

Miguel Velez

Publications

Books

- [6] Amy Brown and Greg Wilson. *The Architecture of Open Source Applications, Volume II*. The Architecture of Open Source Applications v. 2. Kristian Hermansen, 2012.
- [5] Amy Brown and Greg Wilson. *The Architecture of Open Source Applications, Volume I*. The Architecture of Open Source Applications v. 1. CreativeCommons, 2011.
- [4] Paul Clements, Bachmann Felix, Len Bass, David Garlan, James Ivers, Reed Little, Paulo Merson, Robert Nord, and Judith Stafford. *Documenting Software Architectures: Views and Beyond*. Pearson Education, 2002.
- [3] Mary Shaw and David Garlan. *Software Architecture: Perspectives on an Emerging Discipline*. Upper Saddle River, NJ, USA: Prentice-Hall, Inc., 1996.
- [2] Erich Gamma, Richard Helm, Ralph Johnson, and John Vlissides. *Design Patterns: Elements of Reusable Object-oriented Software*. Boston, MA, USA: Addison-Wesley Longman Publishing Co., Inc., 1995.
- [1] Daniel P. Siewiorek, C. Gordon Bell, and Allen Newell. *Computer structures: principles and examples*. McGraw-Hill computer science series. McGraw-Hill, 1987. Chap. 2, Levels and Abstraction.

Refereed Journal Articles

- [14] Jeffrey M. Barnes, David Garlan, and Bradley Schmerl. "Evolution Styles: Foundations and Models for Software Architecture Evolution". In *Softw. Syst. Model. (SoSyM)* 13.2 (May 2014), pp. 649–678.
- [13] Joshua Sunshine, Karl Naden, Sven Stork, Jonathan Aldrich, and Éric Tanter. "First-class State Change in Plaid". In *SIGPLAN Notices* 46.10 (Oct. 2011), pp. 713–732.
- [12] Gordon Bell and Daniel P. Siewiorek. "The Book Computer Structures: Thoughts After 40 Years". In *IEEE Ann. Hist. Comput.* 33.2 (Apr. 2011), pp. 89–95.
- [11] Bradley Schmerl, Jonathan Aldrich, David Garlan, Rick Kazman, and Hong Yan. "Discovering Architectures from Running Systems". In *IEEE Trans. Softw. Eng. (TSE)* 32.7 (July 2006), pp. 454–466.
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- [8] Gail C. Murphy and David Notkin. "Reengineering with Reflexion Models: A Case Study". In *Computer* 30.8 (Aug. 1997), pp. 29–36.
- [7] David Garlan, Robert Allen, and John Ockerbloom. "Architectural Mismatch: Why Reuse Is So Hard". In *IEEE Softw.* 12.6 (Nov. 1995), pp. 17–26.
- [6] David Harel. "Statecharts: A Visual Formalism for Complex Systems". In *Sci. Comput. Program.* 8.3 (June 1987), pp. 231–274.
- [5] Mary Shaw. "The impact of abstraction concerns on modern programming languages". In *Proceedings of the IEEE* 68.9 (1980), pp. 1119–1130.
- [4] W. A. Wulf, R. L. London, and M. Shaw. "An Introduction to the Construction and Verification of Alphard Programs". In *IEEE Trans. Softw. Eng. (TSE)* 2.4 (July 1976), pp. 253–265.
- [3] Frank DeRemer and Hans Kron. "Programming-in-the-Large Versus Programming-in-the-Small". In *IEEE Trans. Softw. Eng. (TSE)* SE-2.2 (June 1976), pp. 80–86.
- [2] C. A. R. Hoare. "Proof of correctness of data representations". In *Acta Informatica* 1.4 (Dec. 1972), pp. 271–281.
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Refereed Conference Publications

- [11] Miguel Velez, Jason Sawin, Alexia Ingerson, and David Chiu. "Improving Bitmap Execution Performance Using Column-Based Metadata". In *The IEEE 4th International Conference on Future Internet of Things and Cloud (FiCloud)*. Vienna, Austria, Aug. 2016.
- [10] Prasad Kawthekar and Christian Kästner. "Sensitivity Analysis For Building Evolving & Adaptive Robotic Software". In *Proceedings of the IJCAI Workshop on Autonomous Mobile Service Robots (WSR)*. New York, NY, USA, July 2016.
- [9] David Garlan. "Software Architecture: A Travelogue". In *Proceedings of the on Future of Software Engineering (FOSE)*. Hyderabad, India: ACM, June 2014, pp. 29–39.
- [8] David Garlan, Vishal Dwivedi, Ivan Ruchkin, and Bradley Schmerl. "Foundations and Tools for End-user Architecting". In *Proceedings of the Conference on Large-Scale Complex IT Systems: Development, Operation and Management*. Oxford, UK, 2012, pp. 157–182.
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Collections

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Miscellaneous

- [5] Miguel Velez and Jason Sawin. *Improving the Efficiency of CHA through Parallelization*. Poster. Inquiry at St. Thomas. May 2016.
- [4] Miguel Velez and Jason Sawin. *Faster WAH Compression Querying through the Use of Metadata*. Poster. Consortium for Computing Sciences in Colleges Midwest Region. 1st place Discovery Track. Oct. 2015.
- [3] Miguel Velez and Armando Solar-Lezama. *Simpler Implementation of Sketches through Enhanced Expressiveness*. Poster. MIT Summer Research Poster Session. Aug. 2015.
- [2] Miguel Velez. *Current and Future Relationships Between Robots and Humans*. Summa Cum Laude Paper. Apr. 2015.
- [1] Miguel Velez, Peter Gittins, and Jason Sawin. *Extending SMILES to Encode Reaction Mechanisms*. Poster. Inquiry at St. Thomas. May 2014.