Dr Michael Tautschnig

michael.tautschnig@gmail.com
https://www.tautschnig.net

PRESENT EMPLOYMENT

Amazon Web Services, AWS Security — *Senior Software Development Engineer*
London, UK — **since July 2015**

Queen Mary University of London — *Lecturer in Theoretical Computer Science*
London, UK — **since January 2013**

SELECTED PUBLICATIONS

Journal Articles and Book Chapters

Lihao Liang, Tom Melham, Daniel Kroening, Peter Schrammel, and Michael Tautschnig. Effective verification for low-level software with competing interrupts. *ACM Trans. Embedded Comput. Syst.*, 17(2):36:1–36:26, 2018.

Marieke Huisman, Vladimir Klebanov, Rosemary Monahan, and Michael Tautschnig. Verifythis 2015 - A program verification competition. *STTT*, 19(6):763–771, 2017.

Andreas Holzer, Christian Schallhart, Michael Tautschnig, and Helmut Veith. Closure properties and complexity of rational sets of regular languages. *Theor. Comput. Sci.*, 605:62–79, 2015.

Jade Alglave, Luc Maranget, and Michael Tautschnig. Herding cats: Modelling, simulation, testing, and data mining for weak memory. *ACM Trans. Program. Lang. Syst.*, 36(2):7, 2014. *Cited in Linux Weekly News and C/C++ WG21/4215.*

Alastair F. Donaldson, Alexander Kaiser, Daniel Kroening, Michael Tautschnig, and Thomas Wahl. Counterexample-guided abstraction refinement for symmetric concurrent programs. *Formal Methods in System Design*, 41(1):25–44, 2012.

Andreas Bauer, Martin Leucker, Christian Schallhart, and Michael Tautschnig. Don't care in SMT—building flexible yet efficient abstraction/refinement solvers. *International Journal on Software Tools for Technology Transfer*, 12(1):23–37, February 2010.

Wolfgang Haberl, Michael Tautschnig, and Uwe Baumgarten. *Generating Distributed Code From COLA Models*, volume 33 of *Lecture Notes in Electrical Engineering*, chapter 20. Springer, March 2009.

Refereed Conference and Workshop Papers

Kareem Khazem and Michael Tautschnig. CBMC path: A symbolic execution retrofit of the C bounded model checker - (competition contribution). In *Tools and Algorithms for the Construction and Analysis of Systems - 25 Years of TACAS: TOOLympics*, volume 11429 of *Lecture Notes in Computer Science*, pages 199–203. Springer, 2019.

Dirk Beyer, Matthias Dangl, Thomas Lemberger, and Michael Tautschnig. Tests from witnesses - execution-based validation of verification results. In *Tests and Proofs (TAP 2018)*, volume 10889 of *Lecture Notes in Computer Science*, pages 3–23. Springer, 2018.

Byron Cook, Kareem Khazem, Daniel Kroening, Serdar Tasiran, Michael Tautschnig, and Mark R. Tuttle. Model checking boot code from AWS data centers. In *Computer Aided Verification (CAV 2018)*, volume 10982 of *Lecture Notes in Computer Science*, pages 467–486. Springer, 2018.

Sumanth Prabhu, Peter Schrammel, Mandayam K. Srivas, Michael Tautschnig, and Anand Yeolekar. Concurrent program verification with invariant-guided underapproximation. In *Automated Technology for Verification and Analysis (ATVA 2017)*, volume 10482 of *Lecture Notes in Computer Science*, pages 241–248. Springer, 2017.

Pasquale Malacaria, Michael Tautschnig, and Dino Distefano. Information leakage analysis of

complex C code and its application to OpenSSL. In *7th International Symposium on Leveraging Applications of Formal Methods, Verification and Validation (ISoLA 2016)*, volume 9952 of *Lecture Notes in Computer Science*, pages 909–925, 2016.

Kareem Khazem and Michael Tautschnig. smid: A black-box program driver. In *23rd International Symposium on Model Checking Software (SPIN 2016)*, volume 9641 of *Lecture Notes in Computer Science*, pages 182–188. Springer, 2016.

Rajdeep Mukherjee, Michael Tautschnig, and Daniel Kroening. v2c - A verilog to C translator. In *Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2016)*, volume 9636 of *Lecture Notes in Computer Science*, pages 580–586. Springer, 2016.

Adam Nellis, Pascal Kesseli, Philippa Ryan Conmy, Daniel Kroening, Peter Schrammel, and Michael Tautschnig. Assisted coverage closure. In *NASA Formal Methods (NFM 2016)*, volume 9690 of *Lecture Notes in Computer Science*, pages 49–64. Springer, 2016.

Martin Chapman, Hana Chockler, Pascal Kesseli, Daniel Kroening, Ofer Strichman, and Michael Tautschnig. Learning the language of error. In *Automated Technology for Verification and Analysis (ATVA 2015)*, volume 9364 of *Lecture Notes in Computer Science*, pages 114–130. Springer, October 2015.

Daniel Kroening, Lihao Liang, Tom Melham, Peter Schrammel, and Michael Tautschnig. Effective verification of low-level software with nested interrupts. In *Design, Automation & Test in Europe Conference & Exhibition (DATE 2015)*, pages 229–234. ACM, March 2015.

Daniel Kroening and Michael Tautschnig. Automating software analysis at large scale. In *9th International Doctoral Workshop on Mathematical and Engineering Methods in Computer Science (MEMICS 2014)*, volume 8934 of *Lecture Notes in Computer Science*, pages 30–39. Springer, October 2014.

Daniel Kroening and Michael Tautschnig. CBMC - C bounded model checker - (competition contribution). In *Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2014)*, volume 8413 of *Lecture Notes in Computer Science*, pages 389–391. Springer, April 2014. *CBMC won the overall Gold medal.*

Jade Alglave, Luc Maranget, and Michael Tautschnig. Herding cats: modelling, simulation, testing, and data-mining for weak memory. In *Programming Language Design and Implementation (PLDI 2014)*, page 7. ACM, 2014.

Roderick Bloem, Robert Könighofer, Franz Röck, and Michael Tautschnig. Automating test-suite augmentation. In *Quality Software (QSIC 2014)*, pages 67–72. IEEE, 2014.

Andreas Holzer, Christian Schallhart, Michael Tautschnig, and Helmut Veith. On the structure and complexity of rational sets of regular languages. In *Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2013)*, volume 24 of *LIPIcs*, pages 377–388. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, December 2013.

Alex Horn, Michael Tautschnig, Celina G. Val, Lihao Liang, Tom Melham, Jim Grundy, and Daniel Kroening. Formal co-validation of low-level hardware/software interfaces. In *Formal Methods in Computer-Aided Design (FMCAD 2013)*, pages 121–128. IEEE, October 2013.

Jade Alglave, Daniel Kroening, and Michael Tautschnig. Partial orders for efficient bounded model checking of concurrent software. In *Computer Aided Verification (CAV 2013)*, volume 8044 of *Lecture Notes in Computer Science*, pages 141–157. Springer, July 2013.

Jade Alglave, Daniel Kroening, Vincent Nimal, and Michael Tautschnig. Software verification for weak memory via program transformation. In *22nd European Symposium on Programming (ESOP 2013)*, volume 7792 of *Lecture Notes in Computer Science*, pages 512–532. Springer, March 2013.

Dirk Beyer, Andreas Holzer, Michael Tautschnig, and Helmut Veith. Information reuse for multi-goal reachability analyses. In *22nd European Symposium on Programming (ESOP 2013)*, volume 7792 of *Lecture Notes in Computer Science*, pages 472–491. Springer, March 2013.

Hana Chockler, Giovanni Denaro, Meijia Ling, Grigory Fedyukovich, Antti Eero Johannes Hyvärinen, Leonardo Mariani, Ali Muhammad, Manuel Oriol, Ajitha Rajan, Ondrej Sery, Natasha Sharygina, and Michael Tautschnig. PINCETTE – validating changes and upgrades in networked software. In *17th European Conference on Software Maintenance and Reengineering, (CSMR 2013)*, pages 461–464. IEEE Computer Society, March 2013. *Best paper award.*

Gérard Basler, Alastair F. Donaldson, Alexander Kaiser, Daniel Kroening, Michael Tautschnig, and Thomas Wahl. satabs: A bit-precise verifier for C programs - (competition contribution). In *Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2012)*, volume 7214 of *Lecture Notes in Computer Science*, pages 552–555. Springer, April 2012.

Vijay D'Silva, Leopold Haller, Daniel Kroening, and Michael Tautschnig. Numeric bounds analysis with conflict-driven learning. In *Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2012)*, volume 7214 of *Lecture Notes in Computer Science*, pages 48–63. Springer, April 2012.

Andreas Holzer, Daniel Kroening, Christian Schallhart, Michael Tautschnig, and Helmut Veith. Proving reachability using FSHELL - (competition contribution). In *Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2012)*, volume 7214 of *Lecture Notes in Computer Science*, pages 538–541. Springer, April 2012.

Jade Alglave, Daniel Kroening, John Lugton, Vincent Nimal, and Michael Tautschnig. Soundness of data flow analyses for weak memory models. In *Proceedings of Programming Languages and Systems - 9th Asian Symposium (APLAS 2011)*, volume 7078 of *Lecture Notes in Computer Science*, pages 272–288. Springer, December 2011.

Jade Alglave, Alastair F. Donaldson, Daniel Kroening, and Michael Tautschnig. Making software verification tools really work. In *Proceedings of 9th Automated Technology for Verification and Analysis (ATVA 2011)*, volume 6996 of *Lecture Notes in Computer Science*, pages 28–42. Springer, October 2011.

Andreas Holzer, Visar Januzaj, Stefan Kugele, Boris Langer, Christian Schallhart, Michael Tautschnig, and Helmut Veith. Seamless testing for models and code. In *Proceedings of 14th International Conference on Fundamental Approaches to Software Engineering (FASE 2011)*, volume 6603 of *Lecture Notes in Computer Science*, pages 278–293. Springer, April 2011.

Sven Bünte, Michael Zolda, Michael Tautschnig, and Raimund Kirner. Improving the confidence in measurement-based timing analysis. In *Proceedings of 14th IEEE International Symposium on Object/Component/Service-Oriented Real-Time Distributed Computing, ISORC 2011*, pages 144–151, Newport Beach, CA, USA, March 2011. IEEE Computer Society.

Wolfgang Haberl, Markus Herrmannsdoerfer, Stefan Kugele, Michael Tautschnig, and Martin Wechs. Seamless model-driven development put into practice. In *Proceedings of 4th International Symposium on Leveraging Applications (ISoLA 2010)*, volume 6415 of *Lecture Notes in Computer Science*, pages 18–32, Heraklion, Crete, Greece, October 2010. Springer.

Andreas Holzer, Visar Januzaj, Stefan Kugele, and Michael Tautschnig. Timely time estimates. In *Proceedings of 4th International Symposium on Leveraging Applications (ISoLA 2010)*, volume 6415 of *Lecture Notes in Computer Science*, pages 33–46, Heraklion, Crete, Greece, October 2010. Springer.

Andreas Holzer, Michael Tautschnig, Christian Schallhart, and Helmut Veith. An introduction to test specification in FQL. In *Proceedings of 6th International Haifa Verification Conference (HVC 2011)*, volume 6504 of *Lecture Notes in Computer Science*, pages 9–22. Springer, October 2010.

Andreas Holzer, Christian Schallhart, Michael Tautschnig, and Helmut Veith. How did you specify your test suite ? In *Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering (ASE 2010)*, pages 407–416, Antwerp, Belgium, September 2010. ACM.

Hermann Gruber, Markus Holzer, and Michael Tautschnig. Short regular expressions from finite automata: Empirical results. In *Proceedings of the 14th International Conference on*

Implementation and Application of Automata (CIAA 2009), volume 5642 of *Lecture Notes in Computer Science*, pages 188–197, Sydney, Australia, July 2009. Springer.

Andreas Holzer, Christian Schallhart, Michael Tautschnig, and Helmut Veith. Query-driven program testing. In *Proceedings of the Tenth International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2009)*, volume 5403 of *Lecture Notes in Computer Science*, pages 151–166, Savannah, GA, USA, January 2009. Springer.

Wolfgang Haberl, Markus Herrmannsdoerfer, Stefan Kugele, Michael Tautschnig, and Martin Wechs. One click from model to reality. In *Proceedings of Symposium on Automotive/Avionics Systems Engineering (SAASE 2009)*, 2009.

Stefan Kugele, Wolfgang Haberl, Michael Tautschnig, and Martin Wechs. Optimizing automatic deployment using non-functional requirement annotations. In *Leveraging Applications of Formal Methods, Verification and Validation*, volume 17 of *Communications in Computer and Information Science*, pages 400–414, Porto Sani, Greece, October 2008. Springer.

Boris Langer and Michael Tautschnig. Navigating the requirements jungle. In *Leveraging Applications of Formal Methods, Verification and Validation*, volume 17 of *Communications in Computer and Information Science*, pages 354–368, Porto Sani, Greece, October 2008. Springer.

Zhonglei Wang, Andreas Herkersdorf, Stefano Merenda, and Michael Tautschnig. A model driven development approach for implementing reactive systems in hardware. In *Forum on Specification and Design Languages (FDL08)*, pages 197–202, Stuttgart, Germany, September 2008. IEEE Computer Society.

Andreas Holzer, Christian Schallhart, Michael Tautschnig, and Helmut Veith. FShell: Systematic Test Case Generation for Dynamic Analysis and Measurement. In *Proceedings of the 20th International Conference on Computer Aided Verification (CAV 2008)*, volume 5123 of *Lecture Notes in Computer Science*, pages 209–213, Princeton, NJ, USA, July 2008. Springer.

Zhonglei Wang, Wolfgang Haberl, Stefan Kugele, and Michael Tautschnig. Automatic Generation of SystemC Models from Component-based Designs for Early Design Validation and Performance Analysis. In *WOSP '08: Proceedings of the 7th International Workshop on Software and Performance*, pages 139–144, Princeton, NJ, USA, June 2008. ACM.

Sven Bünte and Michael Tautschnig. A Benchmarking Suite for Measurement-Based WCET Analysis Tools. In *International Conference on Software Testing Verification and Validation Workshop (ICSTW'08)*, pages 353–356, Lillehammer, Norway, April 2008. IEEE Computer Society Press.

Wolfgang Haberl, Michael Tautschnig, and Uwe Baumgarten. Running COLA on Embedded Systems. In *Proceedings of The International MultiConference of Engineers and Computer Scientists 2008*, pages 922–928, Hongkong, China, March 2008. *Awarded Certificate of Merit.*

Andreas Bauer, Martin Leucker, Christian Schallhart, and Michael Tautschnig. Don't care in SMT—building flexible yet efficient abstraction/refinement solvers. In *Proceedings of the 2007 ISoLA Workshop On Leveraging Applications of Formal Methods, Verification and Validation (ISoLA)*, pages 135–146, Poitiers, France, December 2007.

Christian Kühnel, Andreas Bauer, and Michael Tautschnig. Compatibility and reuse in component-based systems via type and unit inference. In *Proceedings of the 33rd EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA)*, pages 101–108, Lübeck, Germany, August 2007. IEEE Computer Society Press.

Andreas Bauer, Markus Pister, and Michael Tautschnig. Tool-support for the analysis of hybrid systems and models. In *Proceedings of the 2007 Conference on Design, Automation and Test in Europe (DATE)*, pages 924–929, Nice, France, April 2007. European Design and Automation Association.

PATENTS

Optimizing API implementer programs using fine-grained code analysis

Patent number 9904527. Awarded February 27, 2018.

RESEARCH GRANTS

Facilitating Code Merging with User-Defined Abstractions
Google Faculty Research Award *September 2014 – August 2015*
Project partners: Hana Chockler (King's College London), Daniel Kroening (University of Oxford), Ofer Strichman (Technion). Total award: USD 59,000. **Role MT:** Co-investigator.

Benchmarking Hardware
GCHQ Small Grant *March 2014 – February 2015*
Funding: GBP 50,000. **Role MT:** Principal investigator.

SELECTED INVITED TALKS

Formal Verification at Amazon
Keynote at 18th International Workshop on Automated Verification of Critical Systems, Oxford, July 2018. QCon International Software Development Conference, London, March 2018.

Avoiding Groundhog Day: A practitioner's daily mentoring through code reviews
56th CREST Open Workshop: Code Review and Continuous Inspection/Integration, UCL, London, November 2017.

Formal Verification at Amazon
FaceTAV 2017 Symposium, London, November 2017.

Challenges in Analysing Virtualisation Stacks
Big Proof workshop, Alan Turing Institute, London, July 2017. Deep Specifications Workshop, Barcelona, June 2017.

Automating Software Analysis at Large Scale
High Integrity Software (HIS), Bristol, November 2016. Verified Software: Theories, Tools, and Experiments (VSTTE), Toronto, July 2016. Alan Turing Institute: Data Protection and Security at Scale, London, November 2015. Technical University of Graz, July 2015. Next Generation Static Software Analysis Tools, Dagstuhl, August 2014. Facebook Faculty Summit, London, September 2014. Keynote at MEMICS, Telc, October 2014. University of Passau, May 2014.

Bounded Model Checking using CBMC
University of Kent, October 2017. University of Sussex, May 2017. Evaluating Software Verification Systems: Benchmarks and Competitions, Dagstuhl, April 2014.

Partial Orders for Efficient BMC of Concurrent Software
Imperial College, London, July 2013.

Query-Driven Program Testing
Technical University of Graz, June 2013.

Partial Orders for Efficient BMC of Concurrent Software
UPMARC Verification Workshop, Uppsala, May 2013.

UNIVERSITY ACTIVITIES

Semester A 2018/2019 *Lecturer*
Director of Undergraduate Admissions. Lecturing *Microprocessor Systems Design*; supervision of BSc/BEng projects.

Semester B 2017/2018 *Lecturer*
Co-lecturing *Software Analysis and Verification*; supervision of BSc/BEng projects.

Semester A 2017/2018 *Lecturer*
Director of Undergraduate Admissions. Lecturing *Microprocessor Systems Design*; supervision of BSc/BEng projects.

Semester B 2017/2018 *Lecturer*
Co-lecturing *Software Analysis and Verification*; supervision of MSc dissertations; supervision of BSc/BEng projects.

Semester A 2016/2017 *Lecturer*
Director of Undergraduate Admissions. Lecturing *Microprocessor Systems Design*; supervision of BSc/BEng projects.

Semester B 2016/2017 *Lecturer*
Co-lecturing *Automata and Formal Languages*; co-lecturing *Software Analysis and Verification*; supervision of MSc dissertations; supervision of BSc/BEng projects.

Semester A 2015/2016 *Lecturer*
Director of Undergraduate Admissions. Lecturing *Microprocessor Systems Design*; co-lecturing *Embedded Systems*; supervision of BSc/BEng projects.

Semester B 2014/2015 *Lecturer*
Co-lecturing *Language and Communication*; co-lecturing *Software Analysis and Verification*; supervision of MSc dissertations; supervision of BSc/BEng projects.

Semester A 2014/2015 *Lecturer*
Lecturing *Microprocessor Systems Design*.

Semester B 2013/2014 *Lecturer*
Co-lecturing *Language and Communication*; co-lecturing *Software Analysis and Verification*; supervision of MSc dissertations.

Semester B 2012/2013 *Lecturer*
Co-lecturing *Software Analysis and Verification*; supervision of MSc dissertation.

Hilary Term 2012 *Tutor*
Tutor in practicals of the course on *Concurrent Programming*

Hilary Term 2011 *Tutor, Lecturer*
2 Lectures and tutor in practicals of the course on *Software Verification*

Winter Term 2010 *Tutor*
Exercises of the course on *Formal Methods in Computer Science*

Summer Term 2010 *Tutor*
Lab course *Computer Aided Verification*

Winter Term 2009 *Tutor*
Exercises of the course on *Efficient Decision Procedures*; Seminar *Software Validation*

Winter Term 2009 *Supervisor*
Bachelor Thesis: Latinka Pavlova. *Automated Security Analysis of PAM using CBMC.*

Summer Term 2009 *Tutor*
Lectures and exercises of the course on *Automated Methods in Software Engineering*; Seminar *Software Validation*

Winter Term 2008 *Tutor*
Exercises of the course on *Efficient Decision Procedures*; Lab course *Program- and Model Analysis*; Seminar *Software Validation*

Winter Term 2007 *Supervisor*
Diploma Thesis: Patrick Drude. *Solving Sat Modulo Theory Problems with Fourier-Motzkin Elimination.*

Winter Term 2007 *Tutor*
Exercises of the course on *Automata, Formal Languages and Computability*; Lab courses *Game Playing* and *Lego Mindstorms*; Seminar *Software Validation*

Summer Term 2007 *Tutor*
Exercises of the course on *model checking*; Lab courses *Game Playing* and *Lego Mindstorms*

Winter Term 2006 *Tutor*
Exercises of the course on *Automata, Formal Languages and Computability*

Summer Term 2006 *Tutor*
Lab course *Game Playing*

Summer Term 2003 – Summer Term 2006 *Tutor*
Lab course *Lego Mindstorms*

Past Professional Activities

University of Oxford, Department of Computer Science *Research assistant*
Oxford, UK **January 2011 – December 2012**
Research assistant in the group of Prof. Daniel Kroening. Principal funding: EPSRC Grant EP/H017585/1 – Verification of Shared-Memory Concurrent Software. Further project work: CESAR (largest ARTEMIS project), Pincette (FP7 STREP), VeTeSS (ARTEMIS).

Technische Universität Wien, Arbeitsbereich FORSYTE *Research assistant*
Vienna, Austria **January 2010 – December 2010**
Ph.D. student in the group of Prof. Helmut Veith. Key researcher in BMWI grant 20H0804B in the frame of LuFo IV-2 project INTECO in collaboration with Diehl Aerospace.

Technische Universität Darmstadt, FG FORSYTE *Supervision of trainee*
Darmstadt, Germany **April 2009 – December 2009**
Supervision of Stefan Wilke (trainee as "Fachinformatiker/Systemintegration"). Completed training as 2nd best in class in June 2012.

Simon Fraser University *Internship*
Vancouver, Canada **November 2008 – December 2008**
Research collaboration with Prof. Dirk Beyer.

Technische Universität Darmstadt, FG FORSYTE *Research assistant*
Darmstadt, Germany **March 2008 – December 2009**
Ph.D. student in the group of Prof. Helmut Veith. Key researcher in DFG grant FORTAS – Formal Timing Analysis Suite for Real Time Programs (VE 455/1-1); key researcher in BMWI grant 20H0804B in the frame of LuFo IV-2 project INTECO in collaboration with Diehl Aerospace.

Technische Universität München, I7 *Research assistant*
Munich, Germany **May 2006 – February 2008**
Ph.D. student in the group of Prof. Helmut Veith. Key researcher in research collaboration with BMW; key researcher in DFG grant FORTAS – Formal Timing Analysis Suite for Real Time Programs (VE 455/1-1).

Community Service

Conference and Workshop Organisation
CAV 2019 Artifact Evaluation: Co-chair. FLoC 2018: website maintenance. CAV 2015 Artifact Evaluation: Co-chair. ETAPS 2015: Publicity chair. Reorder Workshop at CAV, 2013: Organiser. SPIN Workshop on Model Checking of Software, 2012: Local arrangements chair.

Program Committee
26th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS), 2020; 13th International Conference on Tests and Proofs (TAP), 2019; 17th International Symposium on Automated Technology for Verification and Analysis (ATVA), 2019; Co-chair of the 17th International Workshop on Satisfiability Modulo Theories (SMT), 2017; 25th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS), 2019; 9th Working Conference on Verified Software: Theories, Tools, and Experiments (VSTTE), 2017; 4th International Tools and Methods of Program Analysis Conference (TMPA), 2017; Conference on Formal Methods in Computer-Aided Design (FMCAD), 2016, 2017; 23rd International Symposium on Model Checking of Software (SPIN), 2016; Co-chair of the Artifact Evaluation Committee at the International Conference on Computer Aided

Verification (CAV), 2015; Jury member in TACAS Competition on Software Verification (SV-COMP), 2012, 2014, 2015, 2016, 2017, 2018; The Third International Conference on Advances in System Testing and Validation Lifecycle (VALID), 2011; 5th International Computer Science Symposium in Russia (CSR), 2010.

Conference and Journal Referee
ACM Transactions on Programming Languages and Systems (TOPLAS); Journal on Software Tools for Technology Transfer (STTT); IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD); IEEE Transactions on Software Engineering (TSE); Automated Software Engineering; Software: Practice and Experience; Journal of Systems and Software (JSS); Science of Computer Programming; Software Testing, Verification and Reliability (STVR); The Computer Journal (COMPJ); Formal Methods in System Design (FMSD); Information Processing Letters (IPL);

33rd International Conference on Automated Software Engineering (ASE), 2018; 24th International Symposium on Model Checking of Software (SPIN), 2017; International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI): 2012, 2014, 2015; International Conference on Computer Aided Verification (CAV): 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2018; 35th Programming Language Design and Implementation (PLDI), 2014; 5th Working Conference on Verified Software: Theories, Tools, and Experiments (VSTTE), 2013; 16th International Conference on Theory and Applications of Satisfiability Testing (SAT), 2013; 2nd Workshop on Validation Strategies for Software Evolution (VSSE), 2013; 5th NASA Formal Methods Symposium (NFM), 2013; 30th IEEE International Conference on Computer Design (ICCD), 2012; Formal Methods in Computer Aided Design (FMCAD): 2009, 2010, 2011, 2012; 18th International Symposium on Formal Methods (FM): 2011, 2012; International Colloquium on Automata, Languages and Programming (ICALP): 2007, 2012; International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS), 2012, 2015, 2017; Design, Automation & Test in Europe (DATE): 2011, 2012; Software Verification and Testing 2012, ACM-SAC, 2012; 9th Asian Symposium on Programming Languages and Systems (APLAS), 2011; 1st International Workshop on Design and Implementation of Formal Tools and Systems (DIFTS), 2011; 9th International Symposium on Automated Technology for Verification and Analysis (ATVA), 2011; 9th International Workshop on Satisfiability Modulo Theories (SMT), 2011; 22nd International Conference on Concurrency Theory (CONCUR), 2011; 16th International Workshop on Formal Methods for Industrial Critical Systems (FMICS), 2011; Formal Methods for Components and Objects (FMCO), 2010; 9th International Conference on Formal Methods and Models for Codesign (MemoCODE), 2011; Symposium on Theoretical Aspects of Computer Science (STACS), 2011; Haifa Verification Conference (HVC), 2010; Computation Tools, 2010; 31st IEEE Real-Time Systems Symposium (RTSS), 2010; 7th International Colloquium on Theoretical Aspects of Computing (ICTAC), 2010; International Computer Science Symposium in Russia (CSR): 2007, 2010; 6th International Conference on Quantitative Evaluation of Systems (QEST), 2009; International Symposium On Leveraging Applications of Formal Methods, Verification and Validation (ISoLA), 2008; 1st International Conference on Language and Automata Theory and Applications (LATA), 2007;

Professional Bodies
Fellow of The Higher Education Academy. Member of the ACM.