

SELECTED PUBLICATIONS

Antonio Carzaniga

August 2014

Book Chapters

- A. Carzaniga, A. Gorla, and M. Pezzè. "Handling Software Faults with Redundancy." In R. de Lemos, J.-C. Fabre, C. Gacek, F. Gadducci, and M. ter Beek (Eds.) *Architecting Dependable Systems VI*. LNCS 5835/2009. Springer. 2009.
- C. Godart, N. Belkhatir, A. Carzaniga, J. Estublier, E. Di Nitto, J. Jahnke, P. Lago, W. Schaefer, and H. Skaf. "Cooperation Control in PSEE." In J.-C. Derniame, B.A. Kaba, D. Wastell (Eds.) *Software Process: Principles, Methodology, and Technology*. LNCS 1500. Springer-Verlag. 1999.

Articles in International Journals

- A. Carzaniga, A. Gorla, and M. Pezzè. "Healing Web applications through automatic workarounds." *International Journal on Software Tools for Technology Transfer (STTT)*, 10(6):493-502, Springer-Verlag, October 2008.
- M.J. Rutherford, A. Carzaniga, and A.L. Wolf. "Evaluating Test Suites and Adequacy Criteria Using Simulation-Based Models of Distributed Systems." *IEEE Transactions on Software Engineering*, 34(4):452-470, July-August 2008.
- M. Caporuscio, A. Carzaniga, and A.L. Wolf. "Design and Evaluation of a Support Service for Mobile, Wireless Publish/Subscribe Applications." *IEEE Transactions on Software Engineering*, 29(12):1059-1071, December 2003.
- A. van der Hoek, A. Carzaniga, D. Heimburger, and A.L. Wolf. "A Testbed for Configuration Management Policy Programming." *IEEE Transactions on Software Engineering* 28(1):79-99, January 2002.
- A. Carzaniga, D.S. Rosenblum and A.L. Wolf. "Design and Evaluation of a Wide-Area Event Notification Service." *ACM Transactions on Computer Systems*, 19(3):332-383, August 2001.

Articles in Conference and Workshop Proceedings

Except for the noted invited papers, all the publications listed here are peer reviewed.

- A. Malekpour, A. Carzaniga, and F. Pedone, "End-to-End Congestion Control for Content-Based Networks". In *33rd International Symposium on Reliable Distributed Systems (IEEE SRDS 2014)*. Nara, Japan. October 2014.
- M. Papalini, A. Carzaniga, K. Khazaei, and A.L. Wolf. "Scalable Routing for Tag-Based Information-Centric Networking". In *1st ACM Conference on Information-Centric Networking (ICN-2014)*. Paris, France. September 2014.
- A. Carzaniga, A. Goffi, A. Gorla, A. Mattavelli, and M. Pezzè. "Cross-Checking Oracles from Intrinsic Software Redundancy". In *Proceedings of the 2014 International Conference on Software Engineering (ICSE 2014)*. Hyderabad, India. May 2014.

- A. Carzaniga, K. Khazaei, M. Papalini, and A.L. Wolf. "Is Information-Centric Multi-Tree Routing Feasible?" In *ACM SIGCOMM Workshop on Information-Centric Networking (ICN'13)*. Hong Kong, China. August 2013. (Winner of the Best Paper Award at ICN'13)
- A. Carzaniga, A. Gorla, A. Mattavelli, N. Perino, and M. Pezzè. "Automatic Recovery from Runtime Failures". In *Proceedings of the 2013 International Conference on Software Engineering (ICSE 2013)*. San Francisco, California, USA. May 2013.
- A. Carzaniga, K. Khazaei, and F. Kuhn. "Oblivious Low-Congestion Multicast Routing in Wireless Networks". In *Proceedings of the thirteenth ACM international symposium on Mobile Ad Hoc Networking and Computing (MobiHoc '12)*. Hilton Head, South Carolina, USA. June 2012.
- A. Carzaniga, C. Hall, and M. Papalini. "Fully Decentralized Estimation of Some Global Properties of a Network". In *Proceedings of IEEE INFOCOM 2012*. Orlando, Florida, USA. March 2012.
- T. Konstantinidis, A. Carzaniga, and A.L. Wolf. "A Content-Based Publish/Subscribe Matching Algorithm for 2D Spatial Objects". In *ACM/IFIP/USENIX 12th International Middleware Conference (Middleware 2011)*. Lisbon, Portugal. December 2011.
- A. Malekpour, A. Carzaniga, F. Pedone, and G. Toffetti Carughi. "Probabilistic FIFO Ordering In Publish/Subscribe Networks". In *10th IEEE International Symposium on Network Computing and Applications (IEEE NCA11)*. Cambridge, Massachusetts, USA. August 2011.
- A. Carzaniga, M. Papalini, and A.L. Wolf. "Content-Based Publish/Subscribe Networking and Information-Centric Networking". In *ACM SIGCOMM Workshop on Information-Centric Networking (ICN-2011)*. Toronto, Canada. August 2011.
- A. Malekpour, A. Carzaniga, F. Pedone, and G. Toffetti Carughi. "End-to-End Reliability for Best-Effort Content-Based Publish/Subscribe Networks". In *Proceedings of the 5th ACM International Conference on Distributed Event-Based Systems (DEBS 2011)*. New York, New York, USA. July 2011.
- A. Carzaniga, A. Gorla, N. Perino, and M. Pezzè. "Automatic Workarounds for Web Applications". In *Proceedings of the ACM SIGSOFT Eighteenth Symposium on Foundations of Software Engineering (SIGSOFT 2010/FSE-18)*. Santa Fe, New Mexico, USA. November 2010.
- C. Hall and A. Carzaniga. "Uniform Sampling for Directed P2P Networks." In *15th International European Conference on Parallel and Distributed Computing (Euro-Par 2009)*, Delft, The Netherlands. August 2009.
- A. Carzaniga, G. Denaro, M. Pezzè, J. Estublier, and A.L. Wolf. "Toward Deeply Adaptive Societies of Digital Systems". In *ICSE Companion 2009: 31st International Conference on Software Engineering, ICSE 2009, Companion Volume, New Ideas and Emerging Results track*. Vancouver, Canada. May 2009.
- Y. Wang, , A. Carzaniga, and A.L. Wolf. "Four Enhancements to Automated Distributed System Experimentation Methods." In *Proceedings of the 30th International Conference on Software Engineering (ICSE'08)*. Leipzig, Germany. May 2008.
- A. Carzaniga, A. Gorla, and M. Pezzè. "Self-Healing by Means of Automatic Workarounds." In *Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2008)*. In conjunction with 30th International Conference on Software Engineering (ICSE'08). Leipzig, Germany. May 2008.
- J. Giacomoni, J.K. Bennett, A. Carzaniga, D.C. Sicker, M. Vachharajani and A.L. Wolf. "Frame Shared Memory: Line-Rate Networking on Commodity Hardware." In *Proceedings of the 3rd ACM/IEEE Symposium on Architecture for networking and communications systems (ANCS)*. Orlando, Florida, USA. December 2007.
- A. Carzaniga, G.P. Picco, and G. Vigna. "Is Code Still Moving Around? Looking Back at a Decade of Code Mobility." Invited Paper. In *29th International Conference on Software Engineering (ICSE'07 Companion)*. Minneapolis, Minnesota, USA. May 2007.

- J. Rose, C.P. Hall, and A. Carzaniga. "Spinneret: A log random substrate for P2P networks." In *Fourth International Workshop on Hot Topics in Peer-to-Peer Systems (Hot-P2P)*, Long Beach, California, USA. March 30, 2007. In conjunction with IEEE International Parallel & Distributed Processing Symposium (IPDPS).
- M.J. Rutherford, A. Carzaniga, and A.L. Wolf. "Simulation-Based Test Adequacy Criteria for Distributed Systems." In *Proceedings of the Fourteenth ACM SIGSOFT Symposium on Foundations of Software Engineering (SIGSOFT 2006/FSE-14)*. Portland, Oregon, USA. November 2006. (Nominated for the distinguished paper award.)
- A. Carzaniga and C.P. Hall. "Content-Based Communication: a Research Agenda." Invited Paper. In *Software Engineering and Middleware Workshop (SEM 2006)*, Portland, Oregon, USA. November 2006. In conjunction with Fourteenth ACM Symposium on Foundations of Software Engineering (ACM SIGSOFT 2006/FSE-14).
- Y. Wang, M.J. Rutherford, A. Carzaniga, and A.L. Wolf. "Automating Experimentation on Distributed Testbeds." In *Proceedings of 20th IEEE/ACM International Conference on Automated Software Engineering*. Long Beach, California, USA. November 2005. (Nominated for the best paper award.)
- A. Carzaniga, M.J. Rutherford, and A.L. Wolf. "A Routing Scheme for Content-Based Networking." In *Proceedings of INFOCOM 2004*. Hong Kong, China. March 2004.
- A. Carzaniga and A.L. Wolf. "Forwarding in a Content-Based Network." In *Proceedings of ACM SIGCOMM 2003*. Karlsruhe, Germany. August 2003.
- M. Castaldi, A. Carzaniga, P. Inverardi and A.L. Wolf. "A Lightweight Infrastructure for Reconfiguring Applications." In B. Westfechtel, A. van der Hoek (Eds.): *SCM 2001/2003*, LNCS 2649, Springer-Verlag. ICSE'03 Workshop. Portland, Oregon, USA. May 2003.
- A. Carzaniga and A. Orso. "Continuous Remote Analysis for Improving Distributed Systems Performance" . In *RAMSS'03, First International Workshop on Remote Analysis and Measurement of Software Systems*, ICSE'03 Workshop. Portland, Oregon, USA. May 2003.
- M. Caporuscio, A. Carzaniga, and A.L. Wolf. "An Experience in Evaluating Publish/Subscribe Services in a Wireless Network." *Third International Workshop on Software and Performance (WOSP)*. Rome, Italy. July, 2002. In conjunction with International Symposium on Software Testing and Analysis (ISSTA).
- M.J. Rutherford, K. Anderson, A. Carzaniga, D. Heimbigner, and A.L. Wolf. "Reconfiguration in the Enterprise JavaBean Component Model." In *Proceedings of IFIP/ACM Working Conference on Component Deployment*. Berlin, Germany. June 2002.
- C. Wang, A. Carzaniga, D. Evans, and A.L. Wolf. "Security Issues and Requirements for Internet-scale Publish-Subscribe Systems." In *Proceedings of the Thirty-Fifth Annual Hawaii International Conference on System Sciences*. Big Island, Hawaii, USA. January 2002.
- A.L. Wolf, D. Heimbigner, A. Carzaniga, K.M. Anderson, and N. Ryan. "Achieving Survivability of Complex and Dynamic Systems with the Willow Framework", In *Proceedings of the Working Conference on Complex and Dynamic Systems Architectures*. Brisbane, Australia. December 2001.
- A. Carzaniga and A.L. Wolf. "Content-based Networking: A New Communication Infrastructure." *NSF Workshop on an Infrastructure for Mobile and Wireless Systems*. In conjunction with *International Conference on Computer Communications and Networks (ICCCN)*. Scottsdale, Arizona, USA. October, 2001.
- A. Carzaniga, D.S. Rosenblum and A.L. Wolf. "Achieving Scalability and Expressiveness in an Internet-Scale Event Notification Service." In *Proceedings of ACM Symposium on Principles of Distributed Computing (PODC 2000)*. Portland, Oregon, USA. July 2000.

- A. Carzaniga, D.S. Rosenblum and A.L. Wolf. "Challenges for Distributed Event Services: Scalability vs. Expressiveness." *Engineering Distributed Objects (EDO99)*. ICSE99 Workshop, Los Angeles, California, USA. May 1999.
- A. Carzaniga, E. Di Nitto, D.S. Rosenblum, and A.L. Wolf. "Issues in Supporting Event-Based Architectural Styles." *3rd International Software Architecture Workshop (ISAW3)*. Orlando, Florida, USA. November 1998.
- D.S. Rosenblum, A.L. Wolf, and A. Carzaniga. "Critical Considerations and Designs for Internet-Scale, Event-Based Compositional Architectures." *Workshop on Compositional Software Architectures*. Monterey, California, USA. January 1998.
- A. Carzaniga, G.P. Picco, and G. Vigna. "Designing Distributed Applications with Mobile Code Paradigms." In *Proceedings of the 19th International Conference on Software Engineering (ICSE'97)*. Boston, Massachusetts, USA. May 1997. (ICSE Most Influential Paper Award of ACM SIGSOFT and IEEE TCSE in 2007.)
- S. Bandinelli, A. Carzaniga, and G. Vigna. "Archetype: Addressing Configuration Issues in Software Architectures." In *Proceedings of the First International Workshop on Architectures for Software Systems*, ICSE17 Workshop. Seattle, Washington, USA. April 1995.
- A. Carzaniga, G.P. Picco, and G. Vigna. "Designing and Implementing Inter-Client Communication in the O₂ Object-Oriented Database Management System." In *Proceedings of the International Symposium on Object-Oriented Methodologies and Systems*. LNCS 858. Springer-Verlag. Palermo, Italy. September 1994.

Other Publications and Contributions

- A. van der Hoek, R.S. Hall, A. Carzaniga, D. Heimbigner, and A.L. Wolf. "Software Deployment: Extending Configuration Management Support into the Field." In *CrossTalk: The Journal of Defense Software Engineering*. February 1998.
- B. Stroustrup. *The C++ Programming Language*, 3rd Ed., A. Carzaniga, A. Orso, and M. Monga (translators). *C++: Linguaggio, libreria standard, principi di programmazione*. III edizione. Addison-Wesley. April 2000.
- A. Carzaniga and C. Fusco Karmann. "Gestione informatizzata dei volontari: una guida pratica." In *Prospettive Sociali e Sanitarie*. n. 15-16, Istituto per la Ricerca Sociale, Milano, Italy. September 1997.