

# Werner M. Dietl

University of Waterloo  
200 University Avenue West  
Waterloo, Ontario, N2L 3G1, Canada

wdietl@uwaterloo.ca  
<https://ece.uwaterloo.ca/~wdietl/>  
Tel: +1 (519) 888-4567 x37979  
Fax: +1 (519) 746-3077

---

## Publications

Total citations: 1417; most cited: [C7] with 309. h-index of 17, i10-index of 22. Information based on manually edited Google Scholar profile.

## Journals and Book Chapters

- [J1] [W. Dietl](#) and P. Müller. Object ownership in program verification. In D. Clarke, J. Noble, and T. Wrigstad, editors, *Aliasing in Object-Oriented Programming*, volume 7850 of *Lecture Notes in Computer Science*, pages 289–318. Springer-Verlag, 2013.
- [J2] [W. Dietl](#), S. Drossopoulou, and P. Müller. Separating ownership topology and encapsulation with Generic Universe Types. *ACM Transactions on Programming Languages and Systems*, 33:20:1–20:62, 2011.
- [J3] [W. Dietl](#) and P. Müller. Universes: Lightweight Ownership for JML. *Journal of Object Technology (JOT), Special Issue: ECOOP 2004 Workshop FTfJP*, 4(8):5–32, October 2005.
- [J4] [W. Dietl](#), P. Meerwald, and A. Uhl. Protection of Wavelet-based Watermarking Systems using Filter Parametrization. *Signal Processing (Special Issue on Security of Data Hiding Technologies)*, 83:2095–2116, July 2003.

## Conference Proceedings

- [C1] P. Barros, R. Just, S. Millstein, P. Vines, [W. Dietl](#), M. d’Amorim, and M. D. Ernst. Static analysis of implicit control flow: Resolving Java reflection and Android intents. In *Automated Software Engineering (ASE)*, November 2015.
- [C2] M. D. Ernst, R. Just, S. Millstein, [W. Dietl](#), S. Pernsteiner, F. Roesner, K. Koscher, P. Barros, R. Bhoraskar, S. Han, P. Vines, and E. X. Wu. Collaborative verification of information flow for a high-assurance app store. In *Computer and Communications Security (CCS)*, November 2014.
- [C3] C. S. Gordon, [W. Dietl](#), M. D. Ernst, and D. Grossman. JavaUI: Effects for Controlling UI Object Access. In *European Conference on Object-Oriented Programming (ECOOP)*, July 2013.
- [C4] W. Huang, A. Milanova, [W. Dietl](#), and M. D. Ernst. ReIm & ReImInfer: Checking and inference of reference immutability and method purity. In *Object-Oriented Programming Systems, Languages, and Applications (OOPSLA)*, October 2012.
- [C5] W. Huang, [W. Dietl](#), A. Milanova, and M. D. Ernst. Inference and checking of object ownership. In *European Conference on Object-Oriented Programming (ECOOP)*, June 2012.
- [C6] [W. Dietl](#), M. D. Ernst, and P. Müller. Tunable Static Inference for Generic Universe Types. In *European Conference on Object-Oriented Programming (ECOOP)*, July 2011. Best Paper Award.
- [C7] A. Sampson, [W. Dietl](#), E. Fortuna, D. Gnanapragasam, L. Ceze, and D. Grossman. EnerJ: Approximate Data Types for Safe and General Low-Power Computation. In *Programming Language Design and Implementation (PLDI)*, June 2011.
- [C8] [W. Dietl](#), S. Dietzel, M. D. Ernst, K. Muslu, and T. W. Schiller. Building and Using Pluggable Type-Checkers. In *Software Engineering in Practice Track, International Conference on Software Engineering (ICSE)*, May 2011.

- [C9] D. Cunningham, W. Dietl, S. Drossopoulou, A. Francalanza, P. Müller, and A. J. Summers. Universe Types for Topology and Encapsulation. In F. S. de Boer, M. M. Bonsangue, S. Graf, and W.-P. de Roever, editors, *Formal Methods for Components and Objects (FMCO)*, volume 5382 of *Lecture Notes in Computer Science*, pages 72–112. Springer-Verlag, December 2008.
- [C10] W. Dietl, S. Drossopoulou, and P. Müller. Generic Universe Types. In E. Ernst, editor, *European Conference on Object-Oriented Programming (ECOOP)*, volume 4609 of *Lecture Notes in Computer Science*, pages 28–53. Springer-Verlag, July 2007.
- [C11] W. Dietl and A. Uhl. Robustness against Unauthorized Watermark Removal Attacks via Key-dependent Wavelet Packet Subband Structures. In *International Conference on Multimedia and Expo (ICME)*, June 2004.
- [C12] W. Dietl and A. Uhl. Watermark Security via Secret Wavelet Packet Subband Structures. In A. Lioy and D. Mazzocchi, editors, *Communications and Multimedia Security*, volume 2828 of *Lecture Notes in Computer Science*, pages 214–225. Springer-Verlag, October 2003.

## Workshop Proceedings

- [W1] D. Dean, S. Guarino, L. Eusebi, A. Keplinger, T. Pavlik, R. Watro, A. Cammarata, J. Murray, K. McLaughlin, J. Cheng, and T. Maddern. Lessons learned in game development for crowdsourced software formal verification. In *USENIX Summit on Gaming, Games, and Gamification in Security Education (3GSE)*, August 2015.
- [W2] E. Spishak, W. Dietl, and M. D. Ernst. A type system for regular expressions. In *Formal Techniques for Java-like Programs (FTfJP)*, June 2012.
- [W3] W. Dietl, S. Dietzel, M. D. Ernst, N. Mote, B. Walker, S. Cooper, T. Pavlik, and Z. Popović. Verification games: Making verification fun. In *Formal Techniques for Java-like Programs (FTfJP)*, June 2012.
- [W4] N. Cameron and W. Dietl. Comparing Universes and Existential Ownership Types. In *International Workshop on Aliasing, Confinement and Ownership in object-oriented programming (IWACO)*, July 2009.
- [W5] W. Dietl and P. Müller. Ownership Type Systems and Dependent Classes. In *Foundations of Object-Oriented Languages (FOOL)*, January 2008.
- [W6] W. Dietl and P. Müller. Runtime Universe Type Inference. In *International Workshop on Aliasing, Confinement and Ownership in object-oriented programming (IWACO)*, July 2007.
- [W7] W. Dietl and P. Müller. 2007 State of the Universe Address. In *International Workshop on Aliasing, Confinement and Ownership in object-oriented programming (IWACO)*, July 2007.
- [W8] W. Dietl, S. Drossopoulou, and P. Müller. Generic Universe Types. In *Foundations and Developments of Object-Oriented Languages (FOOL/WOOD)*, January 2007.
- [W9] W. Dietl and P. Müller. Exceptions in Ownership Type Systems. In E. Poll, editor, *Formal Techniques for Java-like Programs (FTfJP)*, technical report, Nr. NIII-R0426, University of Nijmegen, pages 49–54, June 2004.
- [W10] W. Dietl, P. Müller, and A. Poetzsch-Heffter. A Type System for Checking Applet Isolation in Java Card. In *Construction and Analysis of Safe, Secure and Interoperable Smart devices (CASSIS)*, volume 3362 of *Lecture Notes in Computer Science*, pages 129–150. Springer-Verlag, March 2004.

- [W11] M. Brachtl, W. Dietl, and A. Uhl. Key-Dependency for a Wavelet-Based Blind Watermarking Algorithm. In J. Dittmann and J. Fridrich, editors, *Multimedia and Security Workshop*, pages 175–179, September 2004.
- [W12] W. Dietl, P. Meerwald, and A. Uhl. Key-dependent Pyramidal Wavelet Domains for Secure Watermark Embedding. In E. J. Delp and P. W. Wong, editors, *Electronic Imaging, Security and Watermarking of Multimedia Contents V*, volume 5020, pages 728–739. SPIE, January 2003.
- [W13] W. Dietl, P. Meerwald, and A. Uhl. Watermark Security via High-Resolution Wavelet Filter Parametrization. In S. Kmet' and M. Pavluš, editors, *International Scientific Conference, Section 1: Applied Mathematics*, pages 21–28, May 2002.

### Technical Reports, Theses, and Unpublished Material

- [U1] D. Brotherston, W. Dietl, and O. Lhoták. Granular: Gradual Nullable Types for Java. Under review.
- [U2] JSR 308 Expert Group. Annotations on Java types. [http://download.oracle.com/otndocs/jcp/annotations-2014\\_01\\_08-pfd-spec/](http://download.oracle.com/otndocs/jcp/annotations-2014_01_08-pfd-spec/), January 2014. Proposed Final Draft.
- [U3] W. Dietl. Type Annotations, the Checker Framework, and JML. In Gary T. Leavens, Peter H. Schmitt, and Jooyong Yi, editors, *The Java Modeling Language.*, number 2013-3 in NII Shonan Meeting Report, pages 12–13, May 2013. <http://www.nii.ac.jp/shonan/wp-content/uploads/2011/09/No.2013-3.pdf>.
- [U4] A. Sampson, W. Dietl, E. Fortuna, D. Gnanapragasam, L. Ceze, and D. Grossman. EnerJ: Approximate Data Types for Safe and General Low-Power Computation — Full Proofs. Technical Report UW-CSE-10-12-01, University of Washington, June 2011.
- [U5] W. Dietl. Universe Types: Topology, Encapsulation, Genericity, and Tools. Summary of my thesis published in the 2009 GI Outstanding Dissertation Award proceedings. Available in German only, July 2010.
- [U6] W. Dietl, M. D. Ernst, and P. Müller. Tunable Universe Type Inference. Technical Report 659, Department of Computer Science, ETH Zurich, December 2009. Updated March 2010.
- [U7] W. Dietl. *Universe Types: Topology, Encapsulation, Genericity, and Tools*. PhD thesis, Department of Computer Science, ETH Zurich, December 2009. Doctoral Thesis ETH No. 18522.
- [U8] N. Cameron and W. Dietl. Comparing Universes and Existential Ownership Types. Technical Report 06, School of Engineering and Computer Science, VUW, July 2009. <https://ecs.victoria.ac.nz/twiki/pub/Main/TechnicalReportSeries/ECSTR09-06.pdf>.
- [U9] W. Dietl et al. Three papers. In B. Meyer, P. Müller, and M. Oriol, editors, *Annual Report*. Chair of Software Engineering, ETH Zurich, 2008.
- [U10] G. T. Leavens, E. Poll, C. Clifton, Y. Cheon, C. Ruby, D. Cok, P. Müller, J. Kiniry, P. Chalin, D. M. Zimmerman, and W. Dietl. JML Reference Manual. Available from <http://www.jmlspecs.org/>, June 2008.
- [U11] W. Dietl, P. Müller, and D. Schreggenberger. Universe Type System — Quick-Reference. Available from <http://pm.inf.ethz.ch/research/universes/tools/juts-quickref.pdf>, July 2008.
- [U12] W. Dietl et al. Four papers. In B. Meyer, P. Müller, and M. Oriol, editors, *Annual Report*. Chair of Software Engineering, ETH Zurich, 2007.

- [U13] W. Dietl, S. Drossopoulou, and P. Müller. Formalization of Generic Universe Types. Technical Report 532, Department of Computer Science, ETH Zurich, 2006.
- [U14] W. Dietl et al. Four papers. In B. Meyer, P. Müller, and M. Oriol, editors, *Annual Report*. Chair of Software Engineering, ETH Zurich, 2006.
- [U15] W. Dietl. Improving the Security of Wavelet-based Watermarking Systems. Master's thesis, Salzburg University, Department of Scientific Computing, December 2002.