee, International Conference on Foundations of Software Engineering (FSE'08), Atlanta, Georgia, November 2008.
- **Member**, Program Committee of Formal Demonstrations Track, International Conference on Software Engineering (ICSE'08), Leipzig, Germany, May 2008.

2007
- **Co-Chair, Tutorials**, International Conference on Automated Software Engineering (ASE'07), November 2007.
- **Workshop Co-Chair**, ASE 2007 Workshop on Living with Incompleteness, (IWLU'07), Atlanta, Georgia, November 2007.
- **Co-Organizer**, Panel on Model Manipulation and Management Issues, ICSE 2007 Workshop on Modeling in Software Engineering, Minneapolis, MI, May 2007.
- **Co-Chair, Workshops and co-located events**, International Conference on Software Engineering (ICSE'07), Minneapolis, MI, May 2007.

2006
- **Workshop Co-Chair**, CASCON 2006 Workshop on Model Fusion, Toronto, October 2006.
- **Tools and Posters Chair**, Formal Methods (FM'06), Hamilton, Ontario, 2006.
- **Co-Organizer**, IBM Rational/ADTC University Day, Toronto, August 2006.
- **Workshop Co-Chair**, Workshop on Grand Challenges in Automated Software Engineering, Toronto, May 2006.
- **Member**, Program Committee of Emerging Results Track, International Conference on Software Engineering (ICSE'06), Shanghai, China, May 2006.

2005

- **Workshop Co-Chair**, CASCON 2005 Workshop on Cybersecurity, Toronto, October 2005.
- **Member, Doctoral Symposium Committee**, International Conference on Software Engineering (ICSE'05), St. Louis, Missouri, May 2005.

2004
- **Finance Chair**, 34th International IEEE Conference on Multi-Valued Logics (ISMVL'04), Toronto, June 2004.
- **Member**, Workshop Selection Committee, International Conference on Software Engineering (ICSE'04), Edinburgh, Scottland, May 2004.

2003
- **Workshop Chair**, CASCON 2003 Workshop on Specification-Based Testing, Toronto, November 2003.

2002
- **Member**, Workshop Selection Committee, International Conference on Requirements Engineering (RE/ICRE'02), Essen, Germany, September 2002.

2001
- **Workshop Co-Chair** (with S. Easterbrook), ICSE'01 workshop on Living with Inconsistency (IWLWI-2), Toronto, May 2001.
- **Local Arrangements Chair**, 9th International SPIN Workshop, Toronto, May 2001.
- **Publicity Chair**, IEEE International Conference on Requirements Engineering (RE'01), Toronto, June 2001.
- **Member, Doctoral Symposium Committee**, International Conference on Software Engineering (ICSE'01), Toronto, May 2001.

Grant selection committees
- **Panel member**, NSERC Discovery Grants, 2015-18.
- **Proposal review**, Austrian Science Fund (FWF), 2017-18 (3 proposals).
- **Proposal review**, Swedish Knowledge Foundation, 2018.
- **Proposal review**, Canadian Research Chair (Tier II), 2016.
- **Proposal review**, Industry Innovation Ontario (2 proposals), 2015.
- **Proposal review**, Swiss National Science Foundation, April 2015.
- **Chair Selection**, Ludwig-Maximilans-Universitt, University of Munich, May 2014.
- **Panel member**, US National Science Foundation proposal review, "SMALL:FM", April 2013.
- **Proposal review**, Vienna Research Group Leader, November 2011.
- **Proposal review**, KY Research Excellence Grants, April 2011.
- **Proposal review**, US-Israel Binational Science Foundation, February 2011.
- **Panel member**, NORTEL Undergraduate Scholarships, January 2011.
- **Panel Member**, US National Science Foundation proposal review, CAREER awards, October 2010.
- **Proposal review**, Netherlands Organization for Scientific Research (NWO), 2010.
- **Panel member**, MITACS Elevate program for Ontario Postdoctoral Fellows, February-March 2010.
- **Proposal review**, Israel Science Foundation (ISF), 2004, 2006, 2010, 2014, 2016, 2017, 2018.
- **Panel member**, US National Science Foundation proposal review "Expeditions in Computing", November 2009.
- **Panel member**, US National Science Foundation proposal review, CPA SG-B: Software Analysis and Testing, October 2005.
- **Proposal review**, NSERC Committee on Global Partnership Program (GPX), January 2005.
- **Panel Member**, NSERC Committee on Global Partnership Program (GPX), 2004 (May and September).
- **Proposal review**, Engineering and Physical Sciences Research Council, UK, 2006, 2008.
- **Panel member**, Communications & Information Technology Ontario (CITO) proposal review, Round 7.1, Fall 2004.

- **Panel member**, US National Science Foundation proposal review, January 2003.
- **Proposal review**, Canadian National Engineering Research Council (NSERC) (several each year, both Collaborative Research and Development and Discovery Grants)
- **Book reviews**, at least one per year.

Journal Refereeing (partial list)
- IT Professional
- Information Processing Letters
- IEEE Computer
- ACM Transactions on Programming Languages and Systems
- Journal of Software Testing, Verification and Reliability
- ACM Transactions on Software Engineering and Methodology
- Journal of Automated Software Engineering
- Journal on Software Tools for Technology Transfer
- IEEE Transactions on Computer Science Education
- Journal of Systems and Software
- Formal Methods in Software Design
- Journal on Multiprocessors and Microsystems
- IEEE Transactions on Software Engineering
- Formal Aspects of Computing
- IEEE Software
- Communications of ACM
- Journal of Automated Reasoning
- Journal of Software and System Modeling
- IEEE Computer
- Requirements Engineering Journal
- ACM Transactions on Computational Logic
- Transactions of the South African Institute of Electrical Engineers
- Journal of Theoretical Computer Science
- IEEE Transactions on Computers

Conference Review (partial list)
- FSE'15, iFM'13, CAV'11, Grace Hopper'08-'15 (Travel Grants), CAV'08, CONCUR'07, ICDCS'07, Grace Hopper'06, LICS'06, CAV'04, FSTTCS'04, FSE'04, VMCAI'03, CONCUR'03, EXPRESS'03, CASCON'01, CASCON'00, FM'99, CASCON'97.

Other
- **Member**, ACM SIGSOFT, IEEE Computer Society.
- **Member**, GRE Computer Science board, 2003-present.
- **Founding Member**, Ontario Software Certification Consortium, 2006-present.
- **Founding Member**, Southern Ontario Software Engineering (SOSE).
- **Member**, IFIP Working Group 2.9 (Requirements Engineering), 2007-present. **Observer**, 2001-2007.

## II. Academic History

*Research Interests*

My main interests are in applying formal methods to create high-quality software. In particular, I am interested in model-checking and theorem-proving, program analysis and verification, safety certification, requirements engineering, and all aspects of modeling and model management. My other interests include security, reasoning about web services, and issues related to women in technology.

*Research Awards*

2018-2020. Ontario Center of Excellence. "Methods and Models for Assurance Case Templates and Model-Based Support of the Safety Process at GM". PI: T. Maibaum (co-PIs M. Chechik and 2 others). My share: around $50,000 over 2 years.

2018-2021. NSERC CRD. "Safety Assurance at GM and Using Model Management to Support It". PI: M. Lawford (co-PIs M. Chechik and 2 others). My share: around $350,000 over 3 years.

2018-2021. NSERC CRD. "Detection and Impact Analyses of Feature Interactions". PI: J. Atlee (co-PIs M. Godfrey and M. Chechik). My share: around $200,000 over 3 years.

2017. MITACS ACCELERATE. "Standard Response Document Application" (for J. Beth). PI: M. Chechik. $30,000.

2017. MITACS ACCELERATE. "Privacy Enhanced Decentralized Identity System" (for O. Rahman). $30,000.

2017-2019. General Motors Grant. "Feature Analysis and Interaction Analysis". PI: J. Atlee (co-PIs M. Godfrey and M. Chechik). My share: around $130,000 over 3 years.

2017-2019. General Motors Grant. "Safety Assurance at GM and Using Model Management to Support It". PI: A. Wassyong (co-PIs M. Chechik and 2 others). My share: around $200,000 over 3 years.

2014-2016. Strategic Grant (STPGP). "The Upgradable Car: Safely Extensible Automotive Systems and Software". PI: K. Czarnecki. My share: around $75,000 over 3 years.

2015-2021. NSERC CREATE in Product-Line Engineering for Cyber-physical Systems". PI: K. Czarnecki. My share: $15,000 in first year, $30,000/year for the next 5 years.

2015-2021. NSERC Discovery Grant. "Abstraction and Automation for Reasoning about Complex Software". PI: M. Chechik. $50,000 / year for 6 years.

2011-2017. Ontario Research Fund. "Modeling for Complex Systems". PI: J. Atlee. My share: around $250,000 over 6 years.

2011-2016. NSERC Center of Excellence in "Modeling for Complex Systems" (NECSIS) PIs: T. Maibaum and J. Atlee. $5,000,000 over 5 years, multiple universities. My share: around $500,000 over 5 years, with $107,500 awarded for 2011, $175,600 for 2012, $198,700 for 2013, $259,000 for 2014 and $259,000 for 2015.

2010-2012. MITACS Elevate Industrial Postdoc for Rick Salay. Title: "Relationship-Centric Approach to Managing Automotive Models". $120,000 over 2 years ($60,000/year, with General Motors contributing $15,000/year). PI: M. Chechik.

2010-2015. NSERC Discovery Grant. Title: "Reasoning about Models of Software: Abstraction and Automation". $215,000 over 5 years ($43,000/year). PI: M. Chechik.

2010-2013. NSERC ACCELERATE Supplement. Title: "Reasoning about Models of Software: Abstraction and Automation". $120,000 over 3 years ($40,000/year). PI: M. Chechik.

2010. General Motors Research Award, Title: "Metamodel Analysis of GM Software Models", $1,000 US. PI: M. Chechik.

2009-2010. IBM Faculty Award, Title: "Towards Automating Integration Patterns", $20,000 US. Student: F. Tarshizi. PI: M. Chechik.

2009-2010. IBM CAS Faculty Award, Title: "Towards Automating Integration Patterns", $10,000. Student: F. Tarshizi. PI: M. Chechik.

2009. MITACS ACCELERATE award. Title: "Towards Automating Integration Patterns", $7,500.

Student: F. Tarshizi. PI: M. Chechik

2009. MITACS ACCELERATE award, Title: “Planning for Recovery from Webservice Failures”, $7,500. Student: J. Simmonds. PI: M. Chechik.

2008. MITACS ACCELERATE award, Title: “Automated Recovery from Webservice Failures”, $7,500. Student: J. Simmonds. PI: M. Chechik.

2008-2010. IBM Toronto Center for Advanced Studies, Title: “Runtime Monitoring of Web Service Conversations”, $27,500. Student: J. Simmonds. PI: M. Chechik.

2008. MITACS ACCELERATE award, Title: “Runtime Monitoring: Reasoning about Time, Liveness and Security”, $7,500. Student: J. Simmonds. PI: M. Chechik.

2007-2010. Ontario Center of Excellence (OCE), Title: ”Center of Excellence in Research on Adaptive Systems” (CERAS). UofT Share: $526,000 over three years. With 3 others. PI: S. Easterbrook.

2007-2009. Mathematics of Information Technology and Complex Systems (MITACS), Title: ”Detecting Malicious Activity in Networked Computer Systems”, $210,000 over two years. With 5 others. PI: P. Van Oorschoot.

2006. IBM Eclipse Innovation Grant, Title: ”Model Management with Model Interconnection Diagrams”. $22,000 US. With S. Easterbrook. PI: M. Chechik.

2005-2009. National Sciences and Engineering Research Council (NSERC) Collaborative Research Grant with IBM Toronto Center for Advanced Studies. Title: “Use of Model-Checking Technology to Facilitate Testing and Analysis of Complex State-Machine Models”. $235,000 over four years. PI: M. Chechik.

2005-2007. Mathematics of Information Technology and Complex Systems (MITACS) Seed Grant. Title: ”Model-Checking for Security”. $50,000 over two years. With D. Lie. PI: M. Chechik.

2005. National Sciences and Engineering Research Council (NSERC) Equipment Grant. Title: ”Equipment to Support Research in Software Verification”. $81,667. With S. Easterbrook and R. Hehner. PI: M. Chechik.

2005-2010. National Sciences and Engineering Research Council (NSERC) Discovery Grant. Title: ”Model-Checking Software”. $200,000 over five years ($40,000 / year). PI: M. Chechik.

2005-2007. IBM Toronto Center for Advanced Studies. Title: ”Runtime Verification of Statemachine Models”, $84,000 over three years. Student: J. Amir, followed by Y. Gan. PI: M. Chechik.

2004-2005. IBM Fellowship. ”Problems in Model-Checking”. $28,800. Student: A. Gurfinkel.

2003-2004. Mathematics of Information Technology and Complex Systems (MITACS) Seed Grant. Title: ”Mathematical Structures for Compositional Modeling of Reactive Software”. $49,000. With S. Easterbrook (PI).

2001. National Sciences and Engineering Research Council (NSERC) Equipment Grant. Title: ”Hardware for Software Engineering Lab”. $68,535. With 3 others. PI: M. Chechik.

2001-2003. Communications & Information Technology Ontario (CITO). Title: “Analyzing Disagreements Between Stakeholder Views during Requirements Analysis”. $84,000 over two years. With S. Easterbrook. PI: M. Chechik.

2001-2002. National Sciences and Engineering Research Council (NSERC) Matching Grant. Title: “Analyzing Disagreements Between Stakeholder Views during Requirements Analysis”. $21,000. With S. Easterbrook. PI: M. Chechik.

2001-2005. National Sciences and Engineering Research Council (NSERC) Discovery Grant. Title: ”Logic Engineering”. $112,000 over four years ($28,000 / year). PI: M. Chechik.

2000-2002. Communications & Information Technology Ontario (CITO). Title: "Formal Reasoning about Component-Based Systems". $100,000 over two years. With S. Easterbrook (PI).

2000-2003. IBM Toronto Center for Advanced Studies. Title: "Formal Specification of APIs for Visual Age C++". $42,000 over two years. Student: C. Truta.

1999-2000. Ontario-Quebec Projects of Exchange. Travel Grant. Title: "Model-Checking SDL". $9,100 over two years. PI: M. Chechik.

1999. IBM Center for Advanced Studies. Junior Fellowship for V. Cwir. $5,000. PI: M. Chechik.

1998-2000. Canadian Foundation for Innovation (CFI) New Opportunities Grant. Title: "Multimedia Networks: New Paradigms in Communication". $350,000. With 5 others. PI: G. Eleftheriades.

1998-2000. Ontario Research Global Challenge Fund, Matching Grant. Title: 'Multimedia Networks: New Paradigms in Communication". $375,000. With 5 others. PI: G. Eleftheriades.

1998-1999. Northern Telecom (NORTEL) Research Contract. Title: "Feasibility Study of Formal Methods in Telephony". $15,000. PI: M. Chechik.

1998-1999. University of Toronto Connaught New Staff Matching Grant. Title: "Usable Formal Methods". $30,000. Matched by Department of Computer Science, $15,000. PI: M. Chechik.

1997-2002. National Sciences and Engineering Research Council (NSERC) Annual Operating Grant (now called Discovery Grants). Title: "Formal Methods in Safety-Critical Systems". $92,400 over four years ($23,100 / year). PI: M. Chechik.

1996-1997. University of Toronto Connaught Startup Fund. Title: "Formal Methods in Safety-Critical Systems". $10,000. PI: M. Chechik.

**III. Scholarly and Professional Work**

| Career Publication Count | |
|---|---|
| Scholarly Books (authored) | 0 |
| Scholarly Books (edited) | 10 |
| Chapters in Books | 5 |
| Papers in refereed journals | 29 |
| Papers in refereed conferences | 110 |
| Major invited contributions | 1 |
| Other conference abstracts/posters/contributions | 82 |
| Other publications | 33 |

*Books edited*

[BE1] M. Chechik, M. Harman, I. Crnkovic (Eds.). *International Conference on Software Engineering, ICSE '18, Gothenberg, Sweden, May 2018*, ACM, 2018.

[BE2] S. Blazy, M. Chechik (Eds.). *Verified Software. Theories, Tools, and Experiments - 8th International Conference, VSTTE 2016, Toronto, ON, Canada, July 17-18, 2016, Revised Selected Papers*, Lecture Notes in Computer Science 9971, Springer 2016, ISBN 978-3-319-48868-4

[BE3] M. Chechik, J-F. Raskin (Eds.). *Proceedings of Tools and Algorithms for the Construction and Analysis of Systems - 22nd International Conference, TACAS 2016, Held as Part of the European Joint Conferences on Theory and Practice of Software, ETAPS 2016, Eindhoven, The Netherlands, April 2-8, 2016*, Lecture Notes in Computer Science 9636, Springer 2016, ISBN 978-3-662-49673-2

[BE4] J. Gray, M. Chechik, V. Kulkarni, R. Paige (Eds.). *7th IEEE/ACM International Workshop on Modeling in Software Engineering, MiSE 2015, Florence, Italy, May 16-17, 2015*, IEEE 2015, ISBN

978-1-4673-7055-4

[BE5] D. Kolovos, M. Chechik (Eds.). *Proceedings of the Doctoral Symposium at the 18th ACM/IEEE International Conference of Model-Driven Engineering Languages and Systems 2015 (MoDELS 2015), Ottawa, Canada, September 29, 2015.* CEUR Workshop Proceedings 1531, CEUR-WS.org 2015.

[BE6] I. Crnkovic, M. Chechik, P. Grnbacher (Eds.). *ACM/IEEE International Conference on Automated Software Engineering, ASE '14, Vasteras, Sweden - September 15 - 19, 2014*, ACM, 2014, ISBN 978-1-4503-3013-8

[BE7] J. Atlee, R. Baillargeon, M. Chechik, R. France, J. Gray, R. Paige, B. Rumpe (Eds.). *Proceedings of the 5th International Workshop on Modeling in Software Engineering, MiSE 2013, San Francisco, California, USA, May 18-19, 2013*, IEEE Computer Society 2013, ISBN 978-1-4673-6447-8

[BE8] M. Chechik, M. Wirsing (Eds.). *Proceedings of International Conference on Fundamental Approaches of Software Engineering (FASE'09)*, Lecture Notes in Computer Science, Vol. 5503, March 2009.

[BE9] M. Chechik, F. van Bruegel (Eds.). *Proceedings of 19th International Conference on Concurrency Theory (CONCUR'08)*, Lecture Notes in Computer Science, Vol. 5201, Springer, August 2008, 524 pages.

[BE10] M. Chechik, M. Vigdor (Eds.). *Proceedings of International Conference on Computer Science and Software Engineering (CASCON'08)*, IBM Press, October 2008.

*Chapters in books*

[B1] J. Simmonds, M. Chechik. "Runtime Monitoring of Webservice Conversation: A Tale of One CAS Project". Invited book chapter. In *CAS and CASCON: Honouring 25 Years of IBM Research and Innovation*, M. Litoiu, K. Lyons, H. Muller, J. Ng, eds., November 2015, pp. 97-101.

[B2] M. Chechik, J. Simmonds, S. Liaskos, S. Nejati, M. Sabetzadeh, R. Salay. "PWWM: A Personal Web Workflow Methodology". Invited book chapter. In *Personal Web*, M. Chignell, J. Cordy, J. Ng, Y. Yesha, eds., Lecture Notes in Computer Science Number 7855, pp. 11-48, 2013.

[B3] J. Rubin, M. Chechik. "A Survey of Feature Location Techniques". Invited book chapter. In *Domain Engineering, Product Lines, Languages and Conceptual Models*, I. Berger ed., pp. 29-58, 2013, Springer-Verlag.

[B4] J. Simmonds, S. Ben-David, M. Chechik. "Monitoring and Recovery of Web Service Applications". Book chapter in *The Smart Internet – Current Research and Future Applications*, J. Cordy, M. Chignell, J. Ng, eds. Lecture Notes in Computer Science Number 6400, pp. 250-288, November 2011, Springer.

[B5] J. Atlee, M. Chechik, J. Gannon. "Using Model Checking to Analyze Requirements and Designs", in *Advances in Computers*, Vol. 43, M. Zelkowitz, ed., pp. 141-178, Academic Press, 1996.

*Papers in journals*

[J1] S. Ben-David, M. Chechik, S. Uchitel. "Merging Partial Behavior Models with Different Vocabularies". 20 pages. Accepted to *J. of Information and Computation* pending major revisions, January 2015. Revisions made, 2018.

[J2] M. Famelis, R. Salay, A. DiSandro, M. Chechik. "Towards Modeling and Reasoning with Uncertainty". Journal version of ICSE'12 paper (invited), 34 pages. Accepted to *ACM Transactions on Software Engineering and Methodology* subject to major revisions. Revisions submitted in September 2014. Accepted pending additional revisions in February 2015. Revisions submitted in 2017.

[J3] D. Struber, J. Rubin, T. Arendt, M. Chechik, G. Taentzer, J. Ploger. "Variability-Based Model Transformation: Formal Foundation and Application". *Formal Aspects of Computing*, 30(1), pp. 133-162, 2018. Journal version of FASE'16 paper.

[J4] M. Famelis, M. Chechik. "Managing Design-Time Uncertainty". *Journal of Systems and Software (SoSyM)*, pp. 1-36, online since March 2017.

[J5] Y. Li, C. Zhu, J. Rubin, M. Chechik. "Semantic Slicing of Software Version Histories", to appear in *IEEE Transactions on Software Engineering (TSE)*, 44(2), pp. 182-201, 2017.

[J6] R. Salay, M. Chechik, M. Famelis. "A Methodology for Verifying Refinements of Partial Models", in *Journal of Object Technology*, volume 14, number 3, pp. 1-31, 2015.

[J7] J. Rubin, K. Czarnecki, M. Chechik. "Cloned Product Variants: From Ad-Hoc to Managed Software Product Lines". In *Software Tools for Technology Transfer (STTT)*, volume 17, number 5, pp. 627-646, 2015.

[J8] S. Uchitel, D. Alrajeh, S. Ben-David, V. Braberman, M. Chechik, G. de Caso, N. D'Ippolito, D. Fischbein, D. Garbervetsky, J. Kramer, A. Russo, G. Sibay. "Supporting Incremental Behavior Model Elaboration". *J. of Computer Science – Research and Development*, 28(4), pp. 279-293, 2013.

[J9] R. Salay, M. Chechik, J. Horkoff, A. Di Sandro. "Managing Requirements Uncertainty with Partial Models". *Requirements Engineering Journal*, Vol. 18, No. 1, pp. 107-128, 2013. Journal version of RE'12 paper (invited).

[J10] J. Simmonds, S. Ben-David, M. Chechik. "Monitoring and Recovery for Web Service Applications". In *Journal of Computing*, Special Issue on Models at Run Time, Vol. 95, No. 3, pp. 223-267, 2013.

[J11] M. Chechik, S. Nejati, M. Sabetzadeh. "A Relationship-Based Approach to Model Integration". *Journal of Innovations in Systems and Software Engineering*, Vol. 8, No. 1, pp. 3-18, March 2012.

[J12] A. Gurfinkel, M. Chechik. "Robust Vacuity for Branching Temporal Logic". Journal version of the FMCAD'04 paper. *ACM Transactions on Computational Logic*, Vol. 13, No. 1, January 2012, pp. 1-36.

[J13] G. Brunet, M. Chechik, D. Fischbein, N. D'Ippolito, S. Uchitel. "Weak Alphabet Merging of Partial Behaviour Models". *ACM Transactions on Software Engineering and Methodology*, Vol. 21, No. 2, Article 9, March 2012. 47 pp.

[J14] S. Nejati M. Sabetzadeh, M. Chechik, S. Easterbrook, P. Zave. "Matching and d Merging of Variant Feature Specifications". Journal version of the ICSE'07 paper. *IEEE Transactions on Software Engineering*, Vol. 38, No. 6, pp. 1355-1375, 2012.

[J15] O. Wei, A. Gurfinkel, M. Chechik. "On the Consistency, Expressiveness, and Precision of Partial Models". Journal version of the VMCAI'09 paper. *Journal of Information and Computation*, 209(1), pp. 20-47, 2011.

[J16] F. van Breugel, M. Chechik, 19th International Conference on Concurrency Theory: Selection of Best Papers. *Journal of Information and Computation*, 208(10), pp. 1091-1092, 2010.

[J17] J. Simmonds, J. Davies, A. Gurfinkel, M. Chechik. "Exploring Resolution Proofs to Speed Up LTL Vacuity Detection for BMC". Journal version of the FMCAD'07 paper. *Springer International Journal of Software Tools for Technology Transfer (STTT)*, Volume 12, Number 5, pp. 319-335, January 2010.

[J18] M. Chechik, S. Uchitel, M. Sassolas. "Exploring Inconsistencies between Modal Transition Systems". *J. of Software and System Modeling (SoSyM)*, Volume 10, Number 1, pp. 117-142, 2011.

[J19] J. Simmonds, Y. Gan, M. Chechik, S. Nejati, B. O'Farrell, E. Litani, J. Waterhouse. "Runtime Monitoring of Web Service Conversations". *IEEE Transactions on Service Computing*, 2(3), pages 223-244, 2009.

[J20] S. Uchitel, G. Brunet, M. Chechik. "Behavioural Model Synthesis from Properties and Scenarios". *IEEE Transactions on Software Engineering*, 35(3), pages 384-406, 2009.

[J21] M. Chechik, A. Gurfinkel. "A Framework for Counterexample Generation and Exploration", in *Springer International Journal of Software Tools for Technology Transfer (STTT)*, Vol. 9, No. 5-6, pp. 429-445, October 2007. Invited from International Conference on Fundamental Approaches to Software Engineering (FASE'05).

[J22] M. Chechik, A. Gurfinkel, B. Devereux, A. Lai, S. Easterbrook. "Symbolic Data-Structures for Multi-Valued Model-Checking", *Formal Methods for Software Design*, Volume 29, Number 3, pp. 295-344, 2006.

[J23] D. Paun, M. Chechik. "On Closure Under Stuttering", *Formal Aspects of Computing*, volume 14, pp. 342-368, 2003.

[J24] A. Gurfinkel, M. Chechik, B. Devereux. "Temporal Logic Query Checking: A Tool for Model Exploration", *IEEE Transactions on Software Engineering*, Vol. 29, No. 10, pp. 898-914, October 2003 (invited from FSE'02).

[J25] M. Chechik, B. Devereux, S. Easterbrook, A. Gurfinkel. "Multi-Valued Symbolic Model-Checking", *ACM Transactions on Software Engineering and Methodology*, Vol. 12, No. 4, October 2003, pages 1-38.

[J26] B. Devereux, M. Chechik. "Edge-Shifted Decision Diagrams for Multiple-Valued Logic", *International Journal of Multi-Valued Logic and Soft Computing*, vol. 9, no. 1, pp. 59-86, Old City Publishing Inc., 2003.

[J27] M. Chechik, A. Wong. "Formal Modeling in a Commercial Setting: A Case Study", *Journal of Systems and Software*, vol. 60, no. 1, pp. 57-80, January 2002.

[J28] M. Chechik, W. Ding. "Lightweight Reasoning About Program Correctness", *Information Systems Frontiers*, vol. 4, no. 4, 30 pages, December 2002 (extended version of CASCON'01 paper).

[J29] M. Chechik, J. Gannon. "Automatic Analysis of Consistency Between Requirements and Designs", *IEEE Transactions on Software Engineering*, vol. 27, no. 7, pp. 651-672, July 2001.

*Papers in conference and highly competitive workshop proceedings*

In my field of Computer Science, conferences are highly selective archival publication venues, with three-four program committee members making selections based on full (15-20 page) papers. Verification venues typically have smaller number but higher-quality submissions, resulting in higher acceptance rates than software engineering venues.

[C1] Y. Li, C. Zhu, J. Rubin, M. Chechik. "CSCLICERCLOUD: A Web-Based Semantic History Slicing Framework". In *Proceedings of International Conference on Software Engineering (ICSE'18) Formal Demo Track*, pp. 1-4, 2018. To appear.

[C2] C. Menghi, P. Spoletini, M. Chechik and C. Ghezzi. "Supporting Verification-Driven Incremental Distributed Design of Components". In *Proceedings of International Conference on Formal Aspects of Software Engineering (FASE'18)*, pp. 1-17, 2018. To appear.

[C3] M. Chechik, I. Stavropoulou, C. Disenfeld and J. Rubin. "FPH: Efficient Non-Commutativity Analysis of Feature-Based Systems". In *Proceedings of International Conference on Formal Aspects in Software Engineering (FASE'18)*, pp. 1-16, 2018. To appear.

[C4] Y. Gan, M. Chechik, S. Nejati, J. Bennett, B. O'Farrell, J. Waterhouse. "Runtime Monitoring of Web Service Conversations". In *Proceedings of International Conference on Computer Science and Software Engineering (CASCON'17)*, pp. 2-17, 2017. **CASCON'07 10-year Most Influential Paper Award.**

[C5] C. Chung, A. Kadan, Y. Yang, A. Matsuoka, J. Rubin, M. Chechik. "The Impact of Visual Load on Performance in a Human-Computation Game". In *Proceedings of International Conference on the Foundations of Digital Games (FDG'17)*, pp. 51:1-51:4, 2017.

[C6] M. Famelis, J. Rubin, K. Czarnecki, R. Salay, M. Chechik. "Software Product Lines with Design Choices: Reasoning about Variability and Design Uncertainty". In *Proceedings of International Conference on Model-Driven Engineering (MODELS'17)*, pp. 93-100, 2017.

[C7] G. Taentzer, R. Salay, D. Strber, M. Chechik. "Transformations of Software Product Lines: A Generalizing Framework Based on Category Theory". In *Proceedings of International Conference on Model-Driven Engineering (MODELS'17)*, pp. 101-111, 2017.

[C8] A. Grubb, M. Chechik. "Modeling and Reasoning with Changing Intentions: An Experiment". In *Proceedings of International Conference on Requiremengs Engineering (RE'17)*, pp. 164-173, 2017.

[C9] S. Kokaly, R. Salay, M. Chechik, M. Lawford, T. Maibaum. "Safety Case Impact Assessment in Automotive Software Systems: An Improved Model-Based Approach". In *Proceedings of International Conference on Computer Safety, Reliability, and Security (SAFECOMP'17)*, pp. 69-85, 2017.

[C10] Y. Li, C. Zhu, J. Rubin, M. Chechik. "FHistorian: Locating Features in Version Histories". In *Proceedings of International Conference on Software Product Lines, Volume A (SPLC'17)*, pp. 49-58, 2017.

[C11] D. Struber, J. Rubin, T. Arendt, M. Chechik, G. Taentzer, J. Plger. "RuleMerger: Automatic Construction of Variability-Based Model Transformation Rules". In *Proceedings of Software Engineering'17*, 2017, pp.135-136

[C12] C. Zhu, Y. Li, J. Rubin, M. Chechik. "A Dataset for Dynamic Discovery of Semantic Changes in Version Controlled Software Histories". In *Proceedings of International Conference on Mining Software Repositories (MSR'17)*, pp. 523-526, 2017.

[C13] M. Chechik, M. Famelis, R. Salay, D. Struber. "Perspectives of Model Transformation Reuse". In *Proceedings of International Conference on Integrated Formal Methods (iFM'16)*, pp. 28-44, 2016.

[C14] R. Salay, S. Zschaler, M. Chechik. "Correct Reuse of Transformations is Hard to Guarantee". In *Proceedings of International Conference on Model Transformations*, pp. 107-122, 2016.

[C15] D. Strber, J. Rubin, T. Arendt, M. Chechik, G. Taentzer, J. Plger. "RuleMerger: Automatic Construction of Variability-Based Model Transformation Rules". In *Proceedings of International Conference on Formal Aspects in Software Engineering (FASE'16)*, pp. 122-140, 2016. 27% acceptance rate. **Nominated for EASST award.**

[C16] S. Ben-David, M. Chechik, S. Uchitel. "Observational Refinement and Merge for Disjunctive MTSs". *Proceedings of International Conference on Automated Technology for Verification and Analysis (ATVA'16)*, LNCS Vol. 9938, pp. 287-303, 2016.

[C17] Y. Li, C. Zhu, J. Rubin, M. Chechik. "Precise Semantic History Slicing through Dynamic Delta Refinement". In *Proceedings of International Conference on Automated Sofware Engineering (ASE'16)*, pp. 495-506, 2016. 19% acceptance rate.

[C18] S. Kokaly, R. Salay, V. Cassano, T. Maibaum, M. Chechik. "A model management approach for assurance case reuse due to system evolution". In *Proceedings of International Conference on Model-Driven Engineering (MoDELS'16)*, pp. 196-206, 2016. 23.7% acceptance rate.

[C19] A. M. Grubb, M. Chechik. "Looking into the Crystal Ball: Requirements Evolution over Time". In *Proceedings of International Conference on Requirements Engineering (RE'16)*, pp. 86-95, 2016. 27.5% acceptance rate.

[C20] M. Chechik. "Modeling and Reasoning about Software Systems Containing Uncertainty and Variability". In *Proceedings of International Symposium on Theoretical Aspects of Software Engineering (TASE'15)*, September 2015. Invited paper.

[C21] Y. Li, J. Rubin, M. Chechik. "Semantic Slicing of Software Version Histories". In *Proceedings of the International Conference on Automated Software Engineering (ASE'15)*, pp. 686-696, 2015. Acceptance rate 20%. **Distinguished Paper Award.**

[C22] Th. Berger, D. Lettner, J. Rubin, P. Grnbacher, A. Silva, M. Becker, M. Chechik, K. Czarnecki. "What is a Feature?: A Qualitative Study of Features in Industrial Software Product Lines". In *Proceedings of the International Conference on Software Product Lines (SPLC'15)*, pp. 16-25, 2015.

[C23] R. Salay, S. Kokaly, A. Di Sandro, M. Chechik. "Enriching Megamodel Management with Collection-Based Operators". In *Proceedings of International Conference on Model-Driven Engineering (MODELS'15)*, pp. 236-245, 2015. 26% acceptance rate.

[C24] R. Salay, M. Chechik. "A Generalized Formal Framework for Partial Modeling". In *Proceedings of International Conference on Formal Aspects in Software Engineering (FASE'15)*, pp. 133-148, April 2015. 26% acceptance rate.

[C25] D. Struber, J. Rubin, M. Chechik, G. Taentzer. "A Variability-Based Approach to Reusable and Efficient Model Transformations". In *Proceedings of International Conference on Formal Aspects in Software Engineering (FASE'15)*, pp. 283-298, April 15. 26% acceptance rate.

[C26] M. Famelis, L. Lucio, G. Selim, A. Di Sandro, R. Salay, M. Chechik, J. Cordy, J. Dingel, H. Vangheluwe, Ramesh S. "Migrating Automotive Product Lines: a Case Study". In *Proceedings of International Conference on Model Transformation (ICMT'15)*, pp. 82-97, July 2015. **Best Paper Award.**

[C27] M. Famelis, N. Ben-David, A. Di Sandro, R. Salay, M. Chechik. "MuMMINT: an IDE for Model Uncertainty". In *Proceedings of International Conference on Softwre Engineering (ICSE'15), Formal Demos Track*,pp. 697-700, May 2015.

[C28] J. Horkoff, R. Salay, M. Chechik, A. DiSandro. "Supporting Early Decision-Making in the Presence of Uncertainty". In *Proceedings of International Conference on Requirements Engineering (RE'14)*, September 2014. Acceptance rate 27%.

[C29] T. Karsten, M. Chechik. "Trace Reduction and Pattern Analysis to Assist Debugging in Model-Based Testing". In *Proceedings of the 5th International Workshop on Program Debugging (IWPD'14), run at ISSRE'14*, 2014.

[C30] T. Karsten, M. Chechik. "A Comparison of Three Black-Box Optimization Approaches for Model-Based Testing". In *Proceedings of the Federated Conference on Computer Science and Information Systems (FedCSIS)*, 2014.

[C31] M. Chechik. "Explicating and Reasoning with Model Uncertainty". In *Proceedings of 10th European Conference on Modelling Foundations and Applications (ECMFA'14)*, pp. 14-15, July 2014. Invited paper.

[C32] D. Strüber, J. Rubin, G. Taentzer, M. Chechik. "Splitting Models Using Information Retrieval and Model Crawling Techniques". In *Proceedings of Fundamental Approaches to Software Engineering (FASE'14)*, pp. 47-62, April 2014. Acceptance rate 23%.

[C33] R. Salay, M. Famelis, J. Rubin, A. Di Sandro, M. Chechik. "Lifting Model Transformations to Product Lines". To appear in *Proceedings of International Conference on Software Engineering (ICSE'14)*, pp. 117-128, June 2014. Acceptance rate 20%.

[C34] Y. Li, A. Albarghouthi, Z. Kincaid, A. Gurfinkel, M. Chechik. "Symbolic Optimization with SMT Solvers". In *Proceedings of 41st ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL'14)*, pp. 607-618, January 2014.

[C35] Y Li, T. Tan, M. Chechik. "Management of Time Requirements in Component-based Systems". In *Proceedings of International Conference on Formal Methods (FM'14)*, pp. 399-415, May 2014. Acceptance rate 28%.

[C36] J. Rubin, M. Chechik. "N-Way Model Merging". In *Proceedings of 21st ACM SIGSOFT Symposium on the Foundations of Software Engineering and the 14rth European Software Engineering Conference (ESEC/FSE'13)*, pp. 301-311, August 2013. 20% acceptance rate.

[C37] S. Ben-David, M. Chechik, S. Uchitel. "Merging Partial Behavior Models with Different Vocabularies". In *Proceedings of International Conference on Concurrency Theory (CONCUR'13)*, pp. 91-105, August 2013.

[C38] M. Famelis, R. Salay, A. Di Sandro, M. Chechik. "Transformation of Models Containing Uncertainty". In *Proceedings of International Conference on Model-Driven Engineering (MODELS'13)*, pp. 673-689, October 2013.

[C39] J. Rubin, K. Czarnecki, M. Chechik. "Managing Cloned Variants: A Framework and Experience". In *Proceedings of International Software Product Line Confernece (SPLC'13)*, pp. 101-110, August 2013. **Best paper award**.

[C40] J. Rubin, M. Chechik. "A Framework for Managing Cloned Product Variants". In *Proceedings of NIER Track at International Conference on Software Engineering (ICSE'13)*, May 2013, 6 pages. 22% acceptance rate.

[C41] R. Salay, J. Gorzny, M. Chechik. "Change Propagation Due to Uncertainty Change". In *Proceedings of International Conference on Fundamental Approaches to Software Engineering (FASE'13)*, Lecture Notes in Computer Science, Volume 7793, pp. 21-36, March 2013. 23% acceptance rate.

[C42] J. Rubin, M. Chechik. "Quality of Merge-Refactoring for Product Lines". In *Proceedings of International Conference on Fundamental Approaches to Software Engineering (FASE'13)*, Lecture Notes in Computer Science, Volume 7793, pp. 83-98, March 2013. 23% acceptance rate.

[C43] A. Albarghouthi, A. Gurfinkel, Y. Li, S. Chaki, M. Chechik. "UFO: Verification with Interpolants and Abstract Interpretation". In *Proceedings of TACAS'13 Software Verification Competition (SV-COMP'13)*, Lecture Notes in Computer Science, Volume 7795, pp. 637-640, March 2013. **Winner of 4 gold medals and 1 bronze medal.**

[C44] A. Albarghouthi, A. Gurfinkel, M. Chechik. "Craig Interpretation". In *Proceedings of International Static Analysis Symposium (SAS'12)*, Lecture Notes in Computer Science, Volume 7460, pp. 300-316, September 2012. Acceptance rate 40%.

[C45] R. Salay, M. Chechik, J. Horkoff. "Managing Requirements Uncertainty with Partial Models". In *Proceedings of 20th IEEE International Requirements Engineering Conference (RE'12)*, pp. 1-10, September 2012. Acceptance rate 24%. **Best paper award.**

[C46] J. Rubin, M. Chechik. Locating Distinguishing Features Using Diff Sets. In *Proceedings of International Conference on Automated Software Engineering (ASE'12)*, September 2012, pp. 242-245 (short paper).

[C47] J. Rubin, A. Kirshin, G. Boetterweck, M. Chechik. "Managing Forked Product Variants". In *Proceedings of International Software Product Line Conference (SPLC'12)*, September 2012, pp. 156-160 (short paper).

[C48] A. Albarghouthi, Y. Li, A. Gurfinkel, M. Chechik. "UFO: A Framework for Abstraction- and Interpolation-Based Software Verification". In *Proceedings of International Conference on Computer-Aided Verification (CAV'12)*, Lecture Notes in Computer Science, Volume 7358, July 2012, pp. 672-678 (tool paper). Acceptance rate 31%.

[C49] M. Famelis, R. Salay, M. Chechik. "Partial Models: Towards Modeling and Reasoning with Uncertainty", in *Proceedings of International Conference on Software Engineering (ICSE'12)*, pp. 573-583, June 2012, 11 pages. Acceptance rate 21%. **SIGSOFT Distinguished paper award.**

[C50] R. Salay, M. Famelis, M. Chechik. "Language Independent Refinement using Partial Modeling", in *Proceedings of Fundamental Approaches to Software Engineering (FASE'12)*, Lecture Notes in Computer Science, Volume 7212, pages 224-239, March 2012. Springer. Acceptance rate 24.6%.

[C51] J. Rubin, M. Chechik. "Combining Related Products into Product Lines", in *Proceedings of Fundamental Approaches to Software Engineering (FASE'12)*, Lecture Notes in Computer Science, Volume 7212, pages 285-300, March 2012. Springer. Acceptance rate 24.6%.

[C52] A. Albarghouthi, A. Gurfinkel, M. Chechik. "From Under-approximations to Over-approximations and Back", in *Proceedings of International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'12)*, Lecture Notes in Computer Science, Volume 7214, pp. 157-173, March 2012, Springer. 24% acceptance rate.

[C53] A. Albarghouthi, A. Gurfinkel, M. Chechik. "Whale: An Interpolation-Based Algorithm for Inter-procedural Verification". In *Proceedings of 13th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI'12)*, Lecture Notes in Computer Science, Volume 7148, pp. 39-55, January 2012, Springer. 36% acceptance rate.

[C54] S. Ben-David, M. Chechik, A. Gurfinkel, S. Uchitel. "CSSL: A Logic for Specifying Conditional Scenarios". In *Proceedings of 19th ACM SIGSOFT Symposium on the Foundations of Software Engineering and 13th European Software Engineering Conference (ESEC/FSE)*, pp. 37-47, September 2011. 16% acceptance rate.

[C55] J. Simmonds, S. Ben-David, M. Chechik. "Guided Recovery for Web Service Applications". In *Proceedings of Foundations of Software Engineering (FSE'10)*, pp. 247-256, November 2010. 20% acceptance rate.

[C56] A. Albarghouthi, A. Gurfinkel, O. Wei, M. Chechik. "Abstract Analysis of Symbolic Executions". In *Proceedings of International Conference on Computer-Aided Verification*, Lecture Notes in Computer Science, Volume 6174, pages 495-510, July 2010. Springer. 38% acceptance rate.

[C57] F. Torshizi, J. Ostroff, R. Paige, M. Chechik. "The SCOOP Concurrency Model in Java-like Languages", in *Proceedings of International Conference on Process Algebras (CPA'09)*. November 2009, 22 pages.

[C58] O. Wei, A. Gurfinkel, M. Chechik. "Mixed Transition Systems Revisited". 18 pages. In *Proceedings of International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI'09)*, Lecture Notes in Computer Science, Volume 5403, pages 349-365, January 2009.

[C59] S. Nejati, M. Sabetzadeh, M. Chechik, S. Uchitel, P. Zave. "Towards Compositional Synthesis of Evolving Systems". In *Proceedings of International Conference on Foundations on Software Engineering (FSE'08)*, November 2008, pages 285-296. 20% acceptance rate.

[C60] A. Gurfinkel, O. Wei, M. Chechik. "Model Checking Reachability and Non-Termination of Recursive Programs", 19 pages. In *Proceedings of 6th International Symposium on Automated Technology for Verification and Analysis (ATVA'08)*, Lecture Notes in Computer Science, Volume 5311, October 2008, pages 95-110. 32% acceptance rate.

[C61] T. Hart, K. Ku, A. Gurfinkel, M. Chechik, D. Lie. "Augmenting Counterexample-Guided Abstraction Refinement with Proof Templates". In *Proceedings of International Conference on Automated Software Engineering (ASE'08)*, September 2008, pages 387-390.

[C62] J. Simmonds, S. Nejati, M. Chechik. "Property Patterns for Runtime Monitoring of Web Service Conversations". In *Proceedings of the International Workshop on Runtime Verification (RV'08) (associated with ETAPS'08)*, Lecture Notes in Computer Science, Volume 5289, pages 137-157, March 2008. 33% acceptance rate.

[C63] M. Chechik, A. Gurfinkel. "Model Checking Software using Precise Abstractions", in *Verified Software: Theories, Tools, Experiments*, Lecture Notes in Computer Science, Volume 4171, pages 347-353, June 2008.

[C64] M. Sabetzadeh, S. Nejati, S. Easterbrook, M. Chechik. "Global Consistency Checking of Distributed Models with TreMer+". In *Proceedings of International Conference on Software Engineering (ICSE'08)*, May 2008, pages 815-818, ACM Press. 14% acceptance rate.

[C65] K. Ku, T. Hart, M. Chechik, D. Lie. "A Buffer Overflow Benchmark for Software Model Checkers". In *Proceedings of Automated Software Engineering (ASE'07)*, November 2007, 4 pages. 12% acceptance rate.

[C66] J. Simmonds, J. Davies, A. Gurfinkel, M. Chechik. "Exploiting Resolution Proofs to Speed up LTL Vacuity Detection for BMC". In *Proceedings of Formal Methods for Computer-Aided Design (FMCAD'07)*, November 2007, pp. 3-12. 34% acceptance rate.

[C67] Y. Gan, S. Nejati, M. Chechik, J. Bennett, B. O'Farrell, J. Waterhouse. "Runtime Monitoring of Web Service Compositions". In *Proceedings of CASCON'07*, November 2007, pp. 42-57. **Best Student Paper Award.** 27% acceptance rate.

[C68] M. Sabetzadeh, S. Nejati, S. Liaskos, S. Easterbrook, M. Chechik. "Consistency Checking of Conceptual Models via Model Merging", in *Proceedings of International Requirements Engineering Conference (RE'07)*, October 2007, 15 pages. 12% acceptance rate.

[C69] M. Gheorghiu, A. Gurfinkel, M. Chechik. "Finding State Solutions to Temporal Queries", in *Proceedings of Integrated Formal Methods (IFM'07)*, LNCS 4591, pp. 273-292, July 2007. 37% acceptance rate.

[C70] S. Uchitel, M. Chechik, G. Brunet. "Behaviour Model Synthesis from Properties and Scenarios". In *Proceedings of International Conference on Software Engineering (ICSE'07)*, May 2007. 10 pages. 15% acceptance rate.

[C71] S. Nejati, M. Sabetzadeh, S. Easterbrook, M. Chechik, P. Zave. "Matching and Merging of Statecharts Specifications". In *Proceedings of International Conference on Software Engineering (ICSE'07)*, pp. 54-64, May 2007. IEEE Computer Society. 15% acceptance rate. **SIGSOFT Distinguished paper award.**

[C72] M. Chechik, M. Gheorghiu, A. Gurfinkel. "Finding Environmental Guarantees", in *Proceedings of Fundamental Approaches to Software Engineering (FASE'07)*, LNCS 4422, 15 pages, March-April 2007. Springer. 26% acceptance rate.

[C73] S. Nejati, M. Gheorghiu, M. Chechik, "Thorough Checking Revisited", in *Proceedings of Formal Methods in Computer Aided Design (FMCAD'06)*, pp. 106-116, November 2006. IEEE Computer Society. 23% acceptance rate.

[C74] G. Brunet, M. Chechik, S. Uchitel. "Properties of Behavioural Model Merging", in *Proceedings of Formal Methods (FM'06)*, LNCS 4085, pp. 98-114, August 2006. Springer. 23% acceptance rate.

[C75] A. Gurfinkel, O. Wei, M. Chechik. "Yasm: A Software Model-Checker for Verification and Refutation", in *Proceedings of 18th International Conference on Computer-Aided Verification (CAV'06)*, LNCS 4144, pp. 170-174. August 2006. Springer. 29% acceptance rate.

[C76] A. Gurfinkel, M. Chechik. "Why Waste a Perfectly Good Abstraction?", in *Proceedings of International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'06)*, LNCS 3920, pp. 212-226, March 2006. Springer. 25% acceptance rate.

[C77] B. Devereux, M. Chechik. "Automated Support for Building Behavioural Models of Event-Driven Systems", in *Proceedings of Fundamental Approaches to Software Engineering (FASE'06)*, LNCS 3922, pp. 122-138, March 2006. Springer. 17% acceptance rate.

[C78] A. Gurfinkel, O. Wei, M. Chechik. "Systematic Construction of Abstractions for Model-Checking", in *Proceedings of International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI'06)*, LNCS 3855, pp. 381-397, January 2006. Springer.

[C79] S. Nejati, M. Chechik. "Let's Agree to Disagree", in *Proceedings of International Conference on Automated Software Engineering (ASE'05)*, November 2005, pp. 287-290. ACM Press. 10% acceptance rate.

[C80] A. Gurfinkel, M. Chechik. "How Thorough is Thorough Enough?", in *Proceedings of 13th Advanced Research Working Conference on Correct Hardware Design and Verification Methods (CHARME'05)*, LNCS 3725, September 2005, pp. 65-80, Springer. 26% acceptance rate.

[C81] O. Wei, A. Gurfinkel, M. Chechik. "Identification and Counter Abstraction for Full Virtual Symmetry", in *Proceedings of 13th Advanced Research Working Conference on Correct Hardware Design and Verification Methods (CHARME'05)*, LNCS 3725, September 2005, pp. 285-300, Springer. 26% acceptance rate.

[C82] S. Nejati, A. Gurfinkel, M. Chechik. "Stuttering Abstraction for Model Checking", in *Proceedings of 3rd IEEE International Conference on Software Engineering and Formal Methods (SEFM'05)*, September 2005, pp. 311-320, IEEE Computer Society. 33% acceptance rate.

[C83] M. Chechik, A. Gurfinkel. "A Framework for Counterexample Generation and Exploration", in *Proceedings of Fundamental Approaches to Software Engineering (FASE'05)*, LNCS 3442, pp. 217-233, April 2005, Springer. 22% acceptance rate.

[C84] A. Gurfinkel, M. Chechik. "Extending Extended Vacuity", in *Proceedings of Formal Methods in Computer-Aided Design (FMCAD'04)*, LNCS 3312, November 2004, pp. 306-321, Springer. 40% acceptance rate.

[C85] S. Uchitel, M. Chechik. "Merging Partial Behavioural Models", in *Proceedings of SIGSOFT Conference on Foundations of Software Engineering (FSE'04)*, November 2004, pp. 43-52, ACM Press. 15% acceptance rate.

[C86] A. Gurfinkel, M. Chechik. "How Vacuous is Vacuous?", in *Proceedings of International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'04)*, LNCS 2988, March 2004, pp. 451-466, Springer. 26% acceptance rate.

[C87] A. Gurfinkel, M. Chechik. "Counterexamples for Multi-Valued Model-Checking", in *Proceedings of Formal Methods Europe (FME'03)*, LNCS 2805, September 2003, pp. 503-521, Springer. 31% acceptance rate.

[C88] A. Gurfinkel, M. Chechik. "Multi-Valued Model-Checking via Reduction to Classical Model-Checking", in *Proceedings of 14th International Conference on Concurrency Theory (CONCUR'03)*, LNCS 2761, September 2003, pp. 263-277, Springer. 27% acceptance rate.

[C89] M. Chechik, W. MacCaull. "CTL Model-Checking over Logics with Non-Classical Negation", in *Proceedings of 33rd International IEEE Symposium on Multi-Valued Logics (ISMVL'03)*, May 2003, pp. 293-300, IEEE Computer Society Press.

[C90] M. Chechik, A. Gurfinkel. "Temporal Logic Query Checking with TLQSolver", in *Proceedings of 15th International Conference on Computer-Aided Verification (CAV'03)*, LNCS 2725, pp. 210-214, July 2003, Springer. 33% acceptance rate.

[C91] S. Easterbrook, M. Chechik, B. Devereux, A. Gurfinkel, A. Lai, A. Tefliovich, V. Petrovykh, C. Thompson-Welsh. "$\chi$Chek: A Model-Checker for Multi-Valued Reasoning", in *Proceedings of International Conference on Software Engineering (ICSE'03)*, May 2003, 4 pages, ACM Press. 13% acceptance rate.

[C92] A. Gurfinkel, M. Chechik. "Proof-like Counter-Examples", in *Proceedings of International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'03)*, LNCS 2619, pp. 160-175, April 2003, Springer. 27% acceptance rate.

[C93] A. Gurfinkel, B. Devereux, M. Chechik. "Model Exploration with Temporal Logic Query Checking", in *Proceedings of SIGSOFT Conference on Foundations of Software Engineering (FSE'02)*, November 2002, pp. 139-148, ACM Press. 13% acceptance rate.

[C94] M. Chechik, B. Devereux, A. Gurfinkel, "$\chi$Chek: A Multi-Valued Model-Checker", in *Proceedings of 14th International Conference on Computer-Aided Verification (CAV'02)*, July 2002, pp. 505-509, LNCS 2404, Springer. 31% acceptance rate.

[C95] M. Chechik, W. Ding. "Lightweight Reasoning About Program Correctness", in *Proceedings of International Conference on Computer Science and Software Engineering (CASCON'01)*, November 2001, pp. 127-140.

[C96] M. Chechik, B. Devereux, S. Easterbrook, A. Lai, V. Petrovykh. "Efficient Multiple-Valued Model-Checking Using Lattice Representations", in *Proceedings of 12th International Conference on Concurrency Theory (CONCUR'01)*, August 2001, pages 451-465, LNCS 2154, Springer. 41% acceptance rate.

[C97] S. Easterbrook, M. Chechik. "A Framework For Multi-Valued Reasoning Over Inconsistent Viewpoints", in *Proceedings of International Conference on Software Engineering (ICSE'01)*, May 2001, pp. 411-420, IEEE Computer Society Press. 18% acceptance rate.

[C98] M. Chechik, S. Easterbrook, B. Devereux. "Model-Checking Quasi-Boolean Logics", in *Proceedings of IEEE Symposium on Multi-Valued Logics*, May 2001, pp. 187-192, IEEE Computer Society Press.

[C99] M. Chechik, S. Easterbrook, V. Petrovykh. "Model-Checking Over Multi-Valued Logics", in *Proceedings of Formal Methods Europe (FME'01)*, March 2001, pp. 72-98, LNCS 2021, Springer. 44% acceptance rate.

[C100] M. Chechik, B. Devereux, S. Easterbrook. "Implementing a Multi-Valued Symbolic Model-Checker", in *Proceedings of International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'01)*, April 2001, pp. 404-419, LNCS 2031, Springer. 29% acceptance rate.

[C101] M. Chechik, B. Devereux, A. Gurfinkel. "Model-Checking Infinite State-Space Systems with Fine-Grained Abstractions Using SPIN", in *Proceedings of the 8th SPIN Workshop on Model-Checking Software Systems*, LNCS 2057, May 2001, pp. 16-36, Springer.

[C102] M. Chechik, H. Wang. "Feasibility of Bisimulation Analysis of Protocols Expressed in SDL: A Case Study", in *Proceedings of International Conference on Computer Scianeince and Software Engineering (CASCON'00)*, November 2000, 13 pages. 36% acceptance rate.

[C103] M. Chechik, D. Paun. "Events in Property Patterns", in *Proceedings of 6th International SPIN Workshop*, September 1999, LNCS 1680, pp. 154-167, Springer.

[C104] A. Wong, M. Chechik. "Formal Modeling in a Commercial Setting: A Case Study", in *Proceedings of World Congress in Formal Methods (FM'99)*, September 1999, LNCS 1708, pp. 590-607, Springer. 36% acceptance rate.

[C105] D. Paun, M. Chechik. "Events in Linear-Time Properties", in *Proceedings of IEEE 4th International Symposium on Requirements Engineering (RE'99)*, June 1999, pp. 123-132, IEEE Computer Society Press. 24% acceptance rate.

[C106] M. Chechik. "SCR$^3$: Towards Usability of Formal Methods", in *Proceedings of International Conference on Computer Science and Software Engineering (CASCON'98)*, pp. 177-191, November 1998.

[C107] D. Paun, M. Chechik, B. Biechele. "Production Cell Revisited", in *Proceedings of 4th International SPIN Workshop*, pp. 181-194, November 1998.

[C108] M. Chechik, J. Gannon. "Verification of Consistency Between Concurrent Program Designs and Their Requirements", in *Proceedings of 11th Annual IEEE Conference on Computer Assurance*, pp. 103-116, June 1996, IEEE Computer Society Press.

[C109] M. Chechik, J. Gannon. "Automatic Analysis of Consistency Between Implementations and Requirements: A Case Study", in *Proceedings of 10th Annual IEEE Conference on Computer Assurance*, pp. 123-132, June 1995, IEEE Computer Society Press.

[C110] M. Chechik, J. Gannon. "Automatic Verification of Requirements Implementation", in *Proceedings of the International Symposium on Software Testing and Analysis*, pp. 1-12, August 1994, ACM Press.

*Selected Other Contributions*

Workshop papers: full-length and position

[O1] A. M. Grubb, G. Song, M. Chechik. "GrowingLeaf: Supporting Requirements Evolution over Time". In *Proceedings of RE'16 International iStar Workshop (iStar'16)*, pp. 31-36, August 2016.

[O2] R. Salay, S. Kokaly, M. Chechik, T. Maibaum. "Heterogeneous Megamodel Slicing for Model Evolution". In *Proceedings of MODELS'16 Workshop on Model Evolution (ME'16)*, pp. 50-59, 2016.

[O3] S. Kokaly, R. Salay, M. Sabetzadeh, M. Chechik, T. Maibaum. "Model Management for Regulatory Compliance: A Position Paper". In *Proceedings of ICSE'16 International Workshop on Modeling In Software Engineering (MiSE'16)*, May 2016, pp. 74-80.

[O4] C. Chung, A. Matsuoka, Y. Tang, J. Rubin, M. Chechik. "Serious Games for NP-hard Problems: Insights". In *Proceedings of ICSE'16 International Workshop on Games and Software Engineering (GAS'16)*, May 2016, pp. 29-32.

[O5] A. Grubb. "Adding Temporal Intention Dynamics to Goal Modeling: A Position Paper". In *Proceedings of ICSE'15 International Workshop on Modeling in Software Engineering (MiSE'15)*, pp. 66-71, May 2015.

[O6] R. Salay, F. Dialperez, M. Chechik. "Integrating Crowd Intelligence into Software". In *Proceedings of ICSE'15 International Workshop on Crowdsourcing in Software Engineering (CSI-SE'15)*, pp. 1-7, May 2015.

[O7] F. Dalpiaz, M. Korenko, R. Salay, M. Chechik. "Using the Crowds to Satisfy Unbounded Requirements". In *Proceedings of RE'15 International Workshop on Crowdsourcing in Requirements Engineering (CrowdRE'15)*, pp. 19-24, 2015.

[O8] M. Chechik, F. Dalpiaz, C. Debreceni, J. Horkoff, I. Rth, R. Salay, D. Varr. "Property-Based Methods for Collaborative Model Development". In *Proceedings of MODELS'15 International Workshop on the Globalization of Modeling Languages (GEMOC'15)*, pp. 1-7, 2015.

[O9] R. Salay, S. Zschaler, M. Chechik. "Transformation Reuse: What is the Intent?". In *Proceedings of MODELS'15 International Workshop on Automating Model Transformations (AMT'15)*, pp. 7-15, 2015.

[O10] A. Albarghouthi, I. Dillig, A. Gurfinkel and M. Chechik. "Specification Synthesis via Generalized Abduction". In *Proceedings of CAV'14 Interpolation Workshop (iPRA'14)*, July 2014.

[O11] A. Mashiyat, M. Chechik, R. Salay, M. Chechik. "Using Developer Conversations to Resolve Uncertainty in Software Development: A Position Paper". In *Proceedings of 4th Int. Workshop on Recommendation Systems for Software Engineering at ICSE'14*, June 2014.

[O12] R. Salay, M. Chechik. "Supporting Agility in MDE Through Modeling Language Relaxation". In *Proceedings of Extreme Modeling (XM'13) workshop at MODELS'13*, pp. 20-27, October 2013.

[O13] S. Nalchigar, R. Salay, M. Chechik. "Towards a Catalog of Non-Functional Requirements in Model Transformation Languages". In *Proceedings of Int. Workshop on Automating Model Transformations (AMT'13) at MODELS'13*, October 2013.

[O14] M. Chechik, R. Salay. "Using Partial Model Synthesis to Support Model Integration in Large-Scale Software Development". In *Proceedings of Int. Workshop on the Globalization of Modeling Languages (GEMOC'13) at MODELS'13*, October 2013.

[O15] P. Saadatpanah, M. Famelis, J. Gorzny, N. Robinson, M. Chechik, R. Salay. "Comparing the Effectiveness of Reasoning Formalisms for Partial Models". In *Proceedings of MODELS'12 Workshop on Model-Driven Engineering, Verification and Validation (MoDeVVA'12)*, 6 pages. 35% acceptance rate.

[O16] R. Salay, M. Chechik, J. Gorzny. "Towards a Methodology for Verifying Partial Model Refinements". In *Proceedings of ICST'12 Workshop on Verification and Validation of Model Transformations (VOLT'12)*, 8 pages, April 2012.

[O17] M. Famelis, R. Salay, M. Chechik. "The Semantics of Partial Model Transformations". In *Proceedings of ICSE'12 Workshop on Models in Software Engineering (MiSE'12)*, 6 pages, June 2012. Acceptance rate: 41%.

[O18] M. Famelis, S. Ben-David, M. Chechik, R. Salay. "Partial Models: A Position Paper". In *Proceedings of MODELS'11 Workshop on Model-Driven Engineering, Verification and Validation (MoDeVVa)*, 4 pages, October 2011.

[O19] M. Chechik, A. Gurfinkel, S. Uchitel, S. Ben-David. "Raising Level of Abstraction with Patial Models: a Vision". In *Proceedings of NSF/MSR Workshop on Usable Verification*, November 2010, 7 pages.

[O20] M. Chechik, J. Simmonds, S. Ben-David, S. Nejati, M. Sabetzadeh, R. Salay. "Modeling and Analysis of Personal Web Applications: A Vision". In *Proceedings of NSERC/CASCON Symposium on Personal Web*, November 2010, 7 pages.

[O21] J. Simmonds, M. Chechik. "RUMOR: Monitoring and Recovery of BPEL Applications". In *Proceedings of International Conference on Automated Software Engineering*, September 2010, pages 345-346. Tools paper.

[O22] J. Simmonds, S. Ben-David, M. Chechik. "Optimizing Computation of Recovery Plans for BPEL Applications". In *Proceedings of ASE'10 Workshop on Testing and Verification of Web Systems*, EPTCS Volume 35, pp. 3-14, September 2010.

[O23] M. Sabetzadeh, S. Nejati, M. Chechik, and S. Easterbrook. "Reasoning about Consistency in Model Merging". In *Proceedings of 3rd Workshop on Living With Inconsistency in Software Development*, 6 pages, September 2010.

[O24] J. Rubin, M. Chechik. "From Products to Product Lines Using Model Matching and Refactoring". In *Proceedings of 2nd International Workshop on Model-Driven Software Product Line Engineering (MAPLE'2010)*, 6 pages, September 2010.

[O25] M. Chechik, W. Lai, S. Nejati, J. Cabot, Z. Diskin, S. Easterbrook, M. Sabetzadeh, R. Salay. "Relationship-Based Change Propagation: A Case Study". In *Proceedings of International Workshop on Modeling in Software Engineering (associated with ICSE'09)*, May 2009.

[O26] N. D'Ippolito, D. Fishbein, M. Chechik, S. Uchitel. "MTSA: The Modal Transition System Analyzer". In *Proceedings of International Conference on Automated Software Engineering (ASE'08)*, September 2008, pages 475-476. Tools paper.

[O27] T. Hart, K. Ku, A. Gurfinkel, M. Chechik, D. Lie. "PTYasm: Software Model Checking with Proof Templates". In *Proceedings of International Conference on Automated Software Engineering (ASE'08)*, September 2008, pages 479-480. Tools paper.

[O28] T. Hart, M. Chechik, D. Lie. "Security Benchmarking using Partial Verification'. In *Proceedings of 3rd USENIX Workshop on Hot Topics in Security (HotSec'08)*, July 2008, 6 pages. 32% acceptance rate.

[O29] S. Nejati, M. Chechik. "Behavioural Model Fusion: Experiences from Two Telecommunications Case Studies". 7 pages. In *Proceedings of the International Workshop on Modeling in Software Engineering* (associated with ICSE'08), May 2008.

[O30] J. Rubin, M. Chechik, S. Easterbrook. "Declarative Approach to Model Composition". In *Proceedings of the International Workshop on Modeling in Software Engineering (associated with ICSE'08)*, 10 pages, May 2008.

[O31] R. Salay, M. Chechik, S. Easterbrook, Z. Diskin, S. Nejati, M. Sabetzadeh, P. McCormick, P. Viriyakattiyaporn. "An Eclipse-Based Model Management Framework". In *Proceedings of OOPSLA'07 Workshop on Eclipse Technology*, November 2007. 6 pages.

[O32] M. Sabetzadeh, S. Nejati, S. Easterbrook, M. Chechik. "A Relationship-Driven Framework for Model Merging", in *ICSE 2007 Workshop on Models in Software Engineering*, 6 pages. 33% acceptance rate.

[O33] G. Brunet, M. Chechik, S. Easterbrook, S. Nejati, N. Niu, M. Sabetzadeh. "A Manifesto for Model Merging", in *Proceedings of 1st International Workshop on Global Integrated Model Management (GAMMA'06)*, associated with ICSE'06, May 2006, 7 pages.

[O34] S. Berezin, C. Barrett, I. Shikanian, M. Chechik, A. Gurfinkel, D. Dill. "Logic with Partial Functions in CVC Lite", in *Proceedings of 2nd Workshop on Pragmatics of Decision Procedures in Automated Reasoning*, pp. 13-23, July 2004.

[O35] S. Easterbrook, M. Chechik. "Automated Paraconsistent Reasoning Via Model-Checking", in *Proceedings of IJCAI'01 Workshop on Inconsistency*, August 2001, pp. 87-94.

[O36] M. Chechik, S. Easterbrook. "Reasoning About Composition of Concerns", in *Proceedings of ICSE'01 Workshop on Advanced Separation of Concerns*, May 2001, pp. 8-14.

[O37] S. Easterbrook, M. Chechik. "A Framework to Handle Horizontal Inconsistency in Software", position paper, in *Proceedings of ICSE Workshop on Living with Inconsistency*, May 2001, pp. 4-6.

[O38] M. Chechik, A. Wong. "Formal Description Techniques When Money is Tight", in *Proceedings of 1st ICSE Workshop on Economics-Driven Software Engineering Research (EDSER-1)*, May 1999, pp. 1-6.

[O39] A. Wong, M. Chechik. "Applying Formal Methods to a Telecommunication System in a Commercial Setting", in *Proceedings of International Conference on Software Engineering and Its Applications (ICSEA'98)*, pp. 132-140, December 1998 (abstract-refereed).

Tool demonstrations, position papers and poster proposals (partial list)

[O40] C. Disenfeld, I. Stavropoulou, J. Rubin, M. Chechik. "Efficient Detection of Feature Interactions Through Non-Commutativity", in *Proceedings of Poster Track @ ICSE'17*, May 2016.

[O41] A. Di Sandro, R. Salay, M. Famelis, S. Kokaly, M. Chechik. "MMINT: A Graphical Tool for Interactive Model Management", in *Proceedings of Posters and Demos Track @ MODELS'15*, pp. 16-19, 2015.

[O42] M. Chechik. "How Smart are Your Services (Reasoning about Correctness of Web Services)", in *Proceedings of CAS/NSERC Strategic Workshop on Smart Internet Technologies*, November 2009.

[O43] M. Gheorghiu, A. Gurfinkel, M. Chechik. "VaqUoT: A Tool for Vacuity Detection", in *Tools and Posters track, Formal Methods 2006*, 4 pages, August 2006.

[O44] M. Gheorghiu, A. Gurfinkel, M. Chechik. "TLQ: A Query Solver for States", in *Tools and Posters track, Formal Methods 2006*, 4 pages, August 2006.

[O45] J. Simmonds, J. Davies, A. Gurfinkel, M. Chechik. "VaqTree: Efficient Vacuity Detection for Bounded Model Checking", in *Tools and Posters track, Formal Methods 2006*, 4 pages, August 2006.

[O46] M. Sabetzadeh, S. Nejati, M. Chechik, S. Easterbrook. "TReMer: A Tool for Relationship-Driven Model Merging". in *Tools and Posters track, Formal Methods 2006*, 4 pages, August 2006.

[O47] A. Wong, M. Chechik. "SDL or Not SDL?", poster proposal, International Conference on Software Engineering (ICSE'99), 3 pages, May 1999.

[O48] A. Wong, M. Chechik. "Formal Methods in Telecommunications: A Case Study", poster proposal, 3 pages, International Symposium on Requirements Engineering (RE'99), June 1999.

[O49] M. Chechik. "Using SCR Requirements", position paper in *Proceedings of the 7th SCR workshop*, October 1998, 4 pages.

[O50] M. Chechik. "Software Engineering Education at the University of Toronto", position paper in *Proceedings of ACM SIGCSE workshop on Software Engineering Education*, Boston, MA, May 1997, 4 pages.

Workshop summaries and editorials

[O51] M. Chechik, P. Grnbacher. "Guest editorial: selected areas in automated software engineering". In *Journal of Automated Software Engineering*, Vol. 25, Number 1, pp. 45-46, 2018.

[O52] S. Blazy, M. Chechik. "Selected Extended Papers of VSTTE 2016". In *Journal of Automated Reasoning*, Vol. 60, Issue 3, pp. 256-256, 2018.

[O53] M. Chechik, J.-F. Raskin. "Selected Extended Papers of TACAS 2016". In *ACM Transactions on Computational Logic*, 2018. To appear.

[O54] M. Chechik, D. Di Ruscio. "Report from the 9th Workshop on Modelling in Software Engineering (MiSE 2017)". In *ACM SIGSOFT Software Engineering Notes*, Vol. 42, Number 4, pp. 21-24, 2017.

[O55] D. Di Ruscio, M. Chechik, B. Rumpe. "9th Workshop on Modelling in Software Engineering (MiSE 2017)". In *Proceedings of MiSE@ICSE 2017*, p. 1, 2017.

[O56] M. Chechik, G. Georg, M. Gogolla, J.-M. Jzquel, B. Rumpe, M. Schindler. "In memory of Robert B. France, Co-Founder and Editor-in-Chief of SoSyM from 1999 to 2015". In *J. Software and System Modeling (SoSym)*, volume 14, issue 2, pages 525-532, 2015.

[O57] J. Gray, M. Chechik, V. Kulkarni, R. Paige. "7th International Workshop on Modeling in Software Engineering (MiSE 2015)". In *Proceedings of International Conference (ICSE'15), Vol. 2*, pp. 985-986, 2015.

[O58] J. Atlee, R. Baillargeon, M. Chechik, R. France, J. Gray, R. Paige, B. Rumpe. "5th International Workshop on Modeling in Software Engineering (MiSE 2013)". In *Proceedings of International Conference on Software Engineering (ICSE'13)*, pp. 1531-1532, June 2013.

[O59] M. Chechik, H. Muccini. ESEC/FSE'13 Workshop Summary, 2011.

[O60] F. van Bruegel, M. Chechik. Introduction to the Special Issue of Best Papers from CONCUR'2008. *J. Information and Computation*, issue 208, volume 10, pp. 1091-1092, 2010.

[O61] S. Easterbrook, M. Chechik. "Model-Checking Frameworks", an introduction to the Special Issue on Model-Checking in Requirements Engineering, *Requirements Engineering Journal*, issue 4, volume 7, pp. 1-4, 2002.

[O62] S. Easterbrook, M. Chechik. "2nd International Workshop on Living with Inconsistency (IWLWI-2): Workshop Summary", in *SIGSOFT Notes*, 4 pages, 2001.

Other

[O63] M. Chechik, G. Brunet, D. Fischbain, S. Uchitel. "Partial Behavioural Models for Requirements and Early Designs", in *Proceedings of 2006 Dagshtuhl Seminar on Methods and Models for Software Systems (MMOSS)*, LNCS, 2007. 10 pages.

[O64] G. Brunet, M. Chechik, S. Uchitel. "Generating Unbiased Models from Temporal Properties". University of Toronto Technical Report, April 2006. 15 pages.

[O65] S. Nejati, M. Sabetzadeh, M. Chechik, S. Easterbrook. "Identifying and Representing Requirements Variability in Families of Reactive Software". University of Toronto Technical Report, January 2006.

[O66] M. Chechik. "SC(R)$^3$: Towards Usability of Formal Methods", August 1999, 37 pages, Technical Report 391/99.

[O67] M. Chechik. "Automatic Analysis of Consistency between Requirements and Designs", Ph.D. thesis, University of Maryland, College Park, Maryland, December 1996.

*Invited Talks, Keynotes and Workshops*

2019

- TBD. **Unifying talk**, to be presented at ETAPS'19: European Joint Conferences on Theory and Practice of Software, April 2019.

2018

- TBD. To be presented at the Programming Languages Mentoring Workshop at SPLASH'18 (PLMW@SPLASH), November, 2018.
- "Keeping All the Balls in the Air: Career, Family and Play". To be presented at the ICSE'18 New Faculty Symposium, May 2018.
- "Software Safety and Security, Assurance Cases and Model Management". Presented at IFIP Working Group 2.9 on Requirements Engineering, Costa Rica, February 2018.

2017

- "Modeling and Reasoning about Software Systems Containing Uncertainty and Variability". Presented at Chalmers, Sweden, August 2017.
- "Safety Assurance at GM and Using Model Management to Support It", NSERC site visit for CRD application, McMaster, November 2017.
- (with Y. Gan and B. O'Farrell), "Runtime Monitoring of Web Service Conversations: 10 years later", **10-year Most Influential Paper presentation**, CASCON'17, November 2017.
- "Finding and Moving Correct Functionality Across Software", **Invited Talk**, FACTAV: Facebook Workshop on Testing and Verification, London, UK, November 2017.
- "Software Safety and Security, Assurance Cases and Model Management", Facebook Software Engineering Workshop, London, UK, December 2017.
- "Safety Complience Management". **Keynote address** at SEFM'17: International Conference on Software Engineering and Formal Methods, Trento, Italy, September 2017.
- "Uncertainty and Incompleteness". **Guest talk** at CUCSC'17: Canadian Undergraduate Computer Science Conference, Toronto, ON, June 2017.
- (with S. Kokaly) "Trace Links and Their Use in Automotive Software Safety Assessment". Presented at Workshop on Grand Challenges in Traceability, Slade, KY, March-April 2017.
- (with P. G. Larsen and P. Mostermann) "Seeing different types of CPS models in a requirement context". Presented at Computer Automated Multi-Paradigm Modelling (CAMPaM) Workshop, Bellairs, Borbados, March 2017.
- (with F. Mora) "Client-Specific Change Integration Challenge". Presented as part of visit to General Motors, February 2017.

2016

- "Perspectives on Model Transformation Reuse". **Keynote address** at iFM'16: International Conference on Integrated Formal Methods, Reykjavik, Iceland, June 2016.
- "Partial Modeling of Software Behavior". **Invited Speaker**, Fall Lecture Series in Women in Mathematics, University of Waterloo, October 2016.
- (with C. Disenfeld). "Mr. Feature Potato Head: Creating and Analyzing Feature Compositions". Presented at International Workshop on Feature-Oriented Software Development, May 2016 (invitation-only).
- (with S. Kokaly and others). "Model Management for Regulatory Compliance and Reuse at GM". Presented as part of visit to General Motors, June 2016.
- "Model Management". Presented at the ORF Workshop, Waterloo, October 2016.

2015

- "Towards a Formal Framework for Managing Software Families". **Keynote address** at FMSPLE'15: an ETAPS'15 International Workshop on Formal Methods for Software Product Lunes, April 11, 2015.
- "RE Challenges". Presented at IFIP WG 2.9, February 2015.
- "Modeling and Reasoning about Software Systems Containing Uncertainty and Variability". **Keynote address** at TASE'15, the 9th International Symposium on Theoretical Aspects of Software Engineering, Nanjing, China, September 2015.

- "Model Management Theme Report". Presented at NECSIS Annual Workshop, June 2015.
- "Reasoning with Uncertainty and Variability". Presented at NECSIS Annual Workshop, June 2015.

2014

- "Partial Behavioral Modeling: Foundations for Incremental Model-Based Software Engineering". Presented in the Department of Computer Science, Ryerson University, June 2014.
- "Explicating and Reasoning with Model Uncertainty". Presented in the Department of Computer Science, ETH, December 2014.
- "Feature-Interaction Research". Presented at a Dagstuhl Workshop on Feature Interaction, July 2014.
- "Model Management Theme Report". Presented at NECSIS Annual Workshop, June 2014.
- "Collaborative Software Engineering Using Chunk-Based Evolution". Presented at NECSIS Annual Workshop, June 2014.
- "Explicating and Reasoning with Model Uncertainty". **Keynote address** at ECMFA'14: European Conference on Modelling Foundations and Applications, York, UK, July 2014.
- "Internet-Integrated Software". Presented at IBM Center for Advanced Studies University Days, April 2014.
- "Transformation of Models Containing Uncertainty". Presented at Aachen University, Germany, April 2014.
- "Partial Behavioral Modeling". Presented at Aachen University, Germany, April 2014.
- "Internet-Integrated Software". Presented at IFIP 2.9 WG on Requirements Engineering, February 2014.

2013

- "Partial Behavior Modeling". A keynote given at the MODELS'13 Workshop on Model-Driven Engineering, Verification and Validation (MoDeVVA'13), Miami, Florida, October 1, 2013.
- "Proving Safety of Software Systems". Presented at the Department of Computer Science, Stony Brook University, April 19, 2013.
- (with R. Salay) "Managing Model Uncertainty". Presented (by R. Salay) at 5th Modelling Seminar, Bellairs, Borbados, February 9, 2013.
- (with J. Rubin and A. Gurfinkel) "Cloud Security: Information Segregation and Data Privacy". Presented (by J. Rubin) at Dagstuhl Seminar 13051 on Software Certification: Methods and Tools, Jan. 24, 2013.

2012

- "Some Progress in the Model Management Project". Presented at the Annnual NECSIS Workshop, June 25, 2012.

2011

- "Personal Web Workflow Management". Presented (by R. Salay) at SITCON: The CAS / NSERC Strategic Workshop on Smart Internet Technologies. Part of CASCON'2011. November 2011.
- "NECSIS Theme 4: Inconsistency Management and Cross-Cutting Concerns". Presented at NECSIS Annual Workshop, June 15, 2011.

- "Recent Progress with Partial Modeling Formalisms". Presented at IFIP Working Group 2.9, February 9, 2011.

2010

- (with B. Petrini and Faraz Torshizi), "Towards Automated Integration Determination". Presented at CASCON'10 Workshop Titled "Accelerate service integration in your BPM/SOA applications", November 1, 2010.
- (with R. Salay), "Relationship-Driven Model Management". Presented at INRIA, Paris, September 2010.
- (with A. Gurfinkel), "On the Use of Abstraction in Model Checking". **Invited talk**, Workshop on Models and Logics for Quantitative Analysis (MLQA'10). Associated with Logic in Computer Science (LICS'10), July 9, 2010.
- "Runtime Monitoring and Recovery of Web Services". Presented in Department of Computer Science, Carnegie Mellon University, April 30, 2010.
- "Using Planning for Recovery from Web Service Violations". Presented at the IFIP Working Group 2.9 (Requirements Engineering), February 2010.
- "Frameworks for Capturing Partial Models of Software Behaviour". Presented at the IFIP Working Group 2.9 (Requirements Engineering), February 2010.

2009

- "How Smart are Your Services". Presented at SITCON: The CAS / NSERC Strategic Workshop on Smart Internet Technologies. Part of CASCON'2009. November 2009.
- "Relationships-Driven Model Management". **Keynote address** presented at 5th International Workshop on Model-Based Methodologies for Pervasive and Embedded Software (MOMPES'09), held as part of the International Conference on Software Engineering. May 16, 2009.

2008

- "Verifying the Absence of Buffer Overflows: Software Model Checking with Proof Templates". Presented at MITACS/MASCS workshop, Montreal, June 19, 2008 and at MITACS PI Meeting, Kingston, Ontario, July 21, 2008.
- "Model-Driven Engineering for Adaptive Systems". Presented at IBM's Cloud Computing Day, June 17, 2008 and as a University of Toronto Software Engineering seminar on July 15, 2008.
- "Specifying and Runtime Monitoring of Web Service Conversations". Presented at University of Potsdam, Germany, May 13, 2008.
- "Challenges in Model Management". Presented at the International Meeting on Modeling and Modern Software Engineering, University of Dresden, Germany, May 9, 2008.
- "Software Model-Checking". Presented at the University of Buenos Aires, Argentina, February 15, 2008.
- "Guarding Against Software Accidents". **Keynote address** at CUSEC'08 (Canadian Undergraduate Software Engineering Conference), January 17, 2008.
- "Matching and Merging of Statecharts Specifications". **Invited** for presentation in the First Indian Software Engineering Conference (ISEC'08), February 2008 (declined).

2007

- "Runtime Monitoring of Web Service Conversations". Presented at the Annual CSER Meeting, November 2007.
- "Supporting Construction, Analysis, and Understanding of Software Models". Presented in University of Utah in July 2007.
- "Model Merging: Some "Real" Work on Matching/Merging Statecharts and a Brief Manifesto". Presented at the IFIP Working Group 2.9 (Requirements Engineering), February 2007.

2006

- "Static and Dynamic Analysis of Web Services". Presented at the Annual CSER Meeting, November 2006.
- "Constructing and Analyzing Partial Behavioural Models in Requirements and Designs". Presented at Avaya Labs in September 2006.
- "Supporting Construction, Analysis, and Understanding of Software Models". Presented at Rutgers University in September 2006.
- "Static Analysis for Security Applications". Presented at the Annual MITACS PI Meeting, August 2006.
- "Supporting Construction, Analysis, and Understanding of Software Models". Presented at University of Maryland in August 2006.
- "Constructing and Analyzing Partial Behavioural Models in Requirements and Designs". Presented at Dagshtuhl on Methods and Models for Software Systems (MMOSS'06) in August 2006.
- "Supporting Construction, Analysis, and Understanding of Software Models". Presented at IBM Toronto Lab in June 2006.
- "Supporting Construction, Analysis, and Understanding of Software Models". Presented at UNI (Macau) in May 2006.
- "Supporting Construction, Analysis, and Understanding of Software Models". Presented in Tsinghua University (Beijing, China) in May 2006.
- "Supporting Construction, Analysis, and Understanding of Software Models". Presented at York University in February 2006.

2004

- "Understanding and Validating Software Models Using Model-Checking". Presented at McMaster University, December 2004.
- "Understanding and Validating Behavioural Models of Software". Presented in IBM Ottawa Lab, July 2004.
- "What Makes Good Requirements?". Presented at the IFIP Working Group 2.9 (Requirements Engineering), February 2004.

2003

- "How Model Checking Can Help Engineering Software". Presented in Department of Mathematics, Statistics and Computer Science, St. Francis Xavior University, August 2003.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at University of Pennsylvania, August 2003.
- "How Model Checking Can Help Model Exploration". Presented at Automated Software Engineering Workshop, NASA Ames, July 2003.

- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at VERIMAG, Grenoble, France, June 2003.
- "Model Exploration with Temporal Logic Query Checking". Presented at Universite Catholique de Louvain, Belgium, June 2003.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at Dagshtuhl Seminar on Inconsistency, June 2003.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at University of Warwick, UK, May 2003.
- "Proof-Like Counterexamples". Presented at York University, UK, April 2003.
- "Proof-Like Counterexamples". Presented at University of Edinburgh, April 2003.
- "Model Exploration with Temporal Logic Query Checking". Presented at Imperial College, London, April 2003.
- "Proof-Like Counterexamples". Presented at Imperial College, London, March 2003.
- "Proof-Like Counterexamples". Presented at University of Toronto, March 2003.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at MIT, February 2003.
- "Proof-Like Counterexamples". Presented at the IFIP Working Group 2.9 (Requirements Engineering), February 2003.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at Brown University, February 2003.

2002

- "Model Exploration with Temporal Logic Query Checking". Presented at Bell Laboratories, December 2002.
- "Model Exploration with Temporal Logic Query Checking". Presented at George Mason University, December 2002.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at Lehigh University, November 2002.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at Bell Laboratories, Murray Hill, NJ, USA, October 2002.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at University of California at Santa Barbara, September 2002.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at SRI, September 2002.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at NASA Ames, September 2002.
- "Multi-Valued Model-Checking: Theory, Implementation and Applications". Presented at University of Toronto, October 2002.
- "Modeling and Verification with Multi-Valued Logics". Presented at IFIP Working Group 2.9, February 2002.

- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at Carlton University, January 2002.

2001

- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at University of Victoria, August 2001.
- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at University of British Columbia, August 2001.
- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at Bell Laboratories, July 2001.
- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at IRST, Trento, Italy, April 2001.
- "Architecting a Multi-Valued Model-Checker". Presented at IRST, Trento, Italy, April 2001.
- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at York University, Toronto, Canada, March 2001.
- "Multi-Valued Model-Checking", Presented at the University of Toronto Cognitive Robotics group, March 2001.
- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at University of Toronto, Cognitive Robotics group, February 2001 (with S. Easterbrook).
- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at the IFIP Working Group 2.9 (Requirements Engineering), February 2001.
- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at University of Western Ontario, January 2001.

2000

- "A Framework for Multi-Valued Reasoning about Viewpoints". Presented at University of Waterloo, November 2000 (with S. Easterbrook);
- "Model-Checking over Multi-Valued Logics". Presented at NASA Ames, August 2000.
- "Lightweight Reasoning about Program Correctness". Presented at University of Alberta, March 2000.
- "ADLs and Software Frameworks", Presented at University of Alberta, March 2000.

1999

- "Verifying SDL". Presented at University of Waterloo, May 1999.
- "SCR$^3$: Towards Feasibility of Formal Methods". Presented at York University, Toronto, February 1999.

1998

- "Projects in Telecommunications". Presented at the Nortel Advanced Technologies Division Research Day, Toronto, November 1998.
- "SDL in Telecommunications", a **one-day workshop** given at Nortel Multimedia Application Center, Toronto, October 1998.
- "Checking Program Correctness: An Abstract Interpretation Approach", Celebration of Women in Mathematical and Computing Sciences (CWIM'98), May 1998 (**Invited Keynote**).

- "Lightweight Software Engineering", a **4-hour workshop** given at the Royal Military Academy, Kingston, ON, April 1998.
- "A (Yet) Another Look at Checking Program Correctness", AT & T, NJ, USA, April 1998.
- "Specification-Based Testing". Presented at Nortel Advanced Technologies Division, Ottawa, March 1998.

1997

- "Usability of Formal Methods". Presented at Nortel Advanced Technologies Division, Toronto, October 1997.
- "A (Yet) Another Look at Checking Program Correctness". Presented at BRICS, Aarhus University, Denmark, September 1997.
- "Automatic Analysis of Consistency Between Implementations and Requirements". Presented at Naval Research Laboratory, Center for High Assurance Computer Systems, Washington, D.C., July 1995.
- "Formal Methods in Software Development". Presented at Nortel Multimedia Application Center, Toronto, June 1997.
- "When are Requirements and Designs Consistent?". Presented at York University, Toronto, March 1997.
- "When are Requirements and Designs Consistent?". Presented at McMaster University, Hamilton, Canada, February 1997.

1996

- "Automatic Analysis of Consistency Between Requirements and Designs", interview talk. Presented during Spring of 1996 at a variety of academic and industrial locations.

1995

- "Formal Methods in Program Analysis". **Guest lecture** at the Seminar on Software Safety, Federal Drug Administration Staff College, February 1995.

## IV. Teaching

*Undergraduate Courses Taught*

| When Taught | Course Number | Course Name |
|---|---|---|
| Fall 2016 | CSC410 | Software Testing and Verification |
| Winter 2008 | CSC410 | Software Testing and Verification |
| Fall 2007 | CSC330 | Logical Specifications |
| Winter 2007 | CSC410 | Software Testing and Verification |
| Winter 2007 | CSC488 | Compilers and Interpretors (cross-listed with CSC2107) |
| Winter 2006 | CSC410 | Software Testing and Verification |
| Fall 2005 | CSC488 | Compilers and Interpretors (cross-listed with CSC2107) |
| Winter 2005 | CSC148 | Introduction to Computer Science |
| Winter 2005 | CSC488 | Compilers and Interpretors (cross-listed with CSC2107) |
| Winter 2004 | ECE203 | Discrete Mathematics (2 sections) |
| Winter 2002 | CSC148 | Introduction to Computer Science (2 sections) |
| Winter 2001 (with E. Hehner) | ECE450 | Software Engineering II |
| Fall 2000 | CSC148 | Introduction to Computer Science |
| Winter 2000 (with E. Hehner) | ECE450 | Software Engineering II |
| Fall 1999 | CSC148 | Introduction to Computer Science |
| Fall 1998 | CSC324 | Programming Languages (St. George Campus) |
| | | Programming Languages (At Erindale) |
| | CSC299Y | Research Opportunity |
| Winter 1998 | CSC488 | Compilers and Interpretors (cross-listed with CSC2107) |
| Fall 1997 | CSC324 | Programming Languages |
| | CSC326 | Programming Languages (for ECE) |
| Fall 1990 | — | Intermediate Algebra (Univ. of Maryland Baltimore County) |

*Graduate Courses Taught*

| When Taught | Course Number | Course Name |
|---|---|---|
| Winter 2018 | CSC2125 | Topics in SE: Modeling Methods, Tools and Techniques |
| Fall 2012 | CSC2125 | Topics in SE: Modeling Methods, Tools and Techniques |
| Fall 2007 | CSC2108 | Model Checking |
| Fall 2006 | CSC2125 | Topics in SE: Static Analysis of Programs |
| Fall 2005 | CSC2108 | Model Checking |
| Fall 2004 | CSC2125 | Topics in SE: Automata, Logic and Games for Automated Verification |
| Fall 2003 | CSC2108 | Model Checking |
| Fall 2001 | CSC2108 | Automated Verification |
| Fall 2000 | CSC2108 | Automated Verification |
| Fall 1999 | CSC2108 | Automated Verification |
| Winter 1999 | CSC2108 | Automated Verification |
| Fall 1997 | CSC2108 | Automated Verification |
| Winter 1997 | CSC2124 | Topics in PL: Automated Verification |

*Courses Designed*

CSC410 Software Testing and Verification (Winter'06).

CSC2108 Automated Verification (redesigned Fall 2003 under title "Model Checking").
ECE450 Software Engineering II (with E. Hehner) (Winter'00).

*Courses Redesigned*

CSC326 Programming Languages for ECE (Fall '96).
CSC324 Programming Languages (with T. Bonner) (Fall '97).

## V. Supervision

| Career Student Numbers | | |
|---|---|---|
| | In Progress | Completed |
| Undergraduate Students | 4 | 56 |
| Research Masters | 3 | 27 |
| Professional Masters | 1 | 4 |
| PhD | 3 | 9 |
| Postdoctoral Fellows | 1 | 5 |

*Ph.D. Students Graduated*

1. Yi Li, February 2013-present. Topic: *Managing Software Evolution through Semantic History Slicing*, completed in March 2018. External examiner: Prof. Darko Marinov. Next position: Assistant Professor, Singapore, September 2018.

2. Michail Famelis, *Techniques for Reasoning with Uncertainty in Software Engineering*, completed in January 2016. External examiner: Prof. Carlo Ghezzi. Currently Assistant Professor at the University of Montreal, Canada

3. Aws Albarghouthi, *Software Verification with Craig Interpretation*, completed in October 2014. External examiner: Prof. Rajeev Alur. Currently Assistant Professor at the University of Wisconsin-Madisson.

4. Julia Rubin, *Cloned Product Variants: From Ad-Hoc to Well-Managed Software Reuse*, completed in September 2014. External examiner: Prof. Paul Grumbacher. Currently Assistant Professor at the University of British Columbia, Canada.

5. Jocelyn Simmonds, *Reasoning about Web Services*, completed in December 2010. External examiner: Dr. Luciano Baresi. Currently Assistant Professor at the Departamento of Computer Science, University of Chile, Santiago, Chile.

6. Ou Wei, *Applications of Exact Abstraction for Software Model-Checking*, completed in August 2009. External examiner: Prof. Michael Huth. Currently Assistant Professor at Nanjing University of Aeronautics and Astronautics, China.

7. Mihaela Bobaru (Gheorghiu), *Approximation and Refinement Techniques for Hard Model-Checking Problems*, completed in October 2008. External examiner: Dr. Kedar Namjoshi. Currently Research Scientist, Laboratory for Reliable Software (LaRS), Jet Propulsion Laboratory, USA.

8. Shiva Nejati, *Behavioural Model Fusion*, completed in September 2008. External examiner: Prof. Joanne Atlee. Currently Research Scientist, Interdisciplinary Centre for Security, Reliability and Trust, University of Luxembourg, Luxembourg.

9. Arie Gurfinkel, *Model-Checking with Many Values*, completed in March 2007. External examiner: Prof. Edmund Clarke. Currently Associate Professor, University of Waterloo, Canada.

*Masters Students Graduated (with Thesis)*

1. Federico Mora. *CLEVER: A Framework for Client-Specific Program Equivalence*, April 2018.
2. Nick Fung. *Extension of the MMINT Model Management Framework for Safety Case Change Impact Assessment*, February 2018.
3. Ioanna Stavropoulou. *Detection and Resolution of Feature Interaction*, February 2017.
4. Chenguang Zhu. *Benchmark for Semantic Slicing of Software Histories*, April 2017.
5. Benson Quach, *Analysis of Feature Location Techniques*, completed April 2016.
6. Mehrnaz Najafi, *Towards an Algorithm for Property- and Structure-Preserving Slicing of Statecharts*, completed January 2015.
7. Yi Li. *Abstraction for* UFO, completed February 2013.
8. Pooya Saadat Panah. *Property Checking with MAVO Models*, completed February 2013.
9. Jan Gozny. *Change Propagation under Uncertainty*, completed February 2013.
10. Youssef Zaky. *Branching Refinement for DMTSs*, completed February 2013.
11. Michail Famelis, *Relationship-Driven Model Management*, completed April 2010.
12. Aws Albarghouthi, *Abstract Analysis of Symbolic Executions*, completed January 2010.
13. Winnie Lai, *Use of Modeling to Support Adaptation*, completed April 2009.
14. Kelvin Ku, *Static Analysis for Security Properties*, completed January 2008.
15. Yuan Gan, *Runtime Monitoring of Webservice Conversations*, completed April 2007.
16. Greg Brunet, *Properties of Merging Partial Behavioural Models*, completed January 2006.
17. Jonathan Amir, *Runtime Verification*, completed June 2005.
18. Danny House, *Formal Reasoning about Garbage Collection*, completed April 2004.
19. Shiva Nejati, *Refinement Relations on Partial Specifications*, completed June 2003.
20. Arie Gurfinkel, *Multi-Valued Model-Checking: Fairness, Counter-Examples and Running Time*, completed December 2002.
21. Benet Devereux, *Symbolic Representation and Reasoning over State-Based Models with Multiplicities*, joint supervision with E. Hehner, completed June 2001.
22. Darshanand Khusial, *Adaptive Authentication Strategies*, completed July 2001 (M.Eng., ECE).
23. Cosmin Truta, *Formal Specification of APIs for Visual Age C++*, completed December 2001.
24. Wei Ding, *Analyzing Infinite-State Programs with Abstract Interpretation*, completed January 2000.
25. Andre Wong, *Feasibility Study of Formal Methods in Telephony*, completed May 1999.
26. Dimi Paun, *Closure Under Stuttering in Linear-Time Properties*, co-supervised with R. Hehner, completed April 1999.

*Masters Students Graduated (Project)*

1. Kevin Brewer, "Automated Analysis of Security in Software Systems", completed March 2006.

*Professional Masters Students*

1. Jamie Beith. *Modernizing the Management and Consumption of Standard Response Documents*, completed in December 2017.
2. Md Obyadur Rahman. *A Privacy Enhanced Mobile App for Decentralized Identity System*, completed in December 2017.
3. Jia Ming (Anson) Liang. *Medly and the Path to Cross-Platform Automated Testing*, completed in December 2015.
4. Jyotheeswar Arvind Manickavasagar. *Ned and the Path to Integrated Cross-Platform Automated Testing*, completed in December 2015.

*Masters Students Currently Supervised*

1. Mike Maksimov. Topic: "Safety Complience in Model Management", September 2017-present.
2. Nick Feng. Topic: "Shadow Symbolic Execution", January 2018-present.
3. Lobna AbuSerrier. Topic: "Testing Model Transformations", March 2018-present.

*Professional Masters Students Currently Supervised*

1. Lijun Pan. *Privacy Enhanced Application for Decentralized Identity System*, April 2018-present.

*Ph.D. Students Currently Supervised*

1. Alicia Grubb, October 2012-present. Topic: *Timing Analysis in Early Requirements*. Expected completion in 2018.
2. Sahar Kokaly. Ph.D. student at McMaster University, co-supervision began in Fall 2014. Topic: *Software Complience via Model Management*, Expected completion: in 2018.
3. Ramy Shahin. January 2017-present. Topic: *Lifting Product Line Analyses*. Expected completion: in 2021.

*Postdocs and Sabbatical Visitors*

1. Prof. Juan De Lara and Esther Guerra (Universidad Autnoma of Madrid), October 2017 - February 2018.
2. Prof. Vijey Ganesh (University of Waterloo), December 2015-March 2016.
3. Dr. Yanzhen (Jenny) Zou (Pekin University, China), Fall 2014-Fall 2015.
4. Dr. Cynthia Desenfeld (Technion). April 2015-December 2016.
5. Dr. Teemu Karstreen (VTT). September 2012-July 2014.
6. Dr. Rick Salay (Toronto) . MITACS Elevate Post-Doctoral Fellow (Industrial), April 2010-2012.
7. Dr. Rick Salay (Toronto) . NECSIS Post-Doctoral Fellow and then NECSIS Research Associate, 2012-June 2016, January 2017-present.
8. Dr. Jessica Davis (Toronto) . NECSIS Post-Doctoral Fellow, 2014.
9. Dr. Shoham Ben-David (Waterloo) . Ontario Post-Doctoral Fellow, July 2009-September 2011.

10. Dr. Zinovy Diskin. Research Associate in Model Management. January 2006 - June 2007. (co-supervised with S. Easterbrook)

11. Dr. Wendy MacCaull (St. Francis Savior), Professor of Mathematics, St. Francis Xavier University, September 2001 – July 2002. Sabbatical Visitor.

*Research Programmers*

1. Alession DiSandro. *Development of MMTF*. January 2012-present.

2. Vivien Suan. *Relationship Taxonomy*. March 2012-February 2013.

*Undergraduate Students Supervised*

1. Kinga Bojarczuk, *Reuse of Model Transformations*, exchange student from Kings College, London, September 2017 - May 2018.

2. Allen (Hanbin) Chang, *Blooming Leaf Project*, CSC494, Fall 2017.

3. Farhan Samir, *Empirical Research Proejct: Which requirements approach is best?*, Summer-Fall 2017.

4. Charlie (Chenyu) Zhang, *Goal Model Generation from Natural Language Requirementse*, Winter-Summer 2018.

5. Colin Chartier, *Web Support for Proof Formatting*, CSC494, Fall 2017.

6. Shayan Kousha, *A Smart Tool for Effective Management of Software Change Histories*, CSC494, Fall 2017.

7. Yikhei (Navie) Chan, *Development of GrowingLeaf*, CSC494, Spring 2017.

8. Ian Berlot-Attwell, *Contributional Implementation Framework*, May-August 2016.

9. Amit Kadan, *Evaluation of Games with a Purpose*, May 2016 - August 2017.

10. Calahan Janik-Jones, *Developer Conversations*, May-August 2016,

11. Gary Song, *GrowingLeaf: Modeling and Analysis for Goals with Temporal Dynamics*, CSC494, Winter 2016.

12. Christina Cheung, Yueti (Elsie) Yang, Asako Matsuoka, Sihua Caoliu, Angel You. *Development of a Game with a Purpose*, September 2015 - present.

13. Jake Fear. *RE with Dynamic Intentions*, May-August 2015.

14. Wil Ginsberg. *Contributional Implementation Framework*, May-August 2015.

15. Christina Cheung. *Games with a Purpose*, May-August 2015.

16. Kaveh Ghasemloo. *Lifting Transformations*, May-October 2015.

17. Naama Ben-David. *Development of MU-MMINT*, May-October 2014.

18. Michael Layzell. *Internet-Enabled Computing*, May-August 2014.

19. Danitte Kozai. *Development of DMTS Analyzer*, May-August 2013.

20. Lam, Winnie. *Development of DMTS Analyzer*, May-August 2011.

21. Quach, Benson. *Development of the Framework for Model Management*, May-August 2011.

22. Gorzny, Jan. *Development of JSCOOP*, May-August 2010.

23. Ogunbiyi, Oloruntobi. *Development of the Framework for Model Management*, May-August 2010.

24. Gorrie, Cameron. *JSCOOP: Implementing the SCOOP Concurrency Model for Java*, May-August 2009.

25. Zhu, Qiyu. *Light Types for Analyzing Models*, May-August 2009.

26. Wang, Jeffrey. *A Framework for Model Management*, May-August 2008.

27. Hang, Yu Heng. *A Framework for Model Management*, May-August 2008. NSERC URGA.

28. Lugin, Laurie. *Software Model-Checking*, May-August 2008. Exchange student from INRIA, France.

29. Sassolas, Mathiu. *Merging Inconsistent MTSs with Policies*, February-August 2007. Exchange student from Univ. of Paris Couchon.

30. Viriyakattiyaporn, Petcharat (Apple). *Eclipse Plugin for Model Merging*, May-September 2007. NSERC UGRA (co-supervised with S. Easterbrook).

31. McCormick, Pete. *Eclipse Plugin for Model Merging*, April-December 2007. NSERC UGRA. (co-supervised with S. Easterbrook).

32. Selyshchev, Anton. *Points-to Analysis for Software Model-Checking*, Summer 2006. NSERC UGRA.

33. Degtiareva, Evguenia. *Algorithms for Behavioural Model Merging*, CSC494, Winter 2006.

34. Xin, Ma. *Abstraction-refinement in Software Model-Checking*, NSERC UGRA, Summer 2004.

35. Liu, Jianfeng (Jennifer). *Website Development for Formal Methods Group*, Summer 2004.

36. Ku, Kelvin. *Software Model-Checking*, CSC494, Fall 2004 and NSERC UGRA, Summer 2004.

37. Petrovykh, Victor. *Simulator for $\chi$Chek*, CSC494, Winter 2004.

38. Gan, Yuan. *Development of Compositional Verification Algorithm*, 2003.

39. Rashidian, Maryam. *Testcase Generation using Temporal Logic Query Checking*, 2003.

40. Talati, Rohit. *Development of User-Interface for TLQSolver*, Summer 2003.

41. Shukla, Kapil. *Proof Generation with KEGVis*, Summer 2003. NSERC UGRA.

42. Tefliovich, Anya. *Development of XChek GUI*, June-July 2002.

43. Thompson-Walsh, Christopher. *Development of a Lattice Library in JAVA*, Summer 2000, *Development of Multi-Valued Model-Checker*, Summer 2001, *Development of Temporal Logic Query Checker*, Summer 2002.

44. Truong, Giang. *Resources for Teaching Software Engineering in Southern Ontario*, Summer 2000.

45. Petrovykh, Victor. *Development of Multi-Valued Model Checker*, 2000-2002.

46. Wong, Ben. *KEGVis: A Web-Based Counter-Example Visualizer for Multi-Valued Model-Checking*, ECE B.Sc. Thesis, 2001.

47. Chang, Annie (University of British Columbia, part of distributed mentoring program). *Multi-Valued Modeling*, Summer 2001.

48. Aul, Chhad. *Development of an Elevator Simulator*, ECE B.Sc. Thesis, 2000 (joint supervision with E. Hehner).

49. Gurfinkel, Arie and Nudelman, Eugene. *Development of SHADOW: A Framework for Creating Program Analysis Tools*, CSC498/CSC499, 1999-2000.

50. Wong, Serene and Lim, Virginie. *Development of SC(R)$^3$: A Toolset for Improving Usability of Formal Methods*, Summer 1999.

51. Crochet, Paul. *Adaptive Authentication: Improving Throughput Subject to Denial-of-Service Attacks*, Summer 1999 (internship from INCA, France).

52. Suydam, David. *Specification-based Testing for SCR Requirements*, CSC498, Winter 1998.

53. Chaudhry, Kiran. *A Study of Functional Languages*, CSC498, Summer 1998.

54. Cwir, Veronika. *Code Generation from SCR Requirements*, independent study, 1998-99. IBM Junior Fellow.

55. Mouline, Hicham. *Model-checking of complete SCR requirements*, summer 1998 (internship from INCA, France).

56. Cwirko-Godycki, Matthew. *Cruise Control System: A Case Study in Using SCR in Development and Verification of Safety-Critical Systems*, CSC299Y, 1997-98.

57. Sudha, V. Sai. *Checking Consistency Between Code and Annotations*, CSC498, Summer 1997.

58. Wendland, David. *Tool integration and development of GUI for analysis of correctness of embedded systems*, Summer 1997 (internship from INCA, France).

*Visiting Graduate Students and Incomplete Theses*

1. Hakan Asan (Ph.D.), *Security Attack Prevention*, December 2015-March 2016. Exchange student from Dokuz Eylul University, Turkey.

2. Ahmed Mashiyat, Topic: *Swift Trust Computation for On-Line Collaboration.* September 2011-December 2011, September 2012-July 2015. Exited the program in 2015.

3. Faraz Ahmedi Torshizi (Ph.D), *Static Analysis of Concurrent Programs*, September 2008-September 2010.

4. Nicole Allard, (M.Sc.), *Reasoning about Component Composition*, September 2008-June 2009.

5. Tom Hart, (Ph.D.), *Security Analysis via Verification*, joint supervision with David Lie. September 2005-October 2008.

6. Benet Devereux (Ph.D.), *Model-checking Changing Models*, joint supervision with Steve Easterbrook, June 2001-August 2005. Last checkpoint passed: thesis proposal.

7. Jonathan Amir (Ph.D.), June 2005-March 2006.

8. Wei Zhou, (M. Sc.) *Formal Reasoning about Software Frameworks*, September 1999-December 2001.

9. Ariel Fuxman (M. Sc.) *Relationship between Architectural Description Languages and Application Frameworks*, September 1999 - February 2000.

10. Bernd Biechele (M. Sc.) *Model-checking Embedded Systems*, exchange student from University of Ulm, 1997-98, thesis completed in Ulm in 1999.

11. Yuxiang Zhu (M. Sc.) *Discovery of Denial-of-Service Attacks using Model-Checking*, September 1999 - January 2000.

12. Marianna Nicolosi (Ph.D.) *Reasoning about Inconsistency in Requirements Specifications*, co-supervised with S. Easterbrook, exchange student from University of Catalinia, Italy, January-June 2000.

*Graduate Examining Committees and External Examiner*

| When | Student | Degree | Completed/In progress |
|---|---|---|---|
| 2018-present | John Adler (ECE) | Ph.D. | in progress |
| 2018-present | Ryan Berryhill (ECE) | Ph.D. | in progress |
| 2017-present | Mahsa Sadhi | Ph.D. | in progress |
| 2017-present | Aamod Kore | Ph.D. | in progress |
| 2017 | Vajih Montaghami (Waterloo) | Ph.D. | completed |
| 2016 | Amal Khalil (Queen's Univ.) | Ph.D. | completed |
| 2014 | Julian Tschannen (ETH, Zurich) | Ph.D. | completed |
| 2014 | Jon Ringert (Aachen, Germany) | Ph.D. | completed |
| 2014 | Matt Amy | Ph.D. | in progress |
| 2012 | Shirin Sohrabi | Ph.D. | completed |
| 2011-2012 | David Barton | Ph.D. | withdrawn |
| 2011-2012 | Alicia Grubb | Ph.D. | in progress, became primary supervisor |
| 2010-2013 | Niloofar Razavi | Ph.D. | completed |
| 2010-2016 | Zachary Kinchaid | Ph.D. | completed |
| 2010 | Rick Salay | Ph.D. | completed |
| 2010 | Robert Will | M.Sc. | completed |
| 2008 | Mehrdad Sabetzadeh | Ph.D. | completed |
| 2007-present | Justin Ward | Ph.D. | completed |
| 2007-2008 | Marco Autili (Universita di L'Aquila, Italy) | Ph.D. | completed |
| 2007 | Amit Chandel | M.Sc. | completed |
| 2006 | Taimur Javed | M.Sc. | completed |
| 2005-2006 | Irum Godil | M.Sc. | completed |
| 2005 | Nan Zhang | M.Sc. | completed |
| 2005-2009 | Anya Tefliovich | Ph.D. | completed |
| 2004-2008 | Sotirios Liaskos | Ph.D. | completed |
| 2003-2008 | Yilan Gu | Ph.D. | completed |
| 2002-2009 | Wendy Liu | Ph.D. | completed |
| 1998-2002 | Minhas Rajinderjeet (ECE) | Ph.D. | completed |
| 2001-2006 | Yannis Kassios | Ph.D. | completed |
| 2000-2008 | Bob Bernecky | Ph.D. | withdrawn |
| 2000-2006 | Daqing Hou (Univ. of Alberta) | Ph.D. | completed |
| 1999-2003 | Mark Pichora | Ph.D. | completed |
| 1999-2013 | Albert Lai | Ph.D. | completed |
| 1996 | Eric Parsons | Ph.D. | completed |
| 1996-1998 | Kevin Schlueter | Ph.D. | completed |
| 1998-2001 | Susan Sim | M.Sc. | completed |
| 1998 | Jelena Ivanisevic | M.Sc. | completed |
| 1997-2004 | Steven Shapiro | Ph.D. | completed |

## VI. University and Community Service

*Department Service*

- **Member**, Grad Affairs Committee, 2018-present.
- **Chair**, Computer Science Education Centre Working Group, 2018-present.
- **Member**, Teaching Committee for Eyal DeLara, 2015.
- **Member**, Tenure Committee for Daniel Wigdor, 2016.
- **Member**, Tenure Committee for Raquel Urtusan, 2016.
- **Vice Chair**, Department of Computer Science, 2009-2011, 2013-June 2016
- **Committee Chair**, DCS Information System (dcs-is), 2009-2011, 2013-June 2016
- **Member**, DCS Information System (dcs-is) Summer-Fall 2016.

- **Committee Chair**, DCS Faculty and Staff Awards Committee, 2009-2011, 2013-2016, **Member**, Fall 2016, 2018-on
- **Member**, Professional Masters Admissions Committee, 2015-16.
- **Chair**, DCS Incentives Working Group, 2015-16.
- **Member**, DCS Turns 50 committee, 2014-15.
- **Organizer**, DCS Distinguished Lecture Series, 2009-2011, 2013-2016
- **Member**, DCS Planning and Budget Committee, 2005-2008, 2009-2011, 2013-2015
- **Committee Chair**, DCS Cross-, Adjunct and Status-only Appointments Committee, 2009-2011, 2013-2016. **Member**, 2018-present.
- **Member**, Computer Science Chair Search Committee, 2010, 2015
- **Member**, Department Recruiting Committee, 2010.
- **Member**, Computer Science Graduate Chair Search Committee, 2010, 2015
- **Member**, Annual Performance Evaluation (PTR) Committee, 2005, 2006, 2007, 2010, 2011, 2012, 2013, 2014, 2015, 2016.
- **Mentor** for Prof. Azadeh Farzan, April 2010-present.
- **Mentor** for Sanja Fidler, April 2016-present.
- **Member**, DCS Professional Masters Working Group, 2007-2008.
- **Member**, Editorial board, DCS Newsletter, 2007-2008, 2009-2011, 2013-2015.
- **Member**, DCS Communications Committee, 2014-2015.
- **Member**, DCS Lecturer Recruiting Committee, 2014-2015.
- **Member**, 3rd Year Review for Angela Demke-Brown, 2007.
- **Member**, Research Reading Committee for Eyal de Lara, 2006-2007.
- **Session Chair**, DCS Retreat, May 2006.
- **Member**, Teaching Committee for Gerald Penn, 2005-2006.
- **Member**, Advancement and Outreach Commmittee, 2005-2006.
- **Member**, Chief Executive Officer Selection Committee, 2004.
- **Coordinator** (admissions and recruiting), Software Engineering group, 2002, 2003-2006.
- **Member**, Breadth Evaluation Committee, 1998-2002, 2004-2006.
- **Member**, Graduate Admissions Committee, 1998-2000, 2003-2005.
- **Member**, Faculty Recruiting Committee, 1997, 1998, 2004.
- **Member**, Library Committee, 1996-98.
- **Undergraduate advisor**, 1998, 1999, 2000, 2001
- **Member**, Curriculum Development Committee for Electrical Engineering / Software Engineering Option, Department of Electrical and Computer Engineering, 1997.
- **Faculty coordinator** of DCSWomen, an organization of female graduate students and faculty in CS department, (approx. 70 people), 1998-2002.

*Faculty/University Service*

- **Member**, SGS Review Committee for Trillium Awards, March 2016.
- **Member, External Review Committee**, Faculty of Computer Science, Dalhousie University, January 2015.
- **Member**, Women in Arts and Science Committee, Faculty of Arts & Science, 1998-2001.

*Community Service*

- **Panel participant**, Women in CS Panel, Univ. of Toronto, September 29, 2017.
- **Participant and speaker**, MITACS/ACCELERATE Ontario Media event, IBM Toronto Lab, June 25, 2008.
- **Participant** of the Canadian Distributed Mentorship Program, Summer 2001.
- **Speaker**, DCS Graduate Student Seminar: "How to Choose a Research Problem", November 2003.
- **Participant** in UofT A&S Campaign for calling prospective undergraduate students, 1999.
- **Mentor**, Abelard High School, Toronto, 1997-present.
- DCS **Representative** for Engineering Open House, 1997.

- **Speaker**, Faculty of Arts & Science "Careers for Women in the Academy" workshop, January 1999 and November 1999.
- **Lecturer**, Computing Insights, Department of Computer Science, 1997, 1998, 1999.