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MAJOR RESEARCH INTERESTS

1. Context-aware ubiquitous computing
2. Probabilistic modelling and analysis of computer systems
3. Large-scale distributed system architectures
4. Scalability of software systems

SELECTED PUBLICATIONS

1. L. Duboc, E. Letier and D.S. Rosenblum, “Systematic Elaboration of Scalability Requirements through Goal-Obstacle Analysis”, *IEEE Trans. Software Engineering*, 2012, to appear.
2. M. Sama, S. Elbaum, F. Raimondi, D.S. Rosenblum and Zhimin Wang, “Context-Aware Adaptive Applications: Fault Patterns and Their Automated Identification”, *IEEE Trans. Software Engineering*, 2010, 36(5):644–661.
3. M. Sama, D.S. Rosenblum, Z. Wang and S. Elbaum, “Multi-Layer Faults in the Architectures of Mobile, Context-Aware Adaptive Applications”, *Journal of Systems and Software*, 2010, 83(6):906–914.
4. C. Raiciu, F. Huici, M. Handley and D.S. Rosenblum, “ROAR: Increasing the Flexibility and Performance of Distributed Search”, *Proc. ACM SIGCOMM 2009 Conf. on Data Communication* (SIGCOMM 2009), Aug. 2009, pp. 291–302.
5. L. Duboc, D.S. Rosenblum and T. Wicks, “A Framework for Characterization and Analysis of Software System Scalability”, *Proc. Joint 11th European Software Engineering Conf. and 15th ACM SIGSOFT Int’l Symposium on the Foundations of Software Engineering* (ESEC/FSE 2007), Dubrovnik, Croatia, Sep. 2007, pp. 375–384.
6. C. Raiciu and D.S. Rosenblum, “Enabling Confidentiality in Content-Based Publish/Subscribe Infrastructures”, *Proc. Second IEEE Communications Society/CreateNet Int’l Conf. on Security and Privacy in Communication Networks* (SecureComm 2006), Aug.–Sep. 2006, 11 pp.
7. G. Rodrigues, D.S. Rosenblum and S. Uchitel, “Using Scenarios to Predict the Reliability of Concurrent Component-Based Software Systems”, *Proc. ETAPS 2005 8th Int’l Conf. on Fundamental Approaches to Software Engineering* (FASE 2005), Apr. 2005, pp. 111–126.
8. A. Carzaniga, D.S. Rosenblum and A.L. Wolf, “Design and Evaluation of a Wide-Area Event Notification Service”, *ACM Trans. Computer Systems*, 19(3):332–383, 2001.
9. D.S. Rosenblum and A.L. Wolf, “A Design Framework for Internet-Scale Event Observation and Notification”, *Proc. Sixth European Software Engineering Conf./ACM SIGSOFT ’97 Fifth Symposium on the Foundations of Software Engineering* (ESEC/FSE ’97), Sep. 1997, pp. 344–360. *Winner of the 2008 ACM SIGSOFT Impact Paper Award.*
10. D.S. Rosenblum, “A Practical Approach to Programming with Assertions”, *IEEE Trans. Software Engineering*, 21(1):19–31, 1995. Minor correction published in 21(3):265, 1995.