

Publications – Andrei Popescu

Refereed Journal Publications

1. Thomas Bauereiß, Armando Pesenti Gritti, Andrei Popescu and Franco Raimondi. CoSMedis: A Distributed Social Media Platform with Formally Verified Confidentiality Guarantees. **Journal of Automated Reasoning**, 2017, to appear
2. Ondřej Kunčar and Andrei Popescu. From Types to Sets by Local Type Definitions in Higher-Order Logic. **Journal of Automated Reasoning**, 2017, to appear (special issue with a selection the ITP 2016 papers).
3. Ondřej Kunčar and Andrei Popescu. A Consistent Foundation for Isabelle/HOL. **Journal of Automated Reasoning**, 2017, to appear (special issue with a selection the ITP 2015 papers).
4. Jasmin Christian Blanchette, Andrei Popescu Dmitriy Traytel. Soundness and Completeness Proofs by Coinductive Methods. **Journal of Automated Reasoning** 58(1), 149-179, 2017 (special issue with a selection of the IJCAR 2014 papers).
5. Jasmin Christian Blanchette, Sascha Böhme, Andrei Popescu, and Nicholas Smallbone Encoding monomorphic and polymorphic types. *Logical Methods in Computer Science* 12(4), 2016 (special issue with a selection of the TACAS 2013 papers).
6. Andrei Popescu and Grigore Roşu. Term-Generic Logic. **Theoretical Computer Science** 577, 2015, pp. 1-24.
7. Tobias Nipkow and Andrei Popescu. Making Security Type Systems Less Ad Hoc. *IT - Information Technology* 56(6), 2014, pp. 267-272.
8. Andrei Popescu, Johannes Hölzl and Tobias Nipkow. Formal Verification of Language-Based Concurrent Noninterference. *Journal of Formalized Reasoning* 6(1), 2013.
9. Andrei Popescu, Traian Şerbănuţă and Grigore Roşu. A semantic approach to interpolation. **Theoretical Computer Science**, 410(12-13), 2009, pp. 1109-1128.
10. Daniel Găină and Andrei Popescu. An institution-independent proof of the Robinson consistency theorem. *Studia Logica*, 85(1), 2007, pp. 41-73.
11. Andrei Popescu. Some algebraic theory for many-valued relation algebras. *Algebra Universalis*, 56, 2007, pp. 211-235.
12. Daniel Găină and Andrei Popescu. An institution-independent generalization of Tarski's elementary chain theorem. *Journal of Logic and Computation*, 16(6), 2006, pp. 713-735.
13. George Georgescu and Andrei Popescu. A common generalization for MV-algebras and Łukasiewicz-Moisil algebras. *Archive for Mathematical Logic*, 45(8), 2006, pp. 947-981.
14. George Georgescu and Andrei Popescu. A new class of probabilities on Łukasiewicz-Moisil algebras. *Journal of Multiple-Valued Logic and Soft Computing*, 12(3-4), 2006, pp. 337-354.
15. George Georgescu, Ioana Leuştean and Andrei Popescu. Order convergence and distance on Łukasiewicz-Moisil algebras. *Journal of Multiple-Valued Logic and Soft Computing*, 12(1-2), 2006, pp. 33-69.
16. Andrei Popescu. Łukasiewicz-Moisil relation algebras. *Studia Logica* 81(2), 2005, pp. 167-190.

17. George Georgescu and Andrei Popescu. Similarity convergence in residuated lattices. *Logic Journal of IGPL*, 13, 2005, pp. 389 - 413.
18. Andrei Popescu. Many-valued relation algebras. *Algebra Universalis* 53, 2005, pp. 73-108.
19. George Georgescu and Andrei Popescu. Non-commutative fuzzy structures and pairs of weak negations. *Fuzzy Sets and Systems* 143, 2004, pp. 129-155.
20. Andrei Popescu. A general approach to fuzzy concepts. *Mathematical Logic Quarterly* 50(3), 2004, pp. 1-17.
21. George Georgescu and Andrei Popescu. Non-dual fuzzy connections. *Archive for Mathematical Logic* 43, 2004, pp. 1009-1039.
22. George Georgescu and Andrei Popescu. Non-commutative fuzzy Galois connections. *Soft Computing*, 7(7), 2003, pp. 458-467.
23. George Georgescu and Andrei Popescu. Concept lattices and similarity in non-commutative fuzzy logic. *Fundamenta Informaticae*, 53(1), 2002, pp. 23-54.

Refereed Conference Publications

1. Ondřej Kunčar and Andrei Popescu. *Safety and Conservativity of Definitions in HOL and Isabelle/HOL. Principles of Programming Languages (POPL) 2018. Article number 24, pp. 1–24.*
2. Jasmin Christian Blanchette, Fabian Meier, Andrei Popescu, Dmitriy Traytel Foundational nonuniform (co)datatypes for higher-order logic. *32nd Annual ACM/IEEE Symposium on Logic in Computer Science (LICS) 2017. pp. 1–12.*
3. Lorenzo Gheri and Andrei Popescu. A Formalized General Theory of Syntax with Bindings. *8th International Conference on Interactive Theorem Proving (ITP) 2017. pp. 241–261.*
4. Thomas Bauereiß, Armando Pesenti Gritti, Andrei Popescu and Franco Raimondi. *CoSMedis: A Distributed Social Media Platform with Formally Verified Confidentiality Guarantees. 38th IEEE Symposium on Security and Privacy (IEEE S&P) 2017. pp. 729-748*
5. Jasmin Christian Blanchette, Aymeric Bouzy, Andreas Lochbihler, Andrei Popescu, and Dmitriy Traytel *Friends with benefits: Implementing corecursion in foundational proof assistants. 26th European Symposium on Programming (ESOP) 2017. pp. 111-140*
6. Ondřej Kunčar and Andrei Popescu. *Comprehending Isabelle/HOL's consistency. 26th European Symposium on Programming (ESOP) 2017. pp. 724-749*
7. Thomas Bauereiß, Armando Pesenti Gritti, Andrei Popescu, Franco Raimondi. *CoSMed: A Confidentiality-Verified Social Media Platform. 7th International Conference on Interactive Theorem Proving (ITP) 2016. pp. 87-106*
8. Ondřej Kunčar and Andrei Popescu. From Types to Sets by Local Type Definitions in Higher-Order Logic. *7th International Conference on Interactive Theorem Proving (ITP) 2016. pp. 200-218*
9. Jasmin Christian Blanchette, Andrei Popescu and Dmitriy Traytel. *Foundational Extensible Corecursion—A proof Assistant Perspective. 20th ACM SIGPLAN International Conference on Functional Programming (ICFP) 2015, pp. 192-204.*
10. Jasmin Christian Blanchette, Andrei Popescu Dmitriy Traytel. Witnessing (Co)datatypes. *24th European Symposium on Programming (ESOP) 2015, pp. 359-382.*
11. Ondřej Kunčar and Andrei Popescu. A Consistent Foundation for Isabelle/HOL. *6th International Conference on Interactive Theorem Proving (ITP) 2015, pp. 234-252.*
12. Sudeep Kanav, Peter Lammich and Andrei Popescu. *A Conference Management System with Verified Document Confidentiality. 26th International Conference on Computer Aided Verification (CAV) 2014, pp. 46–60.*

13. Jasmin Christian Blanchette, Andrei Popescu and Dmitriy Traytel. Modular First-Order Logic Completeness—A Coinductive Pearl. 7th International Joint Conference on Automated Reasoning (**IJCAR**) 2014, pp. 93-110.
14. Jasmin Christian Blanchette, Andrei Popescu and Dmitriy Traytel. Cardinals in Isabelle/HOL. 5th International Conference on Interactive Theorem Proving (ITP) 2014, pp. 111-127.
15. Jasmin Christian Blanchette, Johannes Hölzl, Andreas Lochbihler, Lorenz Panny, Andrei Popescu and Dmitriy Traytel. Truly Modular (Co)datatypes for Isabelle/HOL. 5th International Conference on Interactive Theorem Proving (ITP) 2014, pp. 93-110.
16. *Jasmin Christian Blanchette, Sascha Böhme, Andrei Popescu and Nicholas Smallbone. Encoding Monomorphic and Polymorphic Types. 19th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS) 2013, pp. 493-507.*
17. Jasmin Christian Blanchette and Andrei Popescu. Mechanizing the metatheory of Sledgehammer. 9th International Symposium on Frontiers of Combining Systems (FroCoS) 2013, pp. 245-260.
18. *Andrei Popescu, Johannes Hölzl and Tobias Nipkow. Noninterfering Schedulers: When Possibilistic Noninterference Implies Probabilistic Noninterference. 5th International Conference on Algebra and Coalgebra in Computer Science (CALCO) 2013. pp. 236-252.*
19. Andrei Popescu, Johannes Hölzl and Tobias Nipkow. Formalizing Probabilistic Noninterference. 3rd International Conference on Certified Programs and Proofs (CPP) 2013, pp. 259-275
20. Andreas Schropp and Andrei Popescu. Nonfree Datatypes in Isabelle/HOL: Animating a Many-Sorted Metatheory. 3rd International Conference on Certified Programs and Proofs (CPP) 2013, pp. 114-130
21. *Andrei Popescu, Johannes Hölzl and Tobias Nipkow. Proving Concurrent Noninterference. 2nd International Conference on Certified Programs and Proofs (CPP) 2012, pp. 109-125.*
22. Jasmin Christian Blanchette, Andrei Popescu, Daniel Wand and Christoph Weidenbach. More SPASS with Isabelle: Superposition with Hard Sorts and Configurable Simplification. 3rd Conference on Interactive Theorem Proving (ITP) 2012, pp. 345-360.
23. *Dmitriy Traytel, Andrei Popescu and Jasmin Christian Blanchette. Foundational, Compositional (Co)datatypes for Higher-Order Logic: Category Theory Applied to Theorem Proving. 27th IEEE Symposium on Logic In Computer Science (LICS) 2012, pp. 596-605.*
24. Andrei Popescu and Elsa L. Gunter. Recursion principles for syntax with bindings and substitution. The 16th ACM SIGPLAN International Conference on Functional Programming (**ICFP**) 2011, pp. 346-358.
25. Andrei Popescu, Elsa Gunter and Chris Osborn. Strong Normalization for System F by HOAS on top of FOAS. 25th IEEE Symposium on Logic In Computer Science (**LICS**) 2010, pp. 31-40.
26. Andrei Popescu and Elsa Gunter. Incremental pattern-based coinduction for process algebra and its Isabelle formalization. 13th International Conference on Foundations of Software and Computational Structures (**FOSSACS**) 2010, LNCS 6014, pp. 109-127.
27. Elsa Gunter, Chris Osborn and Andrei Popescu. Theory support for Weak Higher-Order Abstract Syntax. 4th International Workshop on Logical Frameworks and Meta-Languages: Theory and Practice, 2009. ACM International Conference Proceeding Series 2009.
28. Andrei Popescu. Weak bisimilarity coalgebraically. 3rd International Conference on Algebra and Coalgebra in Computer Science (CALCO) 2009, LNCS 5728, pp. 157-172.
29. Andrei Popescu, Traian Şerbănuţă and Grigore Roşu. A semantic approach to interpolation. 9th International Conference on Foundations of Software Science and Computation Structure (FOSSACS) 2006, LNCS 3921, pp. 307-321.
30. Andrei Popescu and Grigore Roşu. Behavioral extensions of institutions. 1st International Conference on Algebra and Coalgebra in Computer Science (CALCO) 2005, LNCS 3629, pp. 331-347.