CURRICULUM VITAE

David S. Rosenblum

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Planning Research Corporation Professor and Chair
Department of Computer Science
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h-index = 59, *i10-index* = 125 (Google Scholar, August 4, 2023); *Erdős number* ≤ 4

Summary of Key Accomplishments and Research Interests

- Fellow of the ACM and IEEE
- Recipient of the ACM SIGSOFT Distinguished Service Award
- Recipient of two significant test-of-time awards for research papers
- Previously Editor-in-Chief of one of the leading archival journals in software engineering (ACM TOSEM)
- Previously Chair of the leading international professional group in software engineering (ACM SIGSOFT)
- Produced significant, highly cited research results in formal methods, software testing, software architecture, distributed systems, ubiquitous computing, and applied machine learning
- Secured tens of millions of dollars in extramural research funding
- Graduated 16 PhD students to date with strong placements in both academia and industry
- Held professorships and leadership positions in academia in three countries on three continents
- Held research and leadership positions in industry
- Current research is on novel machine learning techniques for ubiquitous computing and software testing

Honors and Awards

- ACM SIGSOFT Distinguished Service Award, 2018
- Fellow of the Association for Computing Machinery (ACM), 2010
  - ***"For contributions to software testing and distributed systems, and for service to the software engineering community"***
- Fellow of the Institute of Electrical and Electronics Engineers (IEEE), 2006
  - ***"For contributions to scalable, distributed component- and event-based software systems"***
- Chartered Fellow of the Institution of Engineering and Technology (IET), 2005
- Chartered Fellow of the British Computer Society (BCS), 2005
- Fellow of the Asia-Pacific Artificial Intelligence Association (AAIA), 2021
- Senior Member of the Singapore Computer Society (SCS), 2013
- Featured in "People of ACM", Jan. 5, 2016, http://www.acm.org/articles/people-of-acm/2016/david-s-rosenblum
- 2008 ACM SIGSOFT Impact Paper Award, ESEC/FSE 1997 paper (#C16)
- 2002 ICSE Most Influential Paper Award, ICSE 1992 paper (#C8)
- 2nd Prize, ACM SIGSOFT FSE 2014 Visions & Challenges paper (#C72)
- Best Demo Award, IoT 2015 Demo (presented by Max Pagel) (#C75)
- Provost's Chair Professor, Dept. of Computer Science, National University of Singapore, 2016
- Wolfson Research Merit Award, The Royal Society, UK, 2004–2009
- CAREER Award, US National Science Foundation, 1997–2001
- Best Graduate Student Paper Award, ACM Special Interest Group on Ada (SIGAda), 1986 (#J2)
- L.F. Connell Award, Best Undergraduate Student, Dept. of Physics, North Texas State Univ., 1982

Education

Ph.D.	*Electrical Engineering (Computer Systems)*, 1988 Stanford University, Stanford, CA, USA
M.S.	*Electrical Engineering (Computer Systems)*, 1987 Stanford University, Stanford, CA, USA
M.S.	*Computer Sciences* , 1983 North Texas State University, Denton, TX, USA
B.S. (summa)	*Computer Sciences (major)*, *Mathematics (minor)*, 1982 North Texas State University, Denton, TX, USA

Professional Certifications

Management Development Program, Harvard Graduate School of Education, 2022

Senior Management Programme, National University of Singapore, 2012

Chartered Engineer (CEng), Engineering Council UK, 2006–2013 (registered with IET)

Academic Positions

2020–	*Planning Research Corporation Endowed Chair (2020–present)* *Department Chair (2020–present)* Department of Computer Science, George Mason University, Fairfax, Virginia, USA
2011–2020	*Provost's Chair Professor, Department of Computer Science (2016–2020)* *Professor, Department of Computer Science (2011–2016)* *Director, NUS-Singtel Cyber Security Research & Development Laboratory (2016–2020)* *Dean, School of Computing (2013–2016)* *Director of the Felicitous Computing Institute (2012–2020)* *Chair, School of Computing Ethical Review Committee (2019–2020)* School of Computing, National University of Singapore, Republic of Singapore
2004–2011	*Professor of Software Systems* *Graduate Tutor (2008–2011)* *Course Coordinator, MSc in Software Systems Engineering (2004–2007)* *Director, London Software Systems (2004–2008)* *Head of Software Systems Engineering (2008–2011)* *Deputy Head of Department (2010–2011)* Department of Computer Science, University College London, UK
1998–2002	*Associate Professor (1998), Assistant Professor (1996)* *Faculty Affiliate, University of California Institute for Software Research (ISR)* *Associate Chair for Computing (1998–2001)* *Acting Manager, Computing Support Group (1999)* Dept. of Information & Computer Science, University of California, Irvine, CA, USA
1996	*Part-Time Lecturer* Department of Computer Science, Rutgers University, Piscataway, NJ, USA
1983–1988	*Research Assistant* Computer Systems Laboratory, Stanford University, Stanford, CA, USA
1982–1983	*Teaching Fellow* Department of Computer Sciences, North Texas State University, Denton, TX, USA
1981	*Programmer/Analyst* University of Texas Health Science Center at Dallas, , TX, USA

Industry Positions

2001–2003	*Chief Technology Officer and Principal Architect* PreCache Inc., Orange, CA, and Bridgewater, NJ, USA

1988–1996 *Member of the Technical Staff*
AT&T Bell Laboratories, Murray Hill, NJ, USA

Other Academic Appointments

2023– *Convenor, Computer Science/Information Technology Panel*
2026 Research Assessment Exercise (RAE 2026), University Grants Committee, Hong Kong

2022–2023 *Member, Committee on Testing, Evaluating, and Assessing Artificial Intelligence-Enabled Systems under Operational Conditions for the Department of the Air Force*
Air Force Studies Board, National Academies of the Sciences, Engineering, and Medicine, USA

2020– *Member, Strategic Advisory Board*
Constructor University (formerly Schaffhausen Institute of Technology and Jacobs University Bremen), Schaffhausen, Switzerland

2018–2021 *Deputy Convenor, Computer Science/Information Technology Panel*
2020 Research Assessment Exercise (RAE 2020), University Grants Committee, Hong Kong

2017–2019 *External Examiner, Bachelor of Computer Science (Hons) (Software Engineering)*
Faculty of Computing and Informatics, Multimedia University, Malaysia

2017–2019 *External Assessor, Bachelor of Software Engineering*
Faculty of Computer Science and Information Technology, Universiti Putra Malaysia, Malaysia

2014–2016 *Executive Committee, Services & Digital Economy Research & Development*
National Research Foundation (NRF), Singapore

2013–2014 *Computer Science/Information Technology Panel*
2014 Research Assessment Exercise (RAE 2014), University Grants Committee, Hong Kong

2013–2018 *Visiting Professor*
Department of Computer Science, University College London, London, UK

2013–2016 *Advisory Committee*
School of Infocomm, Republic Polytechnic, Singapore

2007–2009 *External Member, Faculty Selection Committee*
Faculty of Informatics, Università della Svizzera Italiana, Lugano, Switzerland

2006–2010 *External Examiner, BEng/MEng in Computer Science and Software Engineering*
External Examiner, BSc Computer Science with Business Management
External Examiner, BSc/MEng Electronic and Software Engineering
School of Computer Science, University of Birmingham, UK

2005– *Advisory Council*
Department of Computer Science & Engineering, University of North Texas, Denton, TX, USA

2004–2010 *Honorary Professorial Research Fellow*
Department of Computing, Imperial College London, London, UK

2004–2007 *External Examiner, MSc in Software Engineering for the e-Economy*
External Examiner, MSc in Advanced Software Engineering
External Examiner, MSc in Advanced Distributed Systems
Department of Computer Science, University of Leicester, Leicester, UK

Other Industry Appointments

2019–2020 *Member, Subcommittee on Smart Nation/Industry Transformation Maps/Emerging Technologies*
Coordinating Committee for Cybersecurity, Enterprise Singapore, Singapore

1999–2001 *Member, Scientific Advisory Board*
HomeGopher, Inc., Tustin, CA, USA

Expert Witness Service, Review Committees, and Other Professional Consulting Services

2021– *Expert Witness,* inter partes reviews before the Patent Trial and Appeal Board (PTAB), USPTO
Adsero IP

2018 *Member, Reviewing Committee*
Computer Science Discipline, Tianjin University, China

2017–2021 *ACM Distinguished Member Committee*
Chair, 2020
Deputy Chair, 2019

2012 *External Reviewer, Faculty Hiring Committee*
Department of Computer Science and Engineering, Aalto University, Jul. 2012

2011–2015 *Member, ACM-IEEE Computer Society Ken Kennedy Award Committee*

2007 *Expert Reviewer, Software Product Lines Research Programme*
Lero—The Irish Software Engineering Research Centre, Univ. of Limerick, Ireland

2006 *Ex-Post Evaluation Panelist on behalf of Technopolis Ltd*
Industry PhD programme, IDA Department, Linköping University, Sweden

2004 *Senior Advisor*, Shanghai Software Testing Center, Shanghai, China

2004 *Expert Witness*, individual claim in Brent County Court, London, UK

2004–2005 *Expert Consultant, Intelligence in Future Imaging Technology (IFIT) Consortium*
Kodak Research, UK

2000–2011 *Co-Lead (with Lori A. Clarke), Software Testing and Analysis Team*
Software Engineering Impact Project

1993–1994 *Expert Witness*, US Department of Labor Alien Employment Certification cases

1990–1991 *Representative from AT&T, Formal Methods Transition Study*
Microelectronics and Computer Technology Corporation (MCC), Austin, TX, USA

Elective Offices

2001–2015 *Past Chair (2012-2015)*
Chair (2009–2012)
Vice Chair (2005–2009)
Member-at-Large (2001–2005)
ACM Special Interest Group on Software Engineering (ACM SIGSOFT)

Editorial Boards

ACM Transactions on Software Engineering and Methodology, 2005–2018
Editor-in-Chief, 2013–2018

IEEE Transactions on Software Engineering, 1998–2002
Co-Editor, Outstanding Papers of ICSE 1999, Vol. 27, No. 2, Feb. 2001
Guest Co-Editor, Best Papers of ISSTA 2007, Vol. 34, No. 5, Sep./Oct. 2008

Software Process Improvement and Practice, 1997–1998

Current Professional Memberships

Association for Computing Machinery (ACM) (Fellow)
Special Interest Group on Software Engineering (SIGSOFT)
Institute of Electrical and Electronics Engineers (IEEE) (Fellow)
UK Computing Research Committee (UKCRC)
Asia-Pacific Artificial Intelligence Association (AAIA) (Fellow)

Grants and Contracts

George Mason University

Cornell University, Break Through Tech, *Inclusive Computing at Mason: Get Cities Proposal*, subawards 91229-21012 and 90620-21012. US$2,821,525, Feb. 2021–Jun. 2024. Co-PI with PI Huzefa Rangwala, co-PIs Özlem Uzuner and Mark Snyder.

National University of Singapore

Singapore National Research Foundation (NRF), National Satellite of Excellence in Trustworthy Software Systems (NSoE-TSS) Core Technologies, *Evaluating the Trustworthiness of Deep Learning Systems*, NSOE-TSS2019-05. S$418,400, Oct. 2019–Sep. 2021. Sole PI.

Singapore National Research Foundation (NRF), *NUS-Singtel Corporate Research Laboratory in Cyber Security*, S$42,768,245 (funded with S$14,129,194 each from NRF and Singtel and S$14,509,857 from NUS), Jul. 2016–Jun. 2021. Lead PI and Lab Director.

National University of Singapore – Humboldt Universität zu Berlin Profile Partnership, *Efficient Probabilistic Verification of Reconfigurable Software System*. S$23,550.00, Jul. 2016–Jun. 2017. PI for NUS, with Lars Grunske as PI for HU.

Singapore Agency for Science, Technology and Research (A*STAR), Science and Engineering Research Council (SERC), Public Sector Research Funding (PSF). *Ambient Web: Towards Write Once, Run Everywhere Mobile IoT Applications*, 1521200084. S$648,750.00, Apr. 2016–Mar. 2019. Sole PI.

Singapore Ministry of Education (MOE), Academic Research Fund (AcRF) Tier 2. *Modeling and Analysis of Stochastic Systems with Perturbed Parameters*, MOE2015-T2-1-137. S$417,705.60, Dec. 2015–Feb. 2019. Sole PI.

Microsoft Research Asia. *Inferring People's Mood and Context: Methods and Framework*, 754074. S$25,037.00, Apr. 2013–Apr. 2014. Co-PI with PI Stanislaw Jarzabek.

National University of Singapore, School of Computing and Office of the Deputy President for Research & Technology. *Felicitous Computing Institute*, R-252-000-473-133 and R-252-000-473-750. S$2,000,000.00, Jan. 2012–Dec. 2015. PI and Institute Director.

National University of Singapore, Singapore Ministry of Education Academic Research Fund Tier 1. *Advances in Probabilistic Modeling and Analysis*, R-252-000-458-133, S$300,000.00, Jun. 2011–Nov. 2014. Sole PI.

University College London

European Office of Aerospace Research and Development (EOARD), US Air Force Office of Scientific Research (AFOSR). *Enhancing the Dependability of Complex Missions through Automated Analysis*, FA8655-10-1-3007, US$194,295.00, Jan. 2010–Jul. 2013. Sole PI.

UK Engineering and Physical Sciences Research Council (EPSRC). *UbiComp Grand Challenge*, EP/F013442/1, travel grant for Sebastian Elbaum. £1,660, Jun. 2008–Sep. 2008. Sole PI.

UK Engineering and Physical Sciences Research Council (EPSRC). *Improving Medical Safety using Software Engineering Technology*, EP/E062245/1, visiting researcher grant for Leon J. Osterweil and Lori A. Clarke. £71,417.81, Apr. 2007–Aug. 2007. Sole PI.

UK Engineering and Physical Sciences Research Council (EPSRC). *Testing Techniques for Context-Aware Ubiquitous Systems*, EP/E006191/1, visiting researcher grant for Sebastian Elbaum. £54,992.99, Aug. 2006–Dec. 2006. Sole PI.

UK Engineering and Physical Sciences Research Council (EPSRC), Wired and Wireless Intelligent Networked Systems (WINES) Programme. *UbiVal: Fundamental Approaches to Validation of Ubiquitous Computing Applications and Infrastructures*, EP/D077273/1, project at University College London, University of Birmingham, Imperial College London, Cambridge University and University of Oxford. £1,610,781.58 (including £634,475.93 for University College London), Oct. 2006–Sep. 2010. Project Director.

European Commission, Mobile and Wireless Services Beyond 3G Strategic Objective, Information Society Technologies (IST), Sixth Framework Programme (FP6). *PLASTIC: Providing dependable and Adaptive Service Technology for pervasive Information and Communication*, EU-IST-2005-026955, specific

targeted research project (STREP) of 11 partners coordinated by Valérie Issarny of INRIA. €2,500,000 (including €285,000 for University College London), Feb. 2006–Jul. 2008. Co-PI.

European Commission, Global Computing II Programme, Future and Emerging Technologies (FET), Information Society Technologies (IST), Sixth Framework Programme (FP6). *SENSORIA: Software Engineering for Service-Oriented Overlay Computers*, EU-IST-3-016004-IP-09, integrated project (IP) of 18 partners coordinated by Martin Wirsing of LMU München. €8,150,000 (including €375,748 for University College London), Sep. 2005–Aug. 2009. Site Leader for UCL, Work Package Leader (WP6, Deployment and Reengineering).

The Royal Society, Wolfson Research Merit Award, £200,000, Apr. 2004–Mar. 2009. Sole PI.

University of California, Irvine

US Defense Advanced Research Projects Agency (DARPA), Information Systems Office (ISO), Program in Dynamic Assembly for System Adaptability, Dependability, and Assurance (DASADA). *Proteus: Assessment and Adaptation through Dynamic Architecture Technology*, F30602-00-2-0607. US$1,400,000, Jun. 2000–Jun. 2003. Co-PI with PI Richard N. Taylor, co-PIs David F. Redmiles and Adriaan W. van der Hoek.

US Defense Advanced Research Projects Agency (DARPA), Information Technology Office (ITO), Program in Runtime Environments for Networked, Embedded Systems (RENES). *SensOS: Architecture-centric Dynamic Adaptation of Deeply Networked Embedded Systems*, F30602-99-C-0174. US$980,400 (including US$443,313 for UC Irvine), Sep. 1999–Jan. 2001. Co-PI with PI Richard N. Taylor.

US Air Force Office of Scientific Research, New World Vistas Program. *Specification and Dynamic Checking of Composition Constraints in Distributed Component-Based Systems*, F49620-98-1-0061. US$278,767, Nov. 1997–Oct. 2001. Sole PI.

US National Science Foundation, Software Engineering & Languages Program, Faculty Early Career Development (CAREER) Award. *CAREER: Mechanisms for Ensuring the Integrity of Distributed Object Systems*, CCR-9701973. US$200,000, Jul. 1997–Jun. 2001. Sole PI.

University of California MICRO Program, *Specifying and Checking Integrity Constraints in Distributed Avionics Systems*, 97-151/UCM-110-720842AK. US$7,959, Jul. 1997–Dec. 1998. Co-sponsored by Northrop Grumman Corporation. Sole PI.

University of California, Irvine, Department of Information and Computer Science, Research & Travel Award, US$2,623, 1998. Sole PI.

University of California, Irvine, Department of Information and Computer Science, Research & Travel Award, US$2,300, 1997. Sole PI.

Patents

P11. Y. Huang, A.W.P. Fung, D.S. Rosenblum, S. Yajnik, R. Teodorescu, T.W. Chen, C.-M. Lin, C.Y. Wang, P.F. Yang and R.C. Leng, *Packing routing via payload inspection for alert services, for digital content delivery and for quality of service management and caching with selective multicasting in a publish-subscribe network*, Korea Patent, registration no. 1009852370000, Sep. 28, 2010.

P10. P.F. Yang, T.W. Chen, A.W.P. Fung, D.S. Rosenblum, S. Yajnik, C.Y. Wang, C.M. Lin, Y. Huang and R. Teodorescu, *Method and apparatus for reliable and efficient content-based routing and query and response in a publish-subscribe network*, Korea Patent, registration no. 1009715060000, Jul. 14, 2010.

P9. T.-W. Chen, A.W.P. Fung, D.S. Rosenblum and P.-F. Yang, *Method and apparatus for content-based packet routing using compact filter storage and off-line pre-computation*, US Patent 7,653,753, Jan. 26, 2010.

P8. D.S. Rosenblum and R. Teodorescu, *Method and apparatus for implementing query-response interactions in a publish-subscribe network*, US Patent 7,627,603, Dec. 1, 2009.

P7. T.-W. Chen, A.W.P. Fung, D.S. Rosenblum and P.-F. Yang, *Method and apparatus for propagating content filters for a publish-subscribe network*, US Patent 7,551,629, Jun. 23, 2009.

P6. P.-F. Yang, T.-W. Chen, A.W.P. Fung, D.S. Rosenblum, S. Yajnik, C.-Y. Wang, C.-M. Lin, Y. Huang and R. Teodorescu, *Method and apparatus for reliable and efficient content-based routing and query and response in a publish-subscribe network*, China Patent, publication no. 1656474, Feb. 4, 2009.

P5. D.S. Rosenblum, *Method for sending and receiving a Boolean function over a network*, US Patent 7,117,270, Oct. 3, 2006.

P4. T.-W. Chen, A.W. Fung, P.-F. Yang, Y. Huang, C.-M. Lin, S. Yajnik, C.-Y. Wang and D.S. Rosenblum, *Packet routing via payload inspection and subscription processing in a publish-subscribe network*, Hong Kong Patent 1082858, Jun. 16, 2006.

P3. D.S. Rosenblum, *Method for storing Boolean functions to enable evaluation, modification, reuse, and delivery over a network*, US Patent 6,910,033, Jun. 21, 2005.

P2. T.-W. Chen, A.W. Fung, P.-F. Yang, Y. Huang, C.-M. Lin, S. Yajnik, C.-Y. Wang and D.S. Rosenblum, *Packet routing via payload inspection and subscription processing in a publish-subscribe network*, Taiwan Patent 571531, Jan. 11, 2004.

P1. Y.F.R. Chen, D.S. Rosenblum and K.-P. Vo, *System and method for selecting test units to be re-run in software regression testing*, US Patent 5,673,387, Sep. 30, 1997.

Publications

Books

B1. M. Casterline, T.A. Longstaff, C.R. Baker, R.A. Bond, R. Chellappa, T. Darrell, M. Greer, T.G. Kolda, N.O. Leslie, R.R. Murphy, D.S. Rosenblum, J.N.T. Shanahan, H. Silva III and R. Willett (Committee on Testing, Evaluating, and Assessing Artificial Intelligence-Enabled Systems Under Operational Conditions for the Department of the Air Force), *Test and Evaluation Challenges in Artificial Intelligence-Enabled Systems for the Department of the Air Force,* Consensus Study Report, Air Force Studies Board, Division on Engineering and Physical Sciences, National Academies of Sciences, Engineering, and Medicine. Available online at https://nap.nationalacademies.org/catalog/27092/test-and-evaluation-challenges-in-artificial-intelligence-enabled-systems-for-the-department-of-the-air-force (last accessed Sep. 18, 2023).

Edited Books

EB4. D. Bianculli, N. Medvidović and D.S. Rosenblum (editors), *40 Editions of ICSE—the ruby anniversary celebration*, limited edition book distributed at the 40th Int'l Conf. Software Engineering, Gothenburg, Sweden, May–Jun. 2018. Available online at https://www.icse2018.org/info/50-years-of-se (last accessed Jun. 3, 2018).

EB3. D.S. Rosenblum and G. Taentzer (co-editors), *Proc. 13th Int'l Conf. Fundamental Approaches to Software Engineering* (FASE 2010), Springer LNCS 6013, Mar. 2010.

EB2. J. Estublier and D.S. Rosenblum (co-editors), *Proc. 26th Int'l Conf. Software Engineering* (ICSE 2004), IEEE CS Press, May 2004.

EB1. D.S. Rosenblum (editor), *Proc. ACM SIGSOFT 2000 Eighth Int'l Symp. Foundations of Software Engineering* (FSE 2000), ACM Press, Nov. 2000.

Chapters in Edited Books

BC8. A. Mukhija, D.S. Rosenblum, H. Foster and S. Uchitel, "Runtime Support for Dynamic and Adaptive Service Composition", in Part VII of *Rigorous Software Engineering for Service-Oriented Systems: Results of the SENSORIA Project on Software Engineering for Service-Oriented Computing*, Springer LNCS 6582, 2011, pp. 585–603.

BC7. H. Foster, A. Mukhija, D.S. Rosenblum and S. Uchitel, "Specification and Analysis of Dynamically-Reconfigurable Service Architectures", in Part V of *Rigorous Software Engineering for Service-Oriented Systems: Results of the SENSORIA Project on Software Engineering for Service-Oriented Computing*, Springer LNCS 6582, 2011, pp. 428–446.

BC6. A. Carzaniga, D.S. Rosenblum and A.L. Wolf, "Design and Evaluation of a Wide-Area Event Notification Service", in *Foundations of Intrusion Tolerant Systems*, DARPA Program on Organically Assured and Survivable Information Systems (OASIS), IEEE Computer Society, 2003, pp. 283–334. Invited reprint of #J16.

BC5. A.L. Wolf and D.S. Rosenblum, "A Study in Software Process Data Capture and Analysis", in *Process-Centered Software Engineering Environments*, IEEE Computer Society Press, 1995, pp. 361–370. Invited reprint of #C9.

BC4. Y.-F. Chen, G.S. Fowler, D.G. Korn, E. Koutsofios, S.C. North, D.S. Rosenblum and K.-P. Vo, "Intertool Connections", Chapter 11 of *Practical Reusable UNIX Software*, Wiley, 1995, pp. 299–336.

BC3. D.S. Rosenblum and B. Krishnamurthy, "Generalized Event-Action Handling", Chapter 9 of *Practical Reusable UNIX Software*, Wiley, 1995, pp. 247–274.

BC2. D.S. Rosenblum, "Self-Checking Programs and Program Instrumentation", Chapter 5 of *Practical Reusable UNIX Software*, B. Krishnamurthy (ed.), Wiley, 1995, pp. 159–176.

BC1. D.S. Rosenblum, "A Methodology for the Design of Ada Transformation Tools in a DIANA Environment", in M.V. Zelkowitz (ed.), *Reprints in Software*, third ed., IEEE Computer Society Press, 1987, pp. 84–93. Invited reprint of paper #J1.

Refereed Journal Papers

J33. Y. Liang, K. Ouyang, Y. Wang, Z. Pan, Y. Yin, H. Chen, J. Zhang, Y. Zheng, D.S. Rosenblum and R. Zimmermann, "Mixed-Order Relation-Aware Recurrent Neural Networks for Spatio-Temporal Forecasting", *IEEE Trans. Knowledge and Data Engineering*, Vol. 35, No. 9, Sep. 2023, pp. 9254–9268.

J32. Y. Xiao, I. Beschastnikh, Y. Lin, R.S. Hundal, X. Xie, D.S. Rosenblum and J.S. Dong, "Self-Checking Deep Neural Networks for Anomalies and Adversaries in Deployment", *IEEE Trans. Dependable and Secure Computing*, Jul. 2022, 18pp., to appear.

J31. K. Ouyang, Y. Liang, Y. Liu, Z. Tong, S. Ruan, Y. Zheng and D.S. Rosenblum, "Fine-Grained Urban Flow Inference", *IEEE Trans. Knowledge and Data Engineering*, Vol. 34, No. 6, Jun. 2022, pp. 2755–2770.

J30. Y. Liu, Y. Liang, K. Ouyang, S. Liu, D.S. Rosenblum and Y. Zheng, "Predicting Urban Water Quality with Ubiquitous Data—A Data-driven Approach", *IEEE Trans. Big Data*, Vol. 8, No. 2, Apr. 2022, pp. 564–578.

J29. G. Su, L. Liu, M. Zhang and D.S. Rosenblum, "Quantitative Verification for Monitoring Event-Streaming Systems", *IEEE Trans. Software Engineering*, Vol. 48, No. 2, Feb. 2022, pp. 538–550.

J28. H. Li, Y. Liu, N. Mamoulis and D.S. Rosenblum, "Translation-Based Sequential Recommendation for Complex Users on Sparse Data", *IEEE Trans. Knowledge and Data Engineering*, Vol. 32, No. 8, Aug. 2020, pp. 1639–1651.

J27. O. Bataineh, D.S. Rosenblum and M. Reynolds, "Efficient Decentralized LTL Monitoring Framework using Tableau Technique", *ACM Trans. Embedded Computing Sys.*, Special Issue for ESWEEK 2019, Vol. 18, No. 5S, Oct. 2019, Article 87, 12pp. Presented at EMSOFT 2019, New York, NY, USA, Oct. 2019.

J26. L. Liu, S. Wang, B. Hu, Q. Qiong, J.Wen and D.S. Rosenblum, "Learning Structures of Interval-Based Bayesian Networks in Probabilistic Generative Model for Human Complex Activity Recognition", *Pattern Recognition*, Vol. 81, Sep. 2018, pp. 545–561.

J25. G. Su, Y. Feng, T. Chen and D.S. Rosenblum, "Asymptotic Perturbation Bounds for Probabilistic Model Checking with Empirically Determined Probability Parameters", *IEEE Trans. Software Engineering*, Vol. 42, No. 7, Jul. 2016, pp. 623–639.

J24. Y. Liu, L. Nie, L. Liu and D.S. Rosenblum, "From Action to Activity: Sensor-Based Activity Recognition", *Neurocomputing*, Vol. 181, 12 Mar. 2016, pp. 108–115.

J23. J. Lü, D.S. Rosenblum, T. Bultan, V. Issarny, S. Dustdar, M.-A. Storey and D. Zhang, "Roundtable: The Future of Software Engineering for Internet Computing", *IEEE Software*, invited contribution for Focus Section on Internetware and Beyond, Vol. 32, No. 1, Jan./Feb. 2015, pp. 91–97.

J22. L. Duboc, E. Letier and D.S. Rosenblum, "Systematic Elaboration of Scalability Requirements through Goal-Obstacle Analysis", *IEEE Trans. Software Engineering*, Vol. 39, No.1, Jan. 2013, pp. 119–140.

J21. M. Sama, S. Elbaum, F. Raimondi, D.S. Rosenblum and Z. Wang, "Context-Aware Adaptive Applications: Fault Patterns and Their Automated Identification", invited paper for Special Issue on the Best Papers of FSE 2008, *IEEE Trans. Software Engineering*, Vol. 36, No. 5, Sep./Oct. 2010, pp. 644–661.

J20. M. Sama, D.S. Rosenblum, Z. Wang and S. Elbaum, "Multi-Layer Faults in the Architectures of Mobile, Context-Aware Adaptive Applications", invited paper for Special Issue on Software Architecture and Mobility, *Journal of Systems and Software*, Vol. 83, Issue 6, Jun. 2010, pp. 906–914.

J19. L.A. Clarke and D.S. Rosenblum, "Runtime Assertion Checking", Sidebar in "Determining the Impact of Software Engineering Research on Practice ", *Computer*, Vol. 41, No. 3, Mar. 2008, p.48.

J18. A. Orso, H. Do, G. Rothermel, M.J. Harrold and D.S. Rosenblum, "Using Component Metadata to Regression Test Component-Based Software", S*oftware Testing, Verification & Reliability*, Vol. 17, No. 2, Jun. 2007, pp. 61–94.

J17. N. Medvidovic, D.S. Rosenblum, J.E. Robbins and D.F. Redmiles, "Modeling Software Architectures in the Unified Modeling Language", *ACM Trans. Software Engineering and Methodology*, Vol. 11, No. 1, Jan. 2002, pp. 2–57.

J16. A. Carzaniga, D.S. Rosenblum and A.L. Wolf, "Design and Evaluation of a Wide-Area Event Notification Service", *ACM Trans. Computer Systems*, Vol. 19, No. 3, Aug. 2001, pp. 332–383.

J15. J. Bible, G. Rothermel and D.S. Rosenblum, "A Comparative Study of Coarse- and Fine-Grained Safe Regression Test Selection Techniques", *ACM Trans. Software Engineering and Methodology*, Vol. 10, No. 2, Apr. 2001, pp. 149–183.

J14. M.J. Harrold, D. Rosenblum, G. Rothermel and E. Weyuker, "Empirical Studies of a Prediction Model for Regression Test Selection", *IEEE Trans. Software Engineering*, Vol. 27, No. 3, Mar. 2001, pp. 248–263.

J13. R. Natarajan and D.S. Rosenblum, "Supporting Architectural Concerns in Component Interoperability Standards", *IEE Proceedings – Software*, Special Issue on Component-based Software Engineering, Vol. 147, No. 6, Dec. 2000, pp. 215–223.

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T7. D.S. Rosenblum, *Petri Net Case Study*, in J.J. Kenney and W. Mann (eds.), *Anna Package Specification: Case Studies*, Technical Report CSL-TR-91-496, Computer Systems Laboratory, Stanford University, Oct. 1991, pp. 87–94.

T6. D.S. Rosenblum, *Towards Petri Net-Based Analysis of Behavior Specifications for Concurrent Programs*, AT&T Bell Laboratories Technical Report, Jan. 1991, 7 pp.

T5. P. Frankl and D.S. Rosenblum, *Using Annotations for Selection and Evaluation of Software Test Data*, AT&T Bell Laboratories Technical Report, Oct. 1989, 6 pp.

T4. D.S. Rosenblum, *Event-Based Semantics of Concurrent Programming Languages*, AT&T Bell Laboratories Technical Report, Sep. 1988, 24 pp.

T3. D.S. Rosenblum, *Design and Verification of Distributed Tasking Supervisors for Concurrent Programming Languages*, **Ph.D. Dissertation**, Technical Report CSL-TR-88-357, Computer Systems Laboratory, Stanford University, Mar. 1988, 218 pp.

T2. D.S. Rosenblum and E.W. Mayr, *Simulation of an Ultracomputer with Several `Hot Spots'*, Technical Report STAN-CS-86-1119, Dept. of Computer Science, Stanford University, Jun. 1986, 33 pp.

T1. D.S. Rosenblum, *An Implementation of the IEEE Standard for Binary Floating Point Arithmetic for the Motorola 6809 Microprocessor*, **M.S. Thesis**, Dept. of Computer Sciences, North Texas State University, Aug. 1983, 83 pp.

Presentations and Tutorials

Keynote Talks and Other Plenary Conference Talks

"The Challenges of Probabilistic Thinking", 19th International Conference on Formal Engineering Methods (ICFEM 2017), Xi'an, China, Nov. 2017

"The Power of Probabilistic Thinking", 31st ACM/IEEE International Conference on Automated Software Engineering (ASE 2017), Singapore, Sep. 2016

"Career Management", ICSE 2014 New Faculty and Researcher Symp. (ICSE NFRS 2014), Hyderabad, India, Jun. 2014

"Probability and Uncertainty in Software Engineering", 2013 National Software Application Conf. (NASAC 2013), Tianjin, China, Nov. 2013

"Whither Software Engineering Research?", 19th Asia-Pacific Software Engineering Conf. (APSEC 2012), Hong Kong, China, Dec. 2012

"Software System Scalability: Concepts and Techniques", 2nd India Software Engineering Conference (ISEC 2009), Pune, India, Feb. 2009

"ACM SIGSOFT Impact Paper Award: Reflections and Prospects" (with Alexander L. Wolf), 2008 ACM SIGSOFT Impact Paper Award, 16th ACM SIGSOFT Int'l Symp. Foundations of Software Engineering (FSE 2008), Atlanta, GA, USA, Nov. 2008

"Scalability: What It Is and How to Analyse It", XXI Sympósio Brasileiro de Engenharia de Software (SBES 2007), João Pessoa, Paraíba, Brazil, Oct. 2007

"Analysis of Software Architectures: Achievements and Challenges", 18th Int'l Workshop on Algebraic Development Techniques (WADT '06), La Roche en Ardenne, Belgium, Jun. 2006

"Wide-Area Publish/Subscribe: A Re-Assessment", 2005 Int'l Symp. Distributed Objects and Applications (DOA 2005), Agia Napa, Cyprus, Oct. 2005

"Some Open Problems in Publish/Subscribe Networking", Second Int'l Workshop on Distributed Event-Based Systems (DEBS '03), San Diego, CA, USA, Jun. 2003

"Assertions a Decade Later", ICSE '92 Most Influential Paper Award, 2002 Int'l Conf. Software Engineering, Orlando, FL, May 2002

"Internet Scale Event Notification", Keynote Talk at Workshop on Internet Scale Event Notification, Irvine, CA, Jul. 1998

"An Efficient Communication Kernel for Distributed Ada Runtime Tasking Supervisors", Best Graduate Student Paper Award, ACM SIGAda/AdaJUG Joint Meeting., Hollywood, FL, Jan. 1987

Other Invited Conference and Workshop Talks and Panels

Panelist, "ICSE 2016 Town Hall on ICSE 2017 Submission Limit", 38th Int'l Conf. Software Engineering (ICSE 2016), Austin, TX, USA, May 2016

"A Brief Look at Probabilistic Model Checking", Dagstuhl Seminar #15017 on Formal Foundations for Networking, Schloß Dagstuhl, Germany, Feb. 2015

"How Is Computer Science Changed by Other Disciplines?", Panel "Interdisciplinarity: The Future of Computer Science?", Microsoft Research Asia Faculty Summit 2014, Beijing, China, Oct. 2014

Panelist, "Does Infrastructure Really Matter When Moving to the Front Lines?", IBM Technology Conference & Expo 2014, Singapore, Jul. 2014

"The Mother of All Disciplines?", Pre-Summit Workshop for Deans, Department Chairs and Research Directors, 9th European Computer Science Summit (ECSS 2013), Amsterdam, The Netherlands, Oct. 2013

"A Random Walk Down Memory Lane", IEEE Computer Society Fellows' Distinguished Public Forum, Biopolis, Singapore, Oct. 2013

"Felicitous Computing", NUS School of Computing Annual Research Workshop, NUS Research Institute, Suzhou, China, Jan. 2013

"Applications and Abstractions: A Cautionary Tale", DIMACS Working Group on Abstractions for Network Services, Architecture, and Implementation, Rutgers University, Piscataway, NJ, USA, May 2012

"Felicitous Computing", 5th Annual NUS School of Computing-China Research Workshop, National University of Singapore, Singapore, Jan. 2012

"High Confidence Ubiquitous Computing Systems", 2011 Int'l Symp. High Confidence Software (ISHCS 2011), Beijing, China, Dec. 2011

Panelist, "Future of Software Research in Asia-Pacific/China Region", 2011 Int'l Symp. High Confidence Software (ISHCS 2011), Beijing, China, Dec. 2011

Panelist, "Regression Testing", Dagstuhl Seminar #10111 on Practical Software Testing: Tool Automation and Human Factors, Schloß Dagstuhl, Germany, Mar. 2010

Panellist, "Academic-Industrial Cooperation in Software Engineering", XXI Sympósio Brasileiro de Engenharia de Software (SBES 2007), João Pessoa, Paraíba, Brazil, Oct. 2007

"The Software Engineering Impact Project: Testing & Analysis" (with Lori A. Clarke), 2006 Int'l Symp. Software Testing and Analysis (ISSTA 2006), Portland, ME, USA, Jul. 2006

"Testability and Reliability of Component-Based Software", Pre-ICSE 2006 Workshop on Int'l Software Engineering Cooperation, Shanghai, China, Oct. 2004

Panellist on Panel "Distributed Event-Base Processing in a Bigger Context", Second Int'l Workshop on Distributed Event-Based Systems (DEBS '03), San Diego, CA, Jun. 2003

"Publish/Subscribe Architectures: Attractions, Problems and Lessons", Panel "Event-Based Systems and Software Architectures: Out of the Shadows and Into the Mainstream", 1st Annual Research Forum, UC Irvine Institute for Software Research, Irvine, CA, Jun. 2002

Panellist, "Who Needs Doctors? Reporting from the Doctoral Workshop", 22nd Int'l Conf. Software Engineering (ICSE 2000), Limerick, Ireland, Jun. 2000

"Challenges in Exploiting Architectural Models for Software Testing", NSF/CNR Int'l Workshop on the Role of Software Architecture in Testing and Analysis (ROSATEA), Marsala, Sicily, Italy, Jul. 1998

"An Overview of Selective Regression Testing", Software Engineering Tools and Technologies (SETT) Java Testing Workshop, Irvine, CA, Nov. 1996

Inaugural Lecture as Professor of Software Systems, University College London

"Scalability in Software Systems Engineering: The Good, the Bad, and the Ugly", 13 Dec. 2004 (with Vote of Thanks by Alexander L. Wolf)

Other Invited Talks

"The Power and Challenges of Probabilistic Reasoning for Software Engineering", Faculty of Computer and Information Technology, Universiti Putra Malaysia, Oct. 2018

"The Power and Challenges of Probabilistic Reasoning for Software Engineering", Huawei Research & Development Competence Centre (Shenzhen), May 2018

"The Power and Challenges of Probabilistic Reasoning for Software Engineering", Faculty of Computer and Information Sciences, Hosei University, Feb. 2018

"Uncertainty in Computer Systems: Problems and Results", Department of Computer Science, University of Southern California, Jan. 2017

"Jogging While Driving, and Other Software Engineering Research Problems", Department of Computer Science Distinguished Lecture Series, Univ. of Illinois at Chicago, Apr. 2014

"Felicitous Computing", Institute for Software Research (ISR) Distinguished Speaker Series, University of California, Irvine, Apr. 2013

"Scalability of Software Systems: Concepts and Techniques", Univ. de Buenos Aires, Jul. 2012

"Automated Fault Identification in Context-Aware Adaptive Applications", National University of Singapore, Aug. 2010

"Automated Fault Identification in Context-Aware Adaptive Applications", University of Texas at Dallas, Jun. 2010

"Scalability: What It Is and How to Analyse It", Univ. of Massachusetts–Amherst, Mar. 2008

"Predicting the Reliability of Concurrent Component-Based Software", Università della Svizzera Italiana, Lugano, Switzerland, Dec. 2005

"Predicting the Reliability of Concurrent Component-Based Software", Brunel University, London, UK, Nov. 2005

"Predicting the Reliability of Concurrent Component-Based Software", Georgia Institute of Technology, Atlanta, GA, USA, Jun. 2005

"Publish/Subscribe Networking: Open Problems and Recent Results", University of Nebraska-Lincoln, Lincoln, NE, USA, Mar. 2005

"Predicting the Reliability of Concurrent Component-Based Software", University of Nebraska-Lincoln, Lincoln, NE, USA, Mar. 2005

"Publish/Subscribe Networking: Open Problems and Recent Results", Intel Research Cambridge, Cambridge, UK, Mar. 2005

"Predicting the Reliability of Concurrent Component-Based Software", Università dell'Aquila, L'Aquila, Italy, Mar. 2005

"Two Decades of Software Systems Research", University College London, UK, Oct. 2003

"Publish/Subscribe Networking: Concepts, Results, Open Problems", Università della Svizzera Italiana, Lugano, Switzerland, Jun. 2003

"Publish/Subscribe Networking: Concepts, Results, Open Problems", University College London, London, UK, May 2003

"Publish/Subscribe Networking: Concepts, Results, Open Problems", University of Southern California, Los Angeles, CA, May 2003

"Reconciling Software Architecture Models and Software Component Standards", Politecnico di Milano, Milan, Italy, Jan. 1999

"Reconciling Software Architecture Models and Software Component Standards", Technische Universität Wien, Vienna, Austria, Jan. 1999

"Bringing Software Architecture into the Software Development Process", Southern California Process Improvement Network (SPIN), Irvine, CA, Jun. 1998

"Internet-Scale Event Observation and Notification", Bay Area Round Table (BART), Palo Alto, CA, Feb. 1998

"Validation of Distributed Component-Based Software Systems", Bay Area Round Table (BART), Palo Alto, CA, Aug. 1997

"Predicting the Cost-Effectiveness of Regression Testing Methods", University of California, Irvine, Irvine, CA, May 1996

"A Specification-Based Approach to Automated Fault Detection", University of Colorado at Boulder, Boulder, CO, Apr. 1996

"A Specification-Based Approach to Automated Fault Detection", University of Maryland, College Park, MD, Mar. 1996

"A Specification-Based Approach to Automated Fault Detection", Columbia University, New York, NY, Feb. 1996

"Experience with a Selective Regression Testing System", Clemson U., Clemson, SC, Oct. 1995

"Software Specification", Columbia University, New York, NY, Oct. 1995

"Software Specification", Rutgers University, New Brunswick, NJ, Feb. 1995

"Experience with a System for Selective Regression Testing", Polytechnic University, Brooklyn, NY, Oct. 1994

"Software Research at Bell Labs", Stanford University, Stanford, CA, Aug. 1994

"Testtube: A System for Selective Regression Testing", Siemens Corporate Research, Princeton, NJ, Mar. 1994

"Specifying and Developing Programs with Anna", New York University, New York, NY, Mar. 1991

"Validation of Tasking Supervisors with TSL Specifications", Polytechnic University, Brooklyn, NY, Nov. 1989

"Automated Testing of Distributed Ada Tasking Supervisors", AT&T Bell Laboratories, Holmdel, NJ, Sep. 1987

"Automated Testing of Distributed Ada Tasking Supervisors", Software Engineering Institute, Carnegie Mellon University, Pittsburgh, PA, May 1987

"An Efficient Distributed Implementation of Ada", Los Angeles Chapter of ACM SIGAda, Redondo Beach, CA, May 1987

"Automated Testing of Distributed Ada Tasking Supervisors", Bell Communications Research, Piscataway, NJ, Apr. 1987

"Automated Testing of Distributed Ada Tasking Supervisors", IBM T.J. Watson Research Center, Hawthorne, NY, Apr. 1987

"A Distributed Implementation of Ada", Supercomputing Research Center, Institute for Defense Analyses, Lanham, MD, Apr. 1986

Conference Tutorials

Scalability of Software Systems: Concepts and Techniques, 5th IFIP TC2 Summer School & 2nd ACM/IEEE ICSE 2010 Warm-Up Workshop (WUP 2009), Strand, South Africa, Apr. 2009

Formal Software Engineering (with Alexander L. Wolf), ACM SIGSOFT '95 Third Symp. Foundations of Software Engineering, Washington, DC, USA, Oct. 1995

Formal Software Engineering (with Alexander L. Wolf), ACM SIGSOFT '94 Second Symp. Foundations of Software Engineering, New Orleans, LA, USA, Dec. 1994

Other Conference Presentations

Int'l Conf. Software Engineering (ICSE): 1992, 1994, 2007
ACM SIGSOFT '96 Fourth Symp. Foundations of Software Engineering (FSE): 1996
SIGSOFT '89: 3rd Symp. Software Testing, Analysis and Verification (TAV): 1989
IEEE Computer Society 1984 Conf. Ada Applications and Environments (AAE): 1984

Conference and Workshop Committees

Steering Committees

Int'l Conf. Software Engineering (ICSE), 2001–2007, 2009–2021 (Chair 2004–2007)
Int'l Symp. Software Testing and Analysis (ISSTA), 2005–2014 (Chair 2007–2008)
European Joint Conf. Theory and Practice of Software (ETAPS), 2008–2011
Int'l Workshop and Conf. Distributed Event-Based Systems (DEBS), 2006–2009
Int'l Conf. Model Driven Engineering Languages and Systems (MoDELS/UML), 2005–2009
European Software Engineering Conf. (ESEC), 2005–2009
Workshop on Program Analysis for Software Tools and Engineering (PASTE), 2005–2009
Int'l Workshop on Software and Performance (WOSP), 2005–2009
Int'l Symp. Automated and Analysis-Driven Debugging (AADEBUG), 2005–2006

Conference General Chair

2007 Int'l Symp. Software Testing and Analysis (ISSTA 2007)

Program or Track Chair/Co-Chair of International Events

Journal-First Track, 44th Int'l Conf. Software Engineering (ICSE 2022)
50th Anniversary of Software Engineering, 40th Int'l Conf. Software Engineering (ICSE 2018)
Technical Briefings, 39th Int'l Conf. Software Engineering (ICSE 2017)
Visions of 2025 and Beyond Track, 38th Int'l Conf. Software Engineering (ICSE 2016)
ICSE 2004 Most Influential Paper, 36th Int'l Conf. Software Engineering (ICSE 2014)
ICSE 2013 Int'l Workshop on the Engineering of Mobile-Enabled Systems (MOBS 2013)
ETAPS 2010 13th Int'l Conf. Fundamental Approaches to Software Engineering (FASE 2010)
State-of-the-Art Presentations, Joint 11th European Software Engineering Conf. and 15th ACM SIGSOFT Int'l Symp. Foundations of Software Engineering (ESEC/FSE 2007)
Doctoral Symposium, 29th Int'l Conf. Software Engineering (ICSE 2007)
Conference Coordinator, Social Programs, 28th Int'l Conf. Software Engineering (ICSE 2006)
State-of-the-Practice Track, 27th Int'l Conf. Software Engineering (ICSE 2005)
26th Int'l Conf. Software Engineering (ICSE 2004)
ACM SIGSOFT Eighth Int'l Symp. Foundations of Software Engineering (FSE 2000)
Workshop on Evaluating Software Architectural Solutions (WESAS 2000)
Research Demos and Posters, 22nd Int'l Conf. Software Engineering (ICSE 2000)
Publicity, ACM SIGSOFT Sixth Int'l Symp. Foundations of Software Engineering (FSE 1998)
Publicity, 17th Int'l Conf. Software Engineering (ICSE 1995)

Program Committee Member (Series)

Int'l Conf. Software Engineering (ICSE): 1997, 2000, 2001, 2002, 2003, 2005, 2011, 2012, 2013
SIGSOFT Int'l Symp. Foundations of Software Engineering (FSE): 1998, 2004, 2008, 2010, 2018
European Software Engineering Conf. (ESEC/FSE): 1999, 2001, 2005
SIGSOFT Int'l Symp. Software Testing & Analysis (ISSTA): 1994, 1996, 2004, 2008, 2010

Int'l Workshop/Conf. Distributed Event-Based Systems (DEBS): 2002, 2003, 2004, 2006, 2007
Int'l Conf. Automated Software Engineering (ASE): 1998, 1999
SIGSOFT Symp. Component-Based Software Engineering (CBSE): 2011, 2012

Program Committee Member (Other)
ESEC/FSE 2023 Workshop on Dependability and Trustworthiness of Safety-Critical Systems with Machine Learned Components (SE4SafeML)
Doctoral Symposium, 43rd Int'l Conf. Software Engineering (ICSE 2021)
1st Workshop on AI Engineering – Software Engineering for AI, 43rd Int'l Conf. Software Engineering (WAIN 2021)
Journal-First Track, 41st Int'l Conf. Software Engineering (ICSE 2019)
New and Emerging Ideas Track, 2018 Int'l Conf. Software Architecture (ICSA 2018)
First International Workshop on Establishing a Community-Wide Infrastructure for Architecture-Based Software Engineering (ECASE 2017)
12th Int'l Symp. Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2017)
Doctoral Symposium, 37th Int'l Conf. Software Engineering (ICSE 2015)
Advisory Committee, 2nd Int'l Conf. Big Data Analytics in Healthcare (BDAH 2014)
First Int'l Conf. Mobile Software Engineering and Systems (MOBILESoft 2014)
Tutorial and Technical Briefings Track, 36th Int'l Conf. Software Engineering (ICSE 2014)
FSE 2012 New Ideas and Emergent Results Track
4th Int'l IEEE Conferences on Software – Science, Technology and Engineering (SwSTE 2010)
2009 Workshop on Architecting Dependable Systems (WADS 2009)
2nd ACM/IEEE ICSE 2010 Warm-Up Workshop (WUP 2009)
FSE 2008 New Software Engineering Faculty Symposium
7th ACM Workshop on Software and Performance (WOSP 2008)
Second Int'l Conf. Tests and Proofs (TAP 2008)
Doctoral Symposium, ACM 2008 Int'l Symp. Software Testing and Analysis (ISSTA 2008)
Doctoral Symposium, 30th Int'l Conf. Software Engineering (ICSE 2008)
ETAPS 2008 11th Int'l Conf. Fundamental Approaches to Software Engineering (FASE 2008)
3rd Int'l IEEE Conferences on Software – Science, Technology and Engineering (SwSTE 2007)
Most Promising New Work Track, 2007 Haifa Verification Conference (HVC 2007)
6th ACM Workshop on Software and Performance (WOSP 2007)
2006 Int'l Symp. Trustworthy Global Computing (TGC 2006)
4th Int'l Workshop on Distributed and Mobile Collaboration (DMC 2006)
Workshop on Web Services—Modeling and Testing (WS-MaTe 2006)
Doctoral Symposium, ACM/IFIP/USENIX 6th Int'l Middleware Conf. (Middleware 2005)
2nd Int'l Workshop on Software Quality (SOQUA 2005)
5th Int'l Workshop on Software Engineering and Middleware (SEM 2005)
Fifth Working IFIP/IEEE Conf. Software Architecture (WICSA 2005)
UML 2004 Workshop on Software Architecture Description and UML
3rd Int'l Workshop on Software Engineering and Middleware (SEM 2002)
2nd Int'l Workshop on Engineering Distributed Objects (EDO 2000)
Doctoral Symposium, 22nd Int'l Conf. Software Engineering (ICSE 2000)
Second USENIX Conf. Domain-Specific Languages (DSL '99)
ICSE '99 Workshop on Engineering Distributed Objects (EDO '99)
First Working IFIP Conf. Software Architecture (WICSA1)
Eighth Annual California Software Symposium (CSS '98)
DEXA '98 Int'l Workshop on Large-Scale Software Composition
ISSTA '98 Second Workshop on Formal Methods in Software Practice
Seventh Annual California Software Symposium (CSS '97)
Second Int'l Workshop on Empirical Studies of Software Maintenance (WESS '97)
ISSTA '96 Workshop on Formal Methods in Software Practice
8th Int'l Workshop on Software Specification and Design (IWSSD-8)
1993 Conf. Computer Software and Applications (COMPSAC '93)
Tutorials, 14th Int'l Conf. Software Engineering (ICSE-14)

Selected Reviewer Service

IEEE Computer Society Fellows Committee
IEEE Senior Member Review Panel (UK and Republic of Ireland Section)
The Royal Society
International Grant Assessments Panel

International Fellowships Panel
Engineering and Physical Sciences Research Council (EPSRC)
Review Panel, Technology Programme, Computer Science, Nov. 2005
Prioritisation Panel, Information and Communications Technology Programme, Jun. 2008
Peer Review College, 2006–2009
National Science Foundation (NSF) Review Panels
Computer and Information Science and Engineering (CISE) Directorate, May 2000
Computer and Information Science and Engineering (CISE) Directorate, Feb. 1997
Vienna Science and Technology Fund (WWTF)
Jury Member, Information and Communication Technology (ICT) Call, 2010

Hosting of Extended Visits by Academics

National University of Singapore
Anthony I. Wasserman, Carnegie Mellon University West, 2014
Carlo Ghezzi, sabbatical leave from Politecnico di Milano, 2014
Mehdi Jazayeri, sabbatical leave from Università della Svizzera Italiana, 2015

University College London
Richard N. Taylor, sabbatical leave from University of California, Irvine, 2005
Sebastian Elbaum, sabbatical leave from University of Nebraska–Lincoln, 2006–2007
Leon J. Osterweil, sabbatical leave from University of Massachusetts–Amherst, 2007
Lori A. Clarke, sabbatical leave from University of Massachusetts–Amherst, 2007

Doctoral and Post-Doctoral Supervision and Examination

In addition to doctoral and post-doctoral supervision, I have supervised individual and group projects, theses and internships for over one hundred Bachelors and Masters Students

Post-Doctoral Supervisor

University of California, Irvine
Elisabetta Di Nitto, 1998; now Full Professor at Politecnico di Milano

University College London
Arun Mukhija, 2006–2009; now Vendor Governance Lead at Roche, Switzerland
Andrew Dingwall-Smith, 2006–2007; now Senior Developer at Message Automation
Genaína Rodrigues, 2008; now Professora at Universidade de Brasília
Franco Raimondi, 2008–2009; now Professor of Computer Science at Middlesex U.
Sonia Ben Mokhtar, 2009; now Senior Researcher at CNRS

National University of Singapore
Darren Carlson, 2013–2016; now Asst. Professor at U. of Hawai'I at Mānoa
Guoxin Su, 2013–2017; now Lecturer at University of Wollongong
Li Liu, 2013–2016; now Associate Professor at Chongqing University
Omar al-Bataineh, 2018; now Research Fellow at Nanyang Technological U.
Ye Liu, 2018–2019; now Research Engineer at Twitter

Ph.D. Supervisor

University College London
Jorge Luis Ortega Arjona, 2007; thesis *Architectural Patterns for Parallel Programming—Models for Performance Estimation*; now Professor at Universidad Nacional Autónoma de México, Mexico
Genaína Nunes Rodrigues, 2008; thesis *A Model Driven Approach for Software Reliability Prediction*; now Professora at Universidade de Brasília, Brazil
Ana Letícia De Cerqueira Leite Duboc, 2010; thesis *A Framework for the Characterization and Analysis of Software Systems Scalability*; now Researcher at La Salle – Ramon Llull University, Spain
Costin Raiciu, 2011; thesis *ROAR: Increasing the Flexibility and Performance of Distributed Search*; now Associate Professor at Universitatea Politehnica din Bucuresti, Romania
Michele Sama, 2011; thesis *Context-Driven Methodologies for Context-Aware and Adaptive Systems*; now Vice President of Engineering and Chief Technology Officer at Gluru, UK
Fokion Zervoudakis, 2014; thesis *Cascading Verification: An Integrated Method for Domain-Specific Model Checking*; now Senior Software Engineer at Funding Circle US

Panagiotis Papakos, 2014; thesis *Volare Mobile Context-aware Adaptation for the Cloud*; now Software Engineer at RateSetter, UK

National University of Singapore

Ratul Saha, 2018 (co-supervised with primary supervisor P.S. Thiagarajan); thesis *Quantitative Model Checking of Distributed Probabilistic Systems*; now Konductor at GetonChain, Singapore

Yongpo Jia, 2018; thesis *Multi-Source Learning from Social Network Data*; now Senior Expert on Digital Transformation with AI at Huawei, China

Marc Sven Brünink, 2018; thesis *Analyzing the Behavior of Deployed Software*; now Site Reliability Engineer at Google Zürich, Switzerland

Ye Liu, 2018; thesis *User Attribute Learning from Social Media and Ubiquitous Sensors*; now Senior Research Engineer at Twitter, USA

Yamilet Rosario Serrano Llerena, 2018; thesis *Applications of Perturbation Analysis in Probabilistic Model Checking*; now Head of Data Science at Universidad de Ingeniería y Tecnología (UTEC), Peru

Nirandika Wanigasekara, 2019; thesis *Decision Models for Context-Aware IoT Applications*; now Data Analyst at IBM Sydney, Australia

Kun Ouyang, 2020; thesis *Human Mobility Analytics with Deep Representations*; now Senior Researcher at LightSpeed Studio, Tencent, Singapore

Thilina Madusanka Thanthriwatta, 2021; thesis *Modeling Dynamic Aspects of Context-Aware Recommender Systems*; now Senior Lecturer at University of Moratuwa, Sri Lanka

Yuxuan Liang, 2023 (co-supervised with primary supervisor Roger Zimmermann); thesis *Learning Human Mobility with Deep Spatio-Temporal Neural Networks*; now Assistant Professor at Hong Kong University of Science and Technology (Guangzhou), China

George Mason University

Ajay Krishna Vajjala, cross-domain context-aware recommender systems, anticipated graduation 2024

Ph.D. External Examiner

Robert Chatley, Imperial College London, 2005
Octavian Patrascoiu, University of Kent, 2005
Ashok Argent-Katwala, Imperial College London, 2006
Alexander Buckley, Imperial College London, 2006
William Heaven, Imperial College London, 2007
Lucio Duarte, Imperial College London, 2007
Gürcan Güleşir, De Universiteit Twente, 2008
Matteo Migliavacca, Politecnico di Milano, 2008
Konstantinos Adamopoulos, M.Phil., King's College London, 2008
Eskinder Asmare, Imperial College London, 2009
Paolo Di Benedetto, Università dell'Aquila, 2010
Xiaoyuan Xie, Swinburne University of Technology, 2012

Ph.D. Committee Member

University of Colorado at Boulder

Jonathan E. Cook, 1996

University of California, Irvine

Gregory A. Bolcer, 1998
Nenad Medvidovic, 1998
Juei Chang, 1999
David M. Hilbert, 1999
Jason E. Robbins, 1999
Peyman Oreizy, 2000
E. James Whitehead, Jr. , 2000
Roy T. Fielding, 2000
Michael Kantor, 2001
Chang Liu, 2002
Peter Kammer, 2004

Politecnico di Milano

Antonio Carzaniga, 1998

National University of Singapore
Yongzheng Wu, 2012
Jian Zhu, 2012
Marcel Böhme, 2014
Chen Penghe, 2015
Narcisa Andreea Milea, 2015
Limiao Bai, 2016
Zhu Shenggao, 2017
Shin Hwei Tan, 2018
Pin Sym Foong, 2018
Quang Trung Ta, 2018
Shruti Shrikant Tople, 2018
Mathugamavithanage Dilruk Dasantha Perera, 2020

George Mason University
Yuxing Chen, 2021

Visiting Ph.D. Student
University College London
Javier Cubo, Universidad de Málaga, 2008

Teaching

North Texas State University
IBM System 370 Assembly Language: Fall 1982 (2 sections), Spring 1983 (2 sections)

Rutgers University
Software Engineering: Spring 1996

University of California, Irvine
Software Architectures, Distributed Systems and Interoperability: Spring 1998, Spring 1999, Fall 1999, Fall 2000
Software Engineering: Fall 1998, Winter 2001
Software Testing and Analysis: Spring 1999
Formal Methods in Software Engineering: Spring 1999, Winter 2001
Software Processes: Fall 1997, Winter 2000
Project in System Design: Spring 1998, Fall 1998
Introduction to Software Engineering: Spring 1997
Systematic Software Construction: Winter 1997
Internet-Scale Software Engineering: Fall 1999
Topics in Distributed Object Computing: Spring 1997
Seminar in Software: Fall 1997

University College London
Database and Information Management Systems: 2004–05
Technology Management and Professional Issues: 2004–05, 2005–06, 2006–07, 2007–08, 2008–09, 2009–10, 2010–11
Advanced Analysis and Design: 2005–06, 2006–07, 2007–08, 2008–09, 2009–10, 2010–11
Software Engineering: 2005–06, 2006–07
Architecture and Design of Large-Scale Software Systems: 2006–07, 2007–08, 2008–09
Validation and Verification: 2007–08, 2008–09, 2009–10

National University of Singapore
Automated Software Validation: 2011–12, 2012–13, 2014–15, 2016–17, 2017–18, 2018–19, 2019–20
Software Engineering Project I: 2012–13

Other University Service

University of California, Irvine
Bay Area Round Table (BART), Irvine Research Unit in Software (IRUS) 1997–1998
Representative Assembly, Academic Senate, 1996–1998
Faculty Advisor for Undeclared/Undecided Undergraduate Students, 1997–1999
University Research Park Advisory Committee, 1998–2001
Council on Educational Policy, 1998–1999
Student Discipline Grievance Review Board, Sep. 10, 1997
ICS Department Software Faculty Search Committee, 1998–1999, 2000–2001
ICS Department Graduate Policy Committee, 2000–2001

ICS Department Graduate Policy and Ph.D. Admissions Committee, 1998–1999
ICS Department Graduate Admissions Committee, 1997–1998
ICS Department Undergraduate Policy Committee, 1997–1998
ICS Department Graduate Policy and Admissions Committee, 1996–1997

University College London
UCLse Centre for Systems Engineering, 2005–2011

National University of Singapore
Dean, School of Computing, 2013–2016
Director, NUS-Singtel Cyber Security Research & Development Laboratory, 2016–2020
Chair, Management Board, Cryptocurrency Strategy, Techniques, and Algorithms (CRYSTAL) Centre, 2019–2020
Member, Management Board, Institute of Systems Sciences (ISS), 2015–2016
Member, Management Board, Institute for Mathematical Sciences (IMS), 2015–2016
Member, Management Board, Temasek Laboratories, 2013–2016

George Mason University
Chair, Department of Computer Science, 2020–
Chair, Volgenau School of Engineering Divisional Dean Search Committee, 2022
Chair, Department of Bioengineering Department Chair Search Committee, 2023
Member, College of Engineering and Computing Dean Reappointment Committee, 2021