

Kishor S. Trivedi

Curriculum Vitae

Box 90291
Dept. of Electrical & Computer Engineering
Duke University, Durham, NC 27708

Phone: (919) 660 5269
E-mail : kst@ee.duke.edu
Fax : (919) 660-5293

EDUCATION

- Ph.D. in Computer Science, University of Illinois, Urbana, 1974.
- M.S. in Computer Science, University of Illinois, Urbana, 1972.
- B. Tech. in Electrical Engineering, Indian Institute of Technology, Bombay, India, 1968.

POSITIONS HELD

- Fitzgerald S. Hudson Professor of Electrical and Computer Engineering, Duke University, Durham, NC, 2000 - present.
- ONR Faculty Fellow at NSWC-Corona, Summer 2015
- Erasmus Mundus NORDSECMOB Scholar at NTNU, Trondheim, Norway, May 2014.
- Japan Society for the Promotion of Science (JSPS) Fellow, Hiroshima University, July-August 2014.
- Visiting Professor, Indian Institute of Technology, Gandhinagar, Jan. 2014- May 2014.
- Fulbright Visiting Lecturer to India, Nov. 2002-May 2003.
- Poonam and Prabhu Goel Professor of Computer Science and Engineering, Indian Institute of Technology, Kanpur, Aug. 2002- May 2003.
- Professor of Electrical and Computer Engineering, Duke University, Durham, NC, 1983 - 2000.
- Professor of Computer Science, Duke University, Durham, NC, 1983 - present.
- Site Director, Center for Advanced Computing and Communication, a joint NSF IUCRC between North Carolina State University and Duke University, 1994- 2006.
- Visiting Fellow, Computing Laboratory, Univ. of Newcastle upon Tyne, England, 1989.
- Consultant, Digital Equipment Corporation, Sept. 1988- May 1989.
- Associate Professor of Comp. Science and Elec. Eng., Duke Univ., NC, 1979 - 1983.
- Visiting Scientist, IBM Watson Research Center, July 1981 - Dec. 1981.
- Visiting Professor, IISc, Bangalore, India, Jan. - Feb. 1982.
- Visiting Scientist, National Aeronautics Laboratory, Bangalore, India, Jan. - Feb. 1982.
- Visiting Professor, Technical University of Graz, Austria, Mar. - Apr. 1982.
- Visiting Professor, University of Paris-Sud, France, May - July 1982.
- Assistant Professor of Computer Science, Duke University, Durham, NC, 1975 - 1979.
- Consultant to various industries and research laboratories.
- Visiting Scientist, ICASE, NASA Langley Res. Ctr., VA, Summers, 1976, 1993-1996.
- Research Associate, Department of Computer Science at the University of Illinois, 1974 - 1975.
- Research Assistant, Department of Computer Science, University of Illinois, 1970 - 1974.
- Associate Customer Engineer, IBM World Trade Corporation, Bombay, India, 1968 - 1970.
- Apprentice Engineer, Larsen and Toubro, Mumbai, India, 1968 - 1968.

RESEARCH INTERESTS

Fault-tolerant and dependable computing; Fault trees; Markov chains; Modeling software packages; Performance modeling; Performability, Security and Survivability modeling; Reliability and Availability modeling; Software aging and rejuvenation; Software reliability; Software Fault Tolerance; Stochastic Petri nets.

HONORS

- Panel member, US Nuclear Regulatory Commission, Expert Panel on Digital System Research, Sept. 1999.
- IEEE Computer Society Golden Core Award
- Distinguished Lecturer at the Johns Hopkins University, Case Western Reserve University, University of Wisconsin, University Southern California, Purdue University, Penn State University and University of Central Florida.
- IEEE Computer Society Meritorious Service Award for dedicated service as an Editor of Transactions on Computers.
- Panel member, NSF CER Review panel, 1984. Member of the Academic Assessment Committee for the Autonomous Spacecraft Study Group, JPL, 1981.
- A principal speaker at NASA Working Group II Meeting on Validation Methods Research for Fault Tolerant Avionics and Control Systems, 1980.
- Distinguished Visitor of the *IEEE Computer Society* for 1978-1981.
- *ACM National Lecturer*, 1981-1983.
- Best paper award at the ACM SIGMETRICS, IFIP PERFORMANCE '86 joint conference.
- Best paper award at the ACM/NBS Symposium on Pathways to System Integrity, Washington, DC, June 1980.
- Certificate of appreciation from IEEE Computer Society for dedicated service as a distinguished visitor, 1978 - 1981.
- 2008 IEEE Computer Society Technical Achievement Award.
- Doctor Honoris Causa; USMP, Lima, Peru, 2012.
- Guest Professor, Wuhan University of Technology, Nov. 2015 - Nov. 2018.
- 2015 Best Paper Award of IEEE Reliability Society of Japan for the paper, "Performability Modeling for RAID Storage Systems by Markov Regenerative Process" by Fumio Machida, Ruofan Xia, and Kishor Trivedi, *IEEE Transactions on Dependable and Secure Computing*, December 2015.
- Monograph on *Principles of Performance and Reliability Modeling and Evaluation*, edited by L. Fiondella and A. Puliafito, published by Springer as *Essays in Honor of Kishor Trivedi on his 70th Birthday*, 2016.
- **Undergraduate Awards:**
National Merit Scholar (1963-68). Institute Merit Scholar (1964-68)
- **Graduate Honors:**
Cumulative Grade Point (GPA) - 5.00.

MEMBERSHIPS

- Fellow of IEEE and IEEE Computer Society.
- IFIP Working Group 10.4 on Fault-Tolerant Computing.
- IFIP Working Group 7.3 on Performance Modeling.

EDITORSHIPS

- Area Editor (Performance Modeling), *IEEE Transactions on Computers* (1983- 1987).
- Area Editor (Performance Modeling), *Journal of Parallel and Distributed Computing* (1986-1989).
- Area Editor (Reliability Modeling), *Journal of Electronic Testing (JETTA)* (1990-1998).
- Guest Editor, *IEEE Transactions on Parallel and Distributed Systems*, Sept. 1992 issue.
- Chair, IEEE Computer Society Transactions Operations Committee (1993-1994).
- Voting Member, IEEE Computer Society Publications Board (1993-1994).
- Guest Editor, *IEEE Trans. on Computers* , Jan 1995 special issue on Fault-tolerant systems. On

the Editorial Board of *IEEE Transactions on Dependable and Secure Computing* (2004-2009).

CONFERENCE CHAIRMANSHIPS

Program Chair, *IEEE Symposium on Computer Arithmetic*, Ann Arbor, MI, 1981.
General Chair, *First International Workshop on Timed Petri Nets*, Torino, Italy, 1985.
Program Co-Chair, *IFIP PERF'86 and ACM SIGMETRICS Joint Conf.*, Raleigh, NC, 1986.
Program Co-Chair, *Eleventh Symposium on Reliable Distributed Systems*, Houston, TX, 1992.
Chair, *Workshop on the Evaluation of CARE III, Computer-Aided Reliability Estimator*, 1980.
Chair, *Workshop on HARP, Hybrid Automated Reliability Predictor*, 1990.
General Chair, *Petri Nets and Performance Models '95*.
Program Co-Chair, *Inter. Computer Perf. and Dependability Symp. (IPDS'96)*.
Vice-General Chair, *FTCS 97*, Seattle, June 1997.
General Chair, *Symposium on Reliable Distributed Systems (SRDS 97)*, Durham, NC, Oct. 1997.
General Chair, *Inter. Computer Perf. and Dependability Symp. (IPDS'98)*, Durham NC, Sept. 1998. Honorary General Chair, *Workshop on Software Aging and Rejuvenation (WoSAR)*, 2008-2016. General co-chair, *Valuetools*, 2016.

PROGRAM COMMITTEE MEMBERSHIPS

Major conferences on Computer Arithmetic, Computer Performance, Distributed Computer Systems, Fault-Tolerant Computing, Markov Chains, Performance-Reliability Models of Computer-Communication Systems, Petri Nets and Performance Models, Software Reliability Engineering, Reliability/Availability Modeling.

UNIVERSITY SERVICE

- Undergraduate Admissions Committee (1 year)
- Appointment, Promotion and Tenure Committee (3 years)
- UFCAS (2 years)
- Science and Engineering Task Force (1 year)
- Patent Policy Committee (1 year)
- SRC Planning Committee (1 year).

PH.D. DISSERTATIONS SUPERVISED

1. Lt. Col. R. L. Leech, EQN Models for the Analysis and Design of a Computer Network of Functionalized Processors Department of Electrical Engineering, Duke University, July 1977.
2. R. E. Kinicki, Queuing Models for Computer Configuration Planning, Department of Computer Science, Duke University, Apr. 1978. Currently Professor in the Comp. Sc. Dept., WPI.
3. Timothy M. Sigmon, Performance-Oriented Design Models of Computer Systems, Department of Computer Science, Duke University, Aug. 1979. Currently at Univ. of Virginia.
4. Anna von Mayrhauser, Performance-Oriented Design of Interactive Computer Systems, Department of Computer Science, Duke University, Dec. 1979. Currently Professor at Colorado State University.
5. Joseph G. Rusnak, Performance Synthesis Techniques to Minimize the Turnaround Time of Batch-Oriented Multiprogrammed Computer Systems, Dept. of Comp. Sc., Duke University, Sept. 1980. Currently with IBM Communications Products Division.
6. M. Smotherman, Parametric Error Analysis and Coverage Approximations in Reliability Modeling, Dept. of Comp. Sci., Univ. of North Carolina, Chapel Hill, May 1984. Currently Professor at Clemson University.

7. J. Bechta Dugan, Extended Stochastic Petri Nets: Applications and Analysis, Dept. of Electrical Engineering, Duke University, Durham, July 1984. Currently Full Professor (and an IEEE Fellow) at the University of Virginia.
8. R. A. Sahner, A Hybrid, Combinatorial-Markov Method of Solving Performance and Reliability Models, Dept. of Comp. Sc., Duke University, Dec. 1985. Currently with Motorola.
9. V. F. Nicola, Performance, Reliability and Queueing Analysis of Fault-Tolerant Computer Systems, Dept. of Comp. Sc., Duke University, Apr. 1986. Currently with Univ. of Twente, the Netherlands.
10. Roger M. Smith, Markov Reward Models: Application Domains and Solution Methods, Dept. of Comp. Sc., Duke University, Sept. 1987.
11. A. Reibman, Transient Analysis of Large, Stiff Markov Models: Numerical and Approximate Solution Techniques, Dept. of Comp. Sc., Duke University, Oct. 1987.
12. J. Blake, Comparative Analysis of Multistage Interconnection Networks, Dept. of Comp. Sc., Duke University, Dec. 1987.
13. M. Veeraraghavan, Modelling and Evaluation of Fault-Tolerant Multiple Processor Systems, Dept. of Electrical Engineering, Duke University, Aug. 1988. Currently Director of Computer Engineering, Joint Professor of Computer Science and Electrical and Computer Engineering at University of Virginia.
14. P. Chimento, System Performance in a Failure-Prone Environment, Dept. of Comp. Sc., Duke University, Nov. 1988. Currently with JHUAPL, Maryland.
15. P. Thambidurai, Critical Issues in the Design of Distributed, Fault-Tolerant, Hard Real-Time Systems, Dept. of Electrical Engineering, Duke University, Dec. 1988. Currently with Martin Marietta.
16. Gianfranco Ciardo, Analysis of Large Stochastic Petri Net Models. Dept. of Comp. Sc., Duke University, Apr. 1989. Currently Full Professor and Chair of Computer Science Department, Iowa State University.
17. W. E. Smith, Dependability Evaluation and Comparison of Ring Network Architectures, Dept. of Electrical Engineering, Duke University, Apr. 1989. Retired from IBM.
18. Ray Houghton, Performance Evaluation of Task Graphs on Parallel Architectures, Dept. of Comp. Sc., Duke University, Dec. 1990. Currently with Skidmore College Saratoga Springs, NY.
19. Jogesh Muppala, Performance and Dependability Modeling Using Stochastic Reward Nets, Dept. of Electrical Engineering, Duke University, Apr. 1991. Currently with Hong Kong Institute of Science and Technology.
20. Manish Malhotra, Specification and Solution of Dependability Models of Fault-Tolerant Systems, Dept. of Comp. Sc., Duke University, Apr. 1993. Currently with AT & T, Holmdel, NJ.
21. Hoon Choi, Performance and Reliability Modeling using Markov Regenerative Stochastic Petri Nets, Dept. of Comp. Sc., Duke University, Apr. 1993. Currently with Chungnam National University, Korea.
22. Steve Woolet, Performance Analysis of Computer Networks, Dept. of Electrical Engineering, Duke University, Apr. 1993. Retired from IBM.
23. Varsha Mainkar, Solutions of Large and Non-Markovian Performance Models, Dept. of Comp. Sc., Duke University, August 1994. Currently Professor at IIT Bombay, India.

24. Dimitris Logothetis, Transient Analysis of Communication Networks, Dept. of Elect. Eng., Duke University, Oct. 1994. Currently with Ericsson Corporation, Athens, Greece.
25. Chang-Yu Wang, Non-Markovian Models for the Analysis of Computers and Networks, Dept. of Computer Science, Duke University, Oct. 1995. Currently, Cisco Systems, CA.
26. Lorrie Tomek, Modeling Hardware and Software Fault Tolerant Systems, Dept. of Computer Science, Duke University, April 1996.
27. Steve Hunter, Performance and Dependability Modeling of Some Switched Network Applications, Dept. of Electrical and Computer Engineering, Duke University, March 1997. IBM Fellow.
28. Sachin Garg, Proactive Fault Management in Operational Software Systems, Dept. of Elect. and Comp. Eng., Duke University, May 1997.
29. Ricardo Fricks, Process Control Systems: Dependability and Performance Modeling, Dept. of Electrical and Computer Engineering, Duke University, May 1997. Currently with Boeing, Seattle, Washington.
30. Swapna Gokhale, Software Reliability, Dept. of Electrical and Computer Engineering, Duke University, June 1998. Currently with University of Connecticut.
31. Yue Ma, Composite Performance and Availability Analysis in Wireless Communications Systems, Dept. of Computer Science, Duke University, Aug. 1999.
32. Xinyu Zang, Dependability Modeling of Computer Systems and Networks, Dept. of Electrical and Computer Engineering, Duke University, Sept. 1999.
33. Tong Luo, Design and Analysis of Reliable CORBA-based Software Systems, Dept. of Computer Science, Duke University, March 2000.
34. Yonghuan Cao, Performability Analysis of Wireless Mobile Communication Systems, Dept. of Electrical and Computer Engineering, Duke University, May 2001. Currently with Riverbed Technology, RTP, NC.
35. Srinivasan Ramani, Performance and Reliability Analysis of the CORBA Event and Notification Services, Dept. of Electrical and Computer Engineering, Duke University, August 2001. Currently with IBM, RTP, NC.
36. Kalyanraman Vaidyanathan, Proactive Management of Software Systems: Analysis and Implementation, Dept. of Electrical and Computer Engineering, Duke University, September 2002. Currently with Oracle, San Diego.
37. Dongyan Chen, Analysis and Mitigation of Failures in Communication System with Discrete and Fluid Models, Dept. of Electrical and Computer Engineering, Duke University, March 2003.
38. Wei Xie, Availability and Performance Evaluation of E-Business Systems, Dept. of Electrical and Computer Engineering, Duke University, Sept. 2003.
39. Yujuan Bao, Adaptive Software Rejuvenation, Dept. of Computer Science, Duke University, August 2004.
40. Dazhi Wang, Service Reliability: Models, Algorithms and Applications, Dept. of Computer Science, Duke University, June 2007. The best dissertation award of the Computer Science Department.
41. Vibhu Saujanya Sharma, Performance and Reliability Analysis of Software Architectures, Computer Science & Engineering Department, IIT, Kanpur, India, August 2007; currently at Accenture, Bengaluru, India.

42. Yun Liu, Survivability of Networked Systems, Dept. of Electrical and Computer Engineering, Duke University, May 2008. Currently with Boeing Commercial Aerplane Co., Seattle.
43. Kesari Mishra, Uncertainty Propagation through Dependability Models, Dept. of Electrical and Computer Engineering, Duke University, October 2011. Currently at NetApp, California.
44. Rahul Ghosh, Scalable Stochastic Models for Cloud Services, Dept. of Electrical and Computer Engineering, Duke University, September 2012. Currently with Xerox Res. Ctr., India.
45. Xiaoyan Yin, Performance and Reliability of DSRC in VANETs, Dept. of Electrical and Computer Engineering, Duke University, September 2013. Currently with NetApp, CA.
46. Ruofan Xia, Stochastic Modeling of Modern Storage Systems, Dept. of Computer Science, Duke University, October 2015. Currently with Oracle, Colorado.

CURRENT STUDENTS

Rafael Fricks, Xiaodan Li, Harish Sukhwani.

COURSES TAUGHT

1. Data Structures (Undergraduate)
2. Computer Organization and Assembly Language Programming (Undergraduate)
3. Introduction to Operating Systems
4. Introduction to Computer System Analysis
5. Computer Systems Organization (Graduate)
6. Operating System Theory (Graduate)
7. Computer System Analysis (Graduate)
8. Introduction to CMOS VLSI Design (Graduate)
9. Performance and Reliability of Computer Networks (Graduate)
10. Discrete-event simulation (Graduate)

SHORT COURSES TAUGHT

1. Analysis of Computer Performance and Reliability (one day): IEEE/ACM Tutorials for Professional Development, May 1984, Chicago.
2. Computer Systems Modeling: Mathematical Association of America, Minicourse, Aug. 1984, Eugene, OR.
3. Effectiveness Evaluation of Fault-Tolerant Multiple Processor Systems (one day): Int. Conf. on Parallel Processing, Aug. 1984, Aug. 1985.
4. Performance and Reliability Models of Computer Systems: (two-days) , *ACM/IEEE Fall Joint Computer Conference*, Dallas, Texas, Nov. 1986.
5. Modeling Using SHARPE: Digital Equipment Corporation; several times (two-day course).
6. Modeling Using Stochastic Petri Nets: Digital Equipment Corporation; Software Productivity Consortium (two-day course).
7. Markov Modeling (one-day): Boeing Commercial, Italtel.
8. Computer System Reliability Modeling: Techniques and Tools (one-day): University of Southern California on National Satellite TV Network of NTU; Stratus Computers, Inc.; (two-day) at Jet Propulsion Laboratory.

9. Reliability and Availability Modeling Techniques and Tools (two-day): IBM Communications Division, RTP, NC; (3-day) AT & T, Holmdel, NJ, July 1997.
10. Putting Stochastic Petri Nets to Work (one-day); University of Southern California on National Satellite TV Network of NTU.
11. Reliability Modeling; ACM SIGMETRICS 92.
12. Performability Modeling; Performance Tool'92.
13. Dependability and Performability Analysis; Performance'93.
14. Stochastic Petri Nets with Generally Distributed Firing Delays, Sigmetrics'94.
15. Reliability and Availability Modeling Techniques and Tools (one week): HP, Cupertino, CA, 1995.
16. Fluid Stochastic Petri Nets Tutorial, PNPM '97/TOOLS '97 (joint conference), Saint-Malo, France, Jun. 3-6, 1997.
17. Reliability Modeling Using SHARPE, Motorola University, May 98.
18. System Availability Modeling, Motorola University, Dec 98, March 99; Sun Microsystems (Oct. 2000, May 2001), Nokia (Dec. 2002).
19. Reliability and Availability Modeling using the SHARPE Software Package, Annual Reliability and Maintainability Symposium, (RAMS 2002), Seattle, Washington, Jan. 2002.
20. Architecture Based Software Reliability, Annual Reliability and Maintainability Symposium, (RAMS 2001), Philadelphia, Pennsylvania, Jan. 2001; RAMS 2003.
21. Software Aging and Rejuvenation: Modeling and Analysis, ACM SIGMETRICS, June 2002; IFIP Performance, Sept. 2002; ISSRE 2002; CONSEG 2010.
22. Software Reliability and Rejuvenation: Modeling and Analysis, Boeing, Seattle, June 2002.
23. Survivability Quantification, DSN 2004; ITC 2011.
24. Software aging and rejuvenation (jointly with Dr. Javier Alonso), CONSEG 2011.
25. Software Fault-Tolerance in twenty-First Century, SAFECOMP 2011.
26. Software faults, failures, and their mitigations, Persistent Systems, Pune, January 2013.
27. Performance and Reliability of Computer Networks, six day short course, BUAA, China, Dec. 2013
28. Advanced software reliability and availability models, (jointly with Dr. Michael Grottke and Dr. Javier Alonso), ISSRE 2013, 2014.
29. Five-day Short course on Reliability and Availability at IIT Gandhinagar, India, Jan. 2014.
30. Short course on Reliability and Availability at NSWC Corona, July- August 2015.
31. Short course on Reliability, Availability and Performance of Data Centers and Clouds, Universite de Pisa, Italy, March 2016
32. Reliability and availability modeling in practice, (jointly with Andrea Bobbio), DSN 2016.

INVITED CONFERENCE PRESENTATIONS

1. Int. Workshop on Applied Mathematics and Performance/Reliability Models of Computer and Communication Systems, Pisa, 1983 .
2. Int. Conference on Modeling Techniques and Tools for Performance Analysis, Paris, 1984.
3. Int. Workshop on Modeling and Performance Evaluation of Parallel Systems, Grenoble, France, 1984.

4. Workshop on Reliability/Availability Modeling Tools and their Applications, Puerto Rico, 1985.
5. Int. Conference on Modeling Techniques and Tools for Performance Analysis, Sophia Antipolis, 1986.
6. Int. Workshop on Applied Mathematics and Performance/Reliability Models of Computer and Communication Systems, Rome, 1987.
7. Tenth Brazilian Computer Science Congress, 1990.
8. First Int. Workshop on the Numerical Solution of Markov Chains, Raleigh, 1990.
9. First Int. Workshop on Performability Modeling of Computer and Communication Systems, the Netherlands, 1991.
10. IMA Conf. on Linear Algebra, Markov Chains, and Queuing Models, Minneapolis, 1992.
11. 14th Int. Conference on Applications and Theory of Petri Nets, Chicago, June 1993.
12. Second Int. Workshop on Performability Modeling of Computer and Communication Systems, France, 1993.
13. 7th ITG/GI Conference on Measurement, Modelling and Evaluation of Computer and Communication Systems, Aachen University of Technology, Sept. 1993.
14. Int. Conference on Modeling Techniques and Tools for Performance Analysis, Vienna, 1994.
15. NATO ASI Conference on *Reliability and Maintenance of Complex Systems*, June 1995, Turkey.
16. Reliability 2000 Conference, Zurich, Oct. 1996.
17. DIMACS Workshop on Performance of Realtime Applications on the Internet, Rutgers University, South Plainfield, NJ, Nov. 1996.
18. European Safety and Reliability Association (ESREL '97), Lisbon, Jun. 1997.
19. European Simulation Multi-conference (ESM '97), Istanbul, Jun. 1997.
20. VII Simposio de Computadores Tolerantes a Falhas (VII SCTF), Campina Grande, Brazil, Jul. 1997.
21. First World Congress on systems Simulation (WCSS '97), Singapore, Sept. 1997.
22. Stochastic Processes and Their Applications, Chennai, India, Jan 1998.
23. European Simulation Multiconference ESM'99, Warsaw, Poland, June 1999.
24. Workshop on Modeling of Heterogeneous Networks, Maryland, Oct. 1999.
25. International Conference on Applied Stochastic System Modeling (ASMM'2000), March 29-30, 2000, Kyoto, JAPAN.
26. Workshop on Fault Tolerant Control and Computing, May 22-23, 2000, Seoul, Korea.
27. Keynote speech, 33rd Annual Simulation Symposium, April 2000, Washington, DC.
28. International Conference on Performance and QoS of Next Generation Networking, 27-30 November 2000, Nagoya, Japan.
29. National Academy of Sciences Workshop on Software Reliability, Washington DC, July 2001.
30. Keynote, SHAMAN Workshop, New York, June 2002.
31. Keynote, SPECTS 2002, San Diego, July 2002.
32. Invited Plenary Talk, Broadnets, Durham, NC, Sept. 2007.

33. Keynote, IPDPS, DPDNS Workshop, Miami, FL, April 2008.
34. Plenary Keynote, ASMTA, Madrid, June 2009.
35. Keynote Address, "Performance and Availability Analysis for Infrastructure-as-a-Service Cloud," Feb. 2011, Conf. on Software Engineering, Bangalore, India
36. Keynote address, "Software Fault Tolerance via Environmental Diversity," Int. Symp. On Software Reliability Engineering, Dec. 2011, Hiroshima, Japan.
37. Keynote address, ICUMT 2012, St. Petersburg.
38. Keynote speech, "Optimization of IaaS Cloud including Performance, Availability, Power Analysis," Matrix Analytic Methods 2014 Conference, Calicut, India, Jan. 2014.
39. Keynote speech, Reliability and Availability Modeling in Practice, ICAPGF, Kolenchery, India, January 2014.
40. Invited talk, Why Does Software Fail and What Should be Done about It? Nirma University, Ahmedabad, India, Feb. 2014.
41. Keynote speech Why Does Software Fail and What Should be Done about It? INDIACOM, New Delhi, India, March 2014.
42. Keynote speech "End-to-end performability analysis for infrastructure-as-a-service cloud" . IFIP Networking 2014 Conference, Trondheim, Norway, June 2014.
43. Keynote speech, "Optimization of IaaS Cloud including Performance, Availability, Power Analysis," ColCom 2014 Conference, Bogota, Columbia, June 2014.
44. Invited lecture on Why Does Software Fail and What Should be Done about It?, IEEE Chapter, Bogota, Columbia, June 2014.
45. Invited lecture on Why Does Software Fail and What Should be Done about It? Canon Research Center, Tokyo, Japan, July 2014.
46. Keynote speech, Software Fault Tolerance via Environmental Diversity, SERE Conference, San Fransisco, CA, July 2014.
47. Invited lecture, "Capacity Planning for Infrastructure-as-a-Service Cloud," at Tokyo Metropolitan University, Japan, July 2014.
48. Invited lecture, Why Does Software Fail and What Should be done about It? at Keio Univ., Japan, July 2014.
49. Keynote speech, Performance, Availability & Power Analysis for Infrastructure-as-a-Service Cloud, Workshop on Retrial Queues, Tokyo Institute of Technology, July 2014.
50. Invited talk Survivability quantification for SmartGrid, NEC Research Laboratory, Tokyo, Japan, July 2014.
51. Invited talk, "Capacity Planning for Infrastructure-as-a-Service Cloud," Kyoto University, Japan, July 2014.
52. Invited talk, Survivability Quantification of Networks Int. Summer Seminar, Hiroshima University, Japan, August 2014.
53. Keynote speech, Reliability and Availability Modeling in Practice, APARM 2014, Sapporo, Japan, August 2014.
54. Tutorial on Advanced Software Reliability, QSIC, Dallas, Texas, Oct. 2014 (for IEEE Reliability Society).

55. Invited talk, "Capacity Planning for Infrastructure-as-a-Service Cloud," University of Naples, Italy, Nov. 2014.
56. Invited talk, "Capacity Planning for Infrastructure-as-a-Service Cloud," GSSI, L'Aquila, Italy, June 2015.
57. Invited lecture, Why Does Software Fail and What Should be done about It? GSSI, L'Aquila, Italy, June 2015.
58. Invited lecture, Why Does Software Fail and What Should be done about It? DCIT 2015 2nd International Symposium on Dependable Computing and Internet of Things, Wuhan, China, Nov., 2015.
59. Invited talk, "Duke High Availability Assurance Laboratory (DHAAL)," IIT Gandhinagar, India, Jan. 6, 2016.
60. Invited talk, "Reliability and Availability Modeling in Practice," Workshop on Integrated Vehicular Health Management, Bangalore, India, May 26, 2016.
61. Invited talk, "Reliability and Availability Modeling in Practice," Workshop on Integrated System Health Management, Vizag, India, May 28, 2016.
62. Invited lecture, How Does Software Fail and What Should be done about It? Xerox Research center, Bangalore, India, May 30, 2016.
63. Invited lecture, How Does Software Fail and What Should be done about It? Accenture Technology Lab., Bangalore, India, May 30, 2016.

SEMINARS

Over 200 seminars at many universities and industrial labs including, Alcatel-Lucent, Naperville, Ill., AT&T Bell Labs, Holmdel, Naperville, Murray Hill, Ballistic Missile Defense Advanced Technology Center, Huntsville, Bellcore, NJ, Bendix Aerospace Technology Center, Columbia, MD, Bilkent University, Ankara, Turkey, Boeing, Seattle, City University of Hong Kong, Columbia University, Daimler-Benz, Berlin, Department of Transportation, Boston, Mass., Digital Equipment Corp., Draper Laboratory, DRDO, Hyderabad, India, Ericsson, Sweden, FAA Technical Center, Atlantic City, GE Corporate Research Division, Schenectady, NY, General Dynamics, Greensboro, NC, Halmstad Hogshule, Halmstad, Sweden, Honeywell Systems Research Center, Minneapolis, Hong Kong Institute of Science and Technology, Hong Kong Polytechnic University, HP, Cupertino, IBM Res. Center, Yorktown Heights, Infosys, Bangalore, Indian Institute of Science, Bangalore, India, Indian Institute of Technology, Bombay, India, Indian Institute of Technology, Gandhinagar, India, Indian Institute of Technology, Kharagpur, India, Indian Institute of Technology, Kanpur, India, Indian Institute of Technology, Chennai, India, Indian Space Research Organization, Bangalore, Institute National de Recherche en Informatique et en Automatique, Roquencourt, France, Jet Propulsion Laboratory, Pasadena California, Johns Hopkins University, Lucent Bell Laboratory, Microsoft Research, NASA Langley Research Center, National Aeronautics Laboratory, Bangalore, India, National Inst. of Standards and Technology, Naval Ocean Systems Center, Naval Surface Weapons Center, NTNU, Trondheim, Norway, Ohio State University, PennState University, Persistent Systems, Pune, India, Politecnico di Torino, Italy, Software Productivity Consortium, Southern Methodist University, Stanford University, Stratus Computers, Marlboro, Mass., Tata Consultancy Services, Mumbai, Ahmedabad, Pune, India, Technical University of Berlin, Technical University of Vienna, Texas A & M University, University of Erlangen, University of Illinois at Urbana-Champaign, Univ. of Massachusetts, University of Michigan, University of Torino, Italy, University of Southern California, Univ. of Washington, Univ. of Wisconsin, USAF Rome Laboratories, Vanderbilt University, Wipro, Bangalore, India.

RESEARCH GRANTS

1. \$107,000 NSF Grant for conducting research in problems of parallel computation, Mar. 1977-Mar. 1979.
2. \$145,000 NSF grant for conducting research in the problems of Computer Configuration Design, July 1979-June 1981.
3. \$65,000 NASA grant for evaluation of CARE III, a computer-based reliability estimation package, June 1980 - Sept. 1982.
4. \$45,000 NASA grant for the design of the Hybrid Automated Reliability Predictor, Oct. 1982 - Sept. 1983.
5. \$96,890 NSF grant for the analysis of parallel and distributed systems, Aug. 1983- July 1985.
6. \$90,000 NASA grant for the design of the Hybrid Automated Reliability Predictor, Oct. 1983-Sept. 1984.
7. \$52,000 IBM grant for modeling the recovery behavior of IBM Systems, May 1984-Apr. 1985.
8. \$196,787 ARO grant for the effectiveness evaluation of fault-tolerant multiprocessor systems, Apr. 1984- Sept. 30, 1986.
9. \$138,265 AFOSR grant for the reliability evaluation of fault-tolerant multiprocessor systems, May 1984- Apr. 1986.
10. \$90,000 NASA grant for the Design and Implementation of The Hybrid Automated Reliability Predictor, Oct. 1984- Sept. 1985.
11. \$77,120 IBM grant for modeling the recovery behavior of IBM Systems, May 1985-Apr. 1986.
12. \$90,000 NASA grant for the Design and Implementation of The Hybrid Automated Reliability Predictor, Oct. 1985- Sept. 1986.
13. \$180,500 AFOSR grant for the reliability evaluation of fault-tolerant multiprocessor systems, May 1986- Apr. 1988.
14. \$300,000 DOD-URI equipment grant, FY 1987.
15. \$33,000 Burroughs Corporation grant for the Performance Analysis of Functional Programming Architecture, Sept. 1986-Aug. 1987.
16. \$100,000 NASA grant for the Design and Implementation of The Hybrid Automated Reliability Predictor, Nov. 1986- Oct. 1987.
17. \$172,838 NASA grant for the Design and Implementation of The Hybrid Automated Reliability Predictor, Feb. 1988- Nov. 1990.
18. \$125,778 grant from the Software Productivity Consortium for the Performance Analysis of Ada Designs, Jan. 1988-Dec. 1990.
19. \$232,786 grant from SDIO/IST Program, Naval Ocean Systems Center, July 1988- Dec. 1990.
20. \$70,000 equipment grant from Digital Equipment Corporation for Techniques and Tools for Performance Analysis, Sept. 1990- Aug. 1991.
21. \$263,161 grant from Union Switch and Signals for Performance and Dependability Modeling, May 1991-Feb. 1994.
22. \$145,000 grant from Boeing Commercial Aeroplane for Reliability Modeling, Sept. 1, 1991-Dec. 1994.
23. \$45,000 grant from Naval Surface Warfare Center on Methodology for the Specification of Fault-Tolerant Real-Time Systems, Sept. 1991- August 1992.

24. \$157,173 grant from the National Science Foundation on Towards a Theory of Hierarchical Modeling, Sept 15, 1991- Sept 14, 1993.
25. \$123,331 grant from Naval Surface Warfare Center on Integration of Design Specification and Dependability Evaluation Methods, Sept. 1, 1992- August 30, 1994.
26. \$123,200 grant from IBM Communications Division on Markov Chains and SPN Techniques for the Analysis of Computer and Communication Systems, March 1993-Jan. 1995.
27. \$50,000 planning grant from the National Science Foundation for an Industry-University Cooperative Research Center, July 1993- June 1994.
28. \$70,000 IBM equipment grant, 1993.
29. \$46,200 NSF CS & E research associate award, June 1, 1993- Nov. 30, 1995.
30. \$35,000 Draper Laboratory grant for investigation into fault injection, August 1994- July 1995.
31. \$41,300 grant from IBM Communications Division on Software Process and Performance, July 1994-July 1995.
32. \$555,000 National Science Foundation Grant for an Industry-University Cooperative Research Center, Oct. 1994- Sept. 1999.
33. \$60,000 award as affiliate fees of the Center for Advanced Computing and Communication, Oct. 1994-Sept. 1995.
34. \$105,000 Draper Laboratory grant for investigation into software reliability, August 1995- July 1997.
35. \$80,000 award for affiliate fees of the Center for Advanced Computing and Communication, Oct. 1995-Sept. 1996.
36. \$140,000 USAF Rome Laboratory grant for software reliability research, Oct. 1995-Sept. 1998.
37. \$90,757 RTI subcontract for research in hierarchical fault injection, Aug 1995-Dec. 1996.
38. \$35,000 GTE Lab grant for measurement and modeling of high-speed networks, Mar. 1995-Feb 1996.
39. \$82,000 IBM equipment grant of networking hardware, 1995.
40. \$50,000 award from DoD as affiliate fee for the Center for Advanced Computing and Communication, Oct. 1996-Sept. 1997.
41. \$200,000 award from Bellcore as affiliate fee for the Center for Advanced Computing and Communication, Oct. 1996-Sept. 2000.
42. \$20,000 gift from AlliedSignal Aerospace, Oct.1995- Sept. 1997.
43. \$80,000 IBM Equipment grant for 4 RISC 6000 Workstations, 1996.
44. \$60,000 IBM Equipment grant for an ATM Switch, 1996.
45. \$200,000 award from DoD as affiliate fee for the Center for Advanced Computing and Communication, Sept. 1996-Aug. 2000.
46. \$144,959 DoD/NSA Enhancement Grant for REGAL project, Jul. 1997-Aug. 31, 1998.
47. \$50,000 NSF TIE project, Architecture-Based Estimation of Software Reliability, with A. Mathur from Purdue, Sept. 1997-Aug. 1999.
48. \$10,000 IDEAS project award from NC ACTS, Aug. 1997-Jul. 1998.
49. \$10,000 IDEAS project award from Kenan Institute, Aug. 1997-Jul. 1998.
50. \$20,000 Analytical Model Development, IBM Enhancement, Aug. 1997-Jul. 1998.

51. \$55,000 Draper Laboratory grant for investigation into software reliability, Jul. 1997-Jun. 1998.
52. \$1,547,927 NSF Challenges in CISE award, TUNE: System Support for Memory-Friendly Programming, (co-PIs: J. Board, S. Chatterjee, A. Lebeck, X. Sun), Sept. 1997-Aug. 2000.
53. \$48,400 DoD/NSA Enhancement Grant, ATM Networks, Jan.1, 1998- Dec. 31, 1998.
54. \$1,801,700 DARPA, TUNE: Mathematical Models and Transformations for Memory-Friendly Programming, (co-PIs: J. Board, S. Chatterjee, A. Lebeck, X. Sun, P. Hanlon, L. Greengard), Feb. 1, 1998- Jan. 31, 2001.
55. \$50,000 Draper Laboratory grant for investigation into software reliability, Jul. 1998-Jun. 1999.
56. \$40,000 from Motorola for two fellowships, Sept. 1998- Aug. 1999.
57. \$110,000 from Motorola, Jan. 1999- Dec 1999.
58. \$20,000 from NCNI a fellowship, Sept. 1998- Aug. 1999.
59. \$40,000 from Alcatel for two fellowships, Jan. 1999-Dec 1999.
60. \$50,000 CACC Membership from Alcatel, July 1999 - June 2000.
61. \$50,000 CACC Membership from Telcordia, July 1999 - June 2000.
62. \$53,845 Enhancement project from National Security Agency, July 1999 - June 2000.
63. \$30,000 NSF partnership award to CACC, July 1999-June 2000.
64. \$21,999 NSF-Italy International cooperation grant.
65. \$24,200 IBM Fellowships, summer 1999.
66. \$51,800 Atmel Fellowships, Sept 1998- May 2001.
67. \$50,794 NSF-Korea Cooperative Research grant, Sept. 1998 - Aug. 2000.
68. \$160,000 from Motorola, Jan. 2000- Dec 2000.
69. \$23,000 Motorola UPP Fellowship from SABA.
70. \$20,000 Telcordia fellowship, Spring 2000-Fall 2000.
71. \$20,345 Motorola SABA-UPR Fellowship, 9/1/00-5/31/01.
72. \$50,400 from Motorola for 3 fellowships, 6/1/00 - 8/31/00.
73. \$35,000 from Motorola for 2 fellowships, 6/1/99 - 8/31/99.
74. \$75,000 from Motorola for 2 fellowships, 12/1/98 - 5/1/00.
75. \$24,500 IBM fellowship, 6/1/99 - 8/31/00.
76. \$20,000 NCNI fellowship, 7/1/99 - 6/30/01.
77. \$20,000 CACC membership, Stratus, July 2000-June 2001.
78. \$15,000 IBM fellowship, Summer 1999.
79. \$30,000 IBM Enhancement Project, 1/1/00 - 12/31/00.
80. \$150,000 Nasa's Remote Exploration and Experimentation (REE) Project,"Reliability and Availability of the REE System", 5/1/00 - 9/30/01.
81. \$749,994 Air Force Office of Scientific Research (AFOSR) Multidisciplinary Research Initiative (MURI) Program, "Real-Time Fault Tolerant Network Protocols", 6/01/00 - 5/31/03.
82. \$468,236 Defense Advanced Research Projects Agency (DARPA) Scalable Intrusion Tolerant Systems, 7/27/00 - 6/21/03.

83. \$48,950 DoD/NSA, affiliate fee for Center for Advanced Computing and Communication, 7/1/00 - 6/30/01.
84. \$50,000 CACC membership from Alcatel, July 2000-June 2001.
85. \$50,000 CACC membership from Telcordia, July 2000-June 2001.
86. \$30,000 National Science Foundation partnership award to CACC, July 2000-June 2001.
87. \$150,000 Motorola, January 2001-December 2001.
88. \$45,288 NSF U.S. Civilian Research Development Foundation Cooperative Grants Program (with Dr. Gerasimov Ivanovich), "New Analytical Models and Methods for the Design, Evaluation and Optimization of Computer Systems and Networks Based on Queueing Network Models", 10/1/00 - 3/31/02.
89. \$1,641,701 Department of Defense MURI Program (with Pennsylvania State University, Carnegie Mellon, University, and Louisiana State University) "Mathematics of Failures in Complex Systems", 5/1/01 - 4/1/04.
90. \$42,017 CACC Core Project, "Proactive Management of Security", Spring 2001.
91. \$20,000 Motorola, Fellowship, Summer 2002.
92. \$50,000 SUN Microsystems award.
93. \$12,000 SAF Fellowship, December 2004.
94. \$25,000 Siemens grant, August 2005.
95. \$ 192,000 JPL/NASA Grant on "Classifying Software Faults to Improve Fault Detection Effectiveness," July 2007- June 2009.
96. \$30,000 2007 IBM Faculty award.
97. \$146,437 NSF Grant on "MiMANSaS: Metrics, Models and Analysis of Network Security and Survivability," Sept. 2008- Aug. 2010.
98. \$30,000 Duke OIT Grant on "OIT Metrics Initiative Project," Dec. 2008- Oct. 2009.
99. \$15,000 2009 IBM Faculty award.
100. \$25,000 NEC Grant for the Performability Management in a Virtualized Data Center via Stochastic Modeling and Optimization, Oct. 2008- March 2009.
101. \$57,442 NEC Grant for the Performability Management in a Virtualized Data Center via Stochastic Modeling and Optimization, Oct. 2009- March 2010.
102. \$123,000 NEC Grant for the Performability Management in a Virtualized Data Center via Stochastic Modeling and Optimization, March 2010- March 2011.
103. \$147,500 NSF Grant on "Analytic Modeling and Enhancement of Vehicular Ad Hoc Networks for Safety Related Applications," August 2010- July 2013.
104. \$ 270,906 JPL/NASA Grant on "Dependability Quantification and Assurance of Mission-critical Software Systems," Sept. 2011- Aug. 2014.
105. (euros) 156,656 NATO Grant on "Cyber Security Analysis and Assurance Using Cloud-Based Security Measurement System," Oct. 2013- Sept. 2016.
106. \$20,000 2010 IBM Faculty award for research in cloud computing.
107. \$20,000 2011 IBM Faculty award for research in cloud computing.
108. \$50,000 2011 Cisco award for research in cloud computing.
109. \$33,000 2012 Huawei award for research in software aging and rejuvenation.

110. \$50,000 NEC Grant for the Performability Management in a Virtualized Data Center via Stochastic Modeling and Optimization, April 2011- March 2012.
111. \$20,000 2013 IBM Faculty Award.
112. \$20,000 NEC Grant for the Performability Management in a Virtualized Data Center via Stochastic Modeling and Optimization, April 2013- March 2014.
113. \$ 103,997 NASA Grant on "EMPIRICAL ANALYSIS OF SOFTWARE FAILURE DATA IN NASA SPACE MISSION," Sept. 2014- Sept. 2015.
114. \$40,000 2015 IBM Faculty Award.
115. \$237,000 NSF Grant on "SRN: On Establishing Secure and Resilient Networking Services," Sept. 2015- Aug. 2018.
116. \$40,000 2016 IBM Faculty Award.
117. \$80,000 US Navy (NEEC program) grant on the "Use of State Space Models in Security and Reliability Assessment of Networks," June 2016- May 2017.

PUBLICATIONS

A. Books

1. *Probability and Statistics with Reliability, Queueing, and Computer Science Applications*, Prentice-Hall, Englewood Cliffs, NJ, 1982 (624 pages).
Solution Manual (227 pages).
Acclaimed by scientists such as Richard Hamming, Ed McCluskey, Harold Stone, Domenico Ferrari, Narayan Bhat, Dan Siewiorek, Satish Tripathi, Ashok Agrawala and John Hayes. Used as a textbook as well as by practicing engineers. Second edition, John Wiley, 2001. For reviews of the second edition see: *Interfaces*, Vol. 34, Sept.-Oct. 2004 by Veena Mendiratta; *Technometrics*, Vol. 45, No. 1, February 2003 by John McCool; *Computer Journal*, Vol.45, No.6, 2002 by Andrea Bobbio; *Performance Evaluation*, Vol. 50, No.1, Oct. 2002 by Christoph Lindemann. A paperback of this text appeared in June 2016 and a Chinese translation appeared in Nov. 2015.
2. *Performance and Reliability Analysis of Computer Systems: An Example-Based Approach Using the SHARPE Software Package*, with Robin Sahner and Antonio Puliafito, Kluwer Academic Publishers, 1995 (418 pages). Review in *IEEE Trans. on Reliability*, Sept. 1997, p. 441. Review in *Performance Evaluation*, Vol. 32, pp.231–233, 1998.
3. *Queueing Networks and Markov Chains*, with G. Bolch, S. Greiner and H. de Meer, John Wiley, 1998. Second edition, John Wiley, 2006.
4. *Advanced Computer System Design*, edited with G. W. Zobrist and K. Bagchi, Gordon and Breach Science Publishers, 1998.
5. *Performability Modeling Tools and Techniques*, edited with B. Haverkort, R. Marie and G. Rubino, John Wiley & Sons, 2001.

B. Articles Published in Journals

1. The Status of Investigations into Computer Hardware Design Based on the Use of Continued Fractions, with J.E. Robertson, *IEEE Transactions on Computers*, Vol. C-22, No. 6, pp. 555-560, June 1973. *Computing Reviews* 26021 (November 1973).
2. Prepaging and Applications to Array Algorithms, *IEEE Transactions on Computers*, Vol. C-25, No. 9, pp. 915-921, Sept. 1976.

3. On a Semaphore Anomaly, *Information Processing Letters*, Vol. 5, No. 3, pp. 88-89, August 1976.
4. On-Line Algorithms for Division and Multiplication, with M.D. Ercegovac, *IEEE Transactions on Computers*, Vol. C-26, No. 7, pp. 681-687, July 1977. This paper defined the notion of on-line arithmetic; it has spawned off a lot of research on this topic.
5. On the Use of Continued Fractions for Digital Computer Arithmetic, *IEEE Transactions on Computers*, Vol. C-26, No. 7, pp. 700-704, July 1977.
6. On the Paging Performance of Array Algorithms, *IEEE Transactions on Computers*, Vol. C-26, No. 10, pp. 938-947, October 1977.
7. Analytic Modeling of Computer Systems, *IEEE Computer*, Vol. 11, No. 10, pp. 38-56, October 1978.
8. An Analysis of Prepaging, *Computing*, Vol. 22, pp. 191-210, 1979.
9. A Decision Model for Closed Queueing Networks, with R.A. Wagner, *IEEE Transactions on Software Engineering*, Vol. SE-5, No. 4, pp. 328-332, July 1979.
10. A Model for Computer Configuration Design, with R.E. Kinicki, *IEEE Computer*, Vol. 13, No. 4, pp. 47-54, April 1980.
11. Optimal Selection of CPU Speed, Device Capacities, and File Assignments, with R.A. Wagner and T.M. Sigmon, *Journal of the ACM*, Vol. 27, No. 3, pp. 457-473, July 1980.
12. Optimal Design of Linear Storage Hierarchies, with T.M. Sigmon, *Journal of the ACM*, Vol. 28, No. 2, pp. 270-288, April 1981.
13. Queueing Network Models in Computer System Design, with R.M. Geist, *Mathematics Magazine*, Vol. 55, No. 2, pp. 67-80, March 1982.
14. Optimal Design of Multilevel Storage Hierarchies, with R.M. Geist, *IEEE Transactions on Computers*, Vol. C-31, No. 3, pp. 249-260, March 1982.
15. Computer Configuration Design Minimizing Response Time Subject to a Cost Constraint, with A.K. von Mayrhauser, *Computer Performance*, March 1982.
16. Queueing Network Models for Parallel Processing with Asynchronous Tasks, with P. Heidelberger, *IEEE Transactions on Computers*, Vol. C-31, No. 11, pp. 1099-1108, November 1982.
17. Analytic Queueing Models for Programs with Internal Concurrency, with P. Heidelberger, *IEEE Transactions on Computers*, Vol. C-32, No.1, pp. 73-82, January 1983. This paper has been very heavily referenced.
18. Ultra-High Reliability Prediction for Fault-Tolerant Computer Systems, with R.M. Geist, *IEEE Transactions on Computers*, Vol. C-32, No. 12, pp. 1118-1127, December 1983. This paper has been very heavily referenced.
19. Decomposition in Reliability Analysis of Fault-Tolerant Systems, with R.M. Geist, *IEEE Transactions on Reliability*, December 1983. The notion of behavioral decomposition was developed in this paper.
20. Task Allocation in Fault-Tolerant Distributed Systems, with J.A. Bannister, *Acta Informatica*, Vol. 20, pp. 261-281, 1983.
21. Hybrid Reliability Modeling for Fault-Tolerant Computer Systems, with R. Geist, M. Smotherman and J. Bechta Dugan, *Computers and Electrical Engineering*, Vol. 11, No. 2/3, pp. 87-108, 1984. The notion of coverage as a Laplace transform was developed in this paper; this notion is the main idea behind HARP.

22. Load Distribution in a Star Configured System with Error-Prone Channels, with G. Haring, *Mathematica Aplicada E Computacional*, V. 3, No. 1, pp. 23-40, 1984.
23. The Conservativeness of Reliability Estimates Based on Instantaneous Coverage, *IEEE Transactions on Computers*, with J. McGough and M. Smotherman, Vol. C-34, No. 7, pp.602-609, July 1985.
24. An Aggregation Technique for the Transient Analysis of Stiff Markov Chains, with A. Bobbio, *IEEE Transactions on Computers*, Vol. C-35, No. 9, pp. 803-814, Sept. 1986.
25. Reliability Analysis of Life-Critical Systems, with R. Geist, M. Smotherman, K. S. Trivedi, J. Bechta Dugan, *Acta Informatica*, Vol. 23, No. 6, November 1986.
26. A Single Server Queue in a Hard-Real-Time Environment, with F. Baccelli, *Operations Research Letters*, Vol.4, No. 4, pp. 161-168, December 1985.
27. The Hybrid Automated Reliability Predictor, with J. Bechta Dugan, R. Geist and M. Smotherman, *AIAA Journal on Guidance, Control and Dynamics*, Vol. 9, No. 3, pp. 319-331, May-June 1986.
28. Provably Conservative Approximations to Complex Reliability Models, with M. Smotherman and R. Geist, *IEEE Transactions on Computers*, Vol. C-35, No. 4, pp. 333-338, April 1986.
29. Queuing Analysis of Fault-Tolerant Computer Systems, with V. Nicola and V. Kulkarni, *IEEE Transactions on Software Engineering*, Vol. SE-13, No. 3, pp. 363-375, March 1987 (selected as one of two best papers from the *IFIP PERFORMANCE '86* and *ACM SIGMETRICS 1986* Conference).
30. Performance and Reliability Analysis Using Directed Acyclic Graphs, with R. Sahner, *IEEE Transactions on Software Engineering*, Vol. SE-14, No. 10, pp. 1105-1114, October 1987.
31. On Modeling the Performance and Reliability of Multi-mode Computer Systems, with V. Kulkarni and V. Nicola, *Journal of Systems and Software*, North-Holland, pp. 175-182, May 1986.
32. Probabilistic Modeling of Computer System Availability, with A. Goyal, S. Lavenberg, in: *Annals of Operations Research*, Vol. 8, pp. 285-306, 1987. This is the paper that discusses the algorithms implemented in SAVE.
33. A Note On the Effect of Preemptive Policies on the Stability of a Priority Queue, with R. Marie, *Information Processing Letters*, Vol. 24, No. 6, pp. 397-401, 1987.
34. The Completion Time of a Job on Multi-Mode Systems, with V. Kulkarni and V. Nicola, *Advances in Applied Probability*, Vol. 19, No. 4, pp. 932-954, December 1987.
35. Analysis of Typical Fault-Tolerant Architectures using HARP, with S. Bavuso, J. Bechta Dugan, E. Rothmann and W. E. Smith, *IEEE Transactions on Reliability*, Vol. R-36, No. 2, pp. 176-185, June 1987.
36. Reliability Modeling using SHARPE, with R. Sahner, *IEEE Transactions on Reliability*, Vol. R-36, No. 2, June 1987, pp. 186-193. This paper has been heavily referenced.
37. Reliability Analysis of Systems with Limited Repairs, with A. Goyal, V. Nicola and A. Tantawi, *IEEE Transactions on Reliability*, Vol. R-36, No. 2, pp. 202-207, June 1987.
38. Transient Analysis of Acyclic Markov Chains, with R. Marie and A. Reibman, *Performance Evaluation*, Vol. 7 , pp. 175-194,1987.
39. Computer-aided Reliability Analysis of Fault-Tolerant Systems, with J. Bechta Dugan *Sadhana*, Vol. 11, Parts 1 & 2, pp. 209-220, Indian Academy of Sciences, October 1987.

40. The Use of Weibull Fault Processes in Modeling Fault Tolerant Systems, with R. Geist, M. Smotherman and J. Dugan, *AIAA Journal on Guidance, Control and Dynamics*, Vol. 11, No. 1, pp. 91-93, January-February 1988.
41. Numerical Transient Analysis of Markov Models, with A. Reibman, *Computers and Operations Research*, Vol. 15, No. 1, pp. 19-36, 1988. This paper is a standard reference for the transient analysis of Markov chains.
42. Performability Modeling Based on Real Data: a Case Study, with M. C. Hsueh and R. Iyer, *IEEE Transactions on Computers*, Vol. C-37, No. 4, pp. 478-484, April 1988.
43. Performability Analysis: Measures, An Algorithm and a Case Study, with R. M. Smith and A. Ramesh, *IEEE Transactions on Computers*, Vol. C-37, No. 4, pp. 406-417, April 1988. This paper is a standard reference for performability.
44. Multistage Interconnection Network Reliability, with J. Blake, *IEEE Transactions on Computers*, Vol. C-38, No. 11, pp. 1600-1604, November 1989.
45. Markov Reliability Models of Flight Control Systems, with J. McGough and A. Reibman, *AIAA Journal on Guidance, Control and Dynamics*, Vol. 12, No. 2, pp. 209-219, March-April 1989.
46. Markov and Markov Reward Models: A Survey of Numerical Approaches, with A. Reibman and R. M. Smith, *European Journal of Operations Research*, Vol. 40, pp. 257-267, 1989.
47. Reliability Analysis of Interconnection Networks Using Hierarchical Composition, with J. Blake, *IEEE Transactions on Reliability*, Vol. 38, No. 1, pp. 111-120, April 1989.
48. Approximate Availability Analysis of VAXCluster Systems, with O. Ibe and R. Howe, *IEEE Transactions on Reliability*, Vol. 38, No. 1, pp. 146-152, April 1989.
49. Coverage Modeling for Dependability Analysis of Fault-Tolerant Systems, with J. Bechta Dugan, *IEEE Transactions on Computers*, Vol. 38, No. 6, pp. 775-787, June 1989. This paper is highly regarded.
50. Transient Analysis of Cumulative Measures of Markov Model Behavior, with A. Reibman, *Communications in Statistics- Stochastic Models*, Vol. 5, No. 4, pp. 683-710, 1989.
51. Analysis of Stiff Markov Chains, with A. Reibman, S. Kumar and G. Ciardo, *ORSA Journal on Computing*, Vol. 1, No. 2, pp. 126-133, Spring 1989.
52. Dependability Evaluation of a Class of Multi-Loop Topologies for Local Area Networks, with W. E. Smith, *IBM Journal of Research and Development*, Vol. 33, No. 5, pp. 511-523, Sept. 1989.
53. Computation of the Distribution of the Completion Time When the Work Requirement is a PH Random Variable, with A. Bobbio, *Communications in Statistics- Stochastic Models*, Vol. 6, No. 1, pp. 133-150, 1990.
54. Reliability Estimation of Fault-Tolerant Systems: Tools and Techniques, with R. Geist, *IEEE Computer*, Vol. 23, No. 7, pp. 52-61, July 1990.
55. System Performance with User Behavior Graphs, with M. Calzarossa and R. Marie, *Performance Evaluation*, Vol. 11, No. 3, pp. 155-164, Sept. 1990.
56. Performability Analysis Using Semi-Markov Reward Processes, with G. Ciardo, R. Marie and B. Sericola, *IEEE Transactions on Computers*, Vol. C-39, No. 10, pp. 1251-1264, October 1990.
57. Computing Cumulative Measures of Stiff Markov Chains Using Aggregation, with A. Bobbio, *IEEE Transactions on Computers*, Vol. C-39, No. 10, pp. 1291-1298, October 1990.

58. Effects of Checkpointing and Queueing on Program Performance, with V. Kulkarni and V. Nicola, *Communications in Statistics- Stochastic Models*, Vol. 6, No. 4, pp. 615-648, 1990.
59. Two Queues with Alternating Service and Service Breakdown, with O. Ibe, *Queueing Systems: Theory and Applications*, Vol. 7, pp. 253-268, 1990.
60. Stochastic Petri Net Models of Polling Systems, with O. Ibe, *IEEE Journal on Selected Areas in Communications*, Vol. 8, No. 9, pp. 1649-1657, December 1990.
61. Stochastic Petri Net Analysis of Finite-Population Vacation Queueing Systems, with O. Ibe, *Queueing Systems: Theory and Applications*, Vol. 8, No. 2, pp. 111-128, 1991.
62. Real-Time-Systems Performance in the Presence of Failures, with J. Muppala and S. Woollet, *IEEE Computer*, Vol. 24, No. 5, pp. 37-47, May 1991.
63. On the Solution of GSPN Reward Models, with G. Ciardo and J. Muppala, *Performance Evaluation*, Vol. 12, No. 4, pp. 237-254, July 1991.
64. An Improved Algorithm for Symbolic Reliability Analysis, with M. Veeraraghavan, *IEEE Transactions on Reliability*, Vol. 40, No. 3, pp. 347-358, August 1991.
65. Composite Performance and Dependability Analysis, with J. Muppala, S. Woollet and Boudewijn R. Haverkort, *Performance Evaluation*, Vol. 14, Nos. 3-4, pp. 197-216, February 1992.
66. A Unified Performance Reliability Analysis of a System with a Cumulative Down Time Constraint, with V. Nicola and A. Bobbio, *Microelectronics and Reliability*, Vol. 32, No. 1/2, pp.49-65, 1992.
67. Analyzing Concurrent and Fault-Tolerant Software using Stochastic Petri Nets, with G. Ciardo and J. Muppala, *Journal of Parallel and Distributed Computing*, Vol. 15, pp. 255-269, 1992.
68. Reliability Analysis of RAID, with Manish Malhotra, *Journal of Parallel and Distributed Computing*, Vol. 17, pp. 146-151, 1993.
69. A Software Tool for Learning About Stochastic Models, with Robin Sahner, *IEEE Transactions on Education*, Vol. 36, No. 1, pp. 56-61, February 1993.
70. A Decomposition Approach for Stochastic Reward Net Models, with Gianfranco Ciardo, *Performance Evaluation*, Vol. 18, No. 1, pp. 37-59, July 1993.
71. Specification and Generation of Markov Reward Models, with Boudewijn R. Haverkort, *Discrete-Event Dynamic Systems: Theory and Applications*, Vol. 3, pp. 219-247,1993.
72. The Completion Time of Programs on Processors Subject to Failure and Repair, with P. F. Chimento, Jr., *IEEE Transactions on Computers*, Vol. 42, No. 10, pp. 1184-1194, October 1993.
73. Performance Evaluation of Client-Server Systems, with Oliver C. Ibe and Hoon Choi, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 4, No. 11, pp. 1217-1229, November 1993.
74. Modeling Correlation in Software Recovery Blocks, with L. Tomek and J. Muppala, *IEEE Transactions on Software Engineering* (special issue on Software Reliability), Vol. 19, No.11, pp. 1071-1086, November 1993.
75. Multiprocessor Performability Analysis, with Noe Lopez-Benitez, *IEEE Transactions on Reliability*, Vol. 42, No. 4, pp. 579-587, December 1993.
76. Numerical Computation of Response Time Distributions Using Stochastic Reward Nets, with Jogesh Muppala, Varsha Mainkar and Vidyadhar Kulkarni, *Annals of Operations Research*, Vol 48, pp. 155-184, 1994.

77. Reliability Modeling of Life-Critical Real-Time Systems, with Robert Geist, Varsha Mainkar and Lorrie Tomek, *Proceedings of the IEEE*, Vol. 82, No. 1, pp. 108-121, January 1994.
78. A Combinatorial Algorithm for Performance and Reliability Analysis using Multistate Models, with M. Veeraraghavan, *IEEE Transactions on Computers*, Vol. 43, No. 2, pp. 229-234, February 1994.
79. Guarded Repair of Dependable Systems, with Hermann de Meer and Mario Dal Cin, *Theoretical Computer Science A*, Vol. 128, pp. 179-210, July 1994.
80. Power-Hierarchy of Dependability Model Types, with Manish Malhotra, *IEEE Transactions on Reliability*, Vol. 43, No. 2, pp. 493-502, Sept. 1994.
81. A Survey on Efficient Computation of Reliability Using Disjoint Products Approach, with Suresh Rai and Malathi Veeraraghavan, *Networks*, Vol. 25, No. 3, pp. 147-163, 1995.
82. Stiffness-Tolerant Methods for Transient Analysis of Stiff Markov Chains, with Jogesh Muppala and Manish Malhotra, *Microelectronics and Reliability*, Vol. 34, No. 11, pp. 1825-1841, 1994.
83. Dependability Evaluation of the Double Counter-Rotating Ring with Concentrator Attachments, with D. Logothetis, *ACM/IEEE Transactions on Networks*, Vol. 2, No. 5, pp. 520-532, October 1994.
84. Stochastic Reward Nets for Reliability Prediction, with Jogesh Muppala and Gianfranco Ciardo, *Communications in Reliability, Maintainability and Serviceability: An International Journal published by SAE International*, Vol. 1, No. 2, pp. 9-20, July 1994.
85. Markov Regenerative Stochastic Petri Nets, with Hoon Choi and Vidyadhar Kulkarni, *Performance Evaluation*, Vol. 20, No. 1-3, pp. 337-357, 1994.
86. Data integrity analysis of disk array systems with analytic modeling of coverage, with M. Malhotra, *Performance Evaluation*, Vol 22, No. 1, pp. 111-134, 1995.
87. Dependability Modeling Using Petri-Nets, with M. Malhotra, *IEEE Transactions on Reliability*, Vol. 44, No. 3, pp. 428-440, Sept., 1995. Also see: Hein, A.; Malhotra, M.; Trivedi, K.S.: "Comment/Correction: Dependability Modeling Using Petri Nets" *IEEE Transactions on Reliability*, Vol. 45, No. 2, pp. 272-273, 1996.
88. Dependability Modeling of Real-Time Systems Using Stochastic Reward Nets, with Cristian Constantinescu, *Microelectronics and Reliability*, Vol. 35, No. 6, pp. 903-914, 1995.
89. Numerical Methods for Reliability Evaluation of Markovian Closed Fault-tolerant Systems, with Christoph Lindemann and Manish Malhotra, *IEEE Transactions on Reliability*, Vol. 44, No. 4, pp. 694-704, December 1995.
90. Stochastic Petri Nets for the Reliability Analysis of Communication Network Applications with Alternate-Routing, with M. Balakrishnan, *Reliability Engineering and System Safety*, special issue on Reliability and Safety Analysis of Dynamic Process Systems, Vol. 52, No. 3, pp. 243-259, 1996.
91. Availability and Performance-Based Sizing of Multiprocessor Systems, with Archana S. Sathaye, Oliver C. Ibe, Richard C. Howe and Ashutosh Aggarwal, *Communications in Reliability, Maintainability and Serviceability: An International Journal published by SAE International*, 1996.
92. A Comparison of Approximate Interval Estimators for the Bernoulli Parameter, with Larry Leemis, *The American Statistician*, Vol. 50, No. 1, pp. 63-68, February 1996.
93. Buffer Losses vs. Deadline Violations for ABR Traffic in an ATM Switch: A Computational Approach, with Meera Balakrishnan, Antonio Puliafito and Ioannis Viniotis, *The Journal of Telecommunication Systems, Modeling, Analysis, Design, and Management*, Vol. 7, No. 1-3, 1997.

94. Fluid stochastic Petri nets: Theory, application, and solution, with G. Horton, V. Kulkarni and D. Nicol, *European Journal of Operations Research*, Vol. 105, No. 1, pp. 184-201, February 1998.
95. Important Milestones in Software Reliability Modeling, with S. Gokhale and P.N. Marinos, *Communications in Reliability, Maintainability and Serviceability: An International Journal published by SAE International*, 1996.
96. Sufficient Conditions for the Existence of a Fixed Point in Stochastic Reward Net-Based Iterative Models, with V. Mainkar, *IEEE Transactions on Software Engineering*, Vol. 22, No. 9, pp. 640-653, Sept. 1996.
97. Optimal rejuvenation for tolerating soft failures, with András Pfening, Sachin Garg, Miklós Telek and Antonio Puliafito, *Performance Evaluation*, Vol. 27 & 28, October 1996, North-Holland, pp. 491-506.
98. Accelerating Mean Time to Failure Computations, with P. Heidelberger and J. Muppala, *Performance Evaluation*, Vol. 27 & 28, pp. 627-645, October 1996.
99. The Effect of Detection and Restoration Times for Error Recovery in Communication Networks, with D. Logothetis, *Journal of Network and Systems Management*, Vol. 5, No. 2, pp.173-195, June 1997.
100. Performance And Reliability Analysis Of Computer Systems (an Example-based Approach Using The Sharpe Software), with R. Sahner and A. Puliafito, *IEEE Transactions on Reliability*, Vol. 46, Issue 3, pp 441, Sept. 1997.
101. Analysis of Preventive Maintenance in Transactions based Software Systems, with S. Garg, A. Puliafito and M. Telek, *IEEE Transactions on Computers*, Vol. 47, No. 1, January 1998, pp. 96-107.
102. Petri Nets with k Simultaneously Enabled Generally Distributed Timed Transitions, with A. Puliafito and M. Scarpa, *Performance Evaluation*, Vol. 32, No.1, pp. 1-34, February 1998.
103. Recent Developments in Stochastic Petri Nets, with A. Bobbio, A. Puliafito and M. Telek, *Journal of Circuits, Systems, and Computers*, Vol. 8, No. 1, pp. 119-158, February 1998.
104. Analysis of Conditional MTTF of Fault-Tolerant Systems, with H. Choi and W. Wang, *Microelectronics and Reliability*, Vol. 38, No. 3, pp. 393-401, 1998.
105. Availability Management of Energy Management Systems, with R. Fricks, *Microelectronics and Reliability*, Vol. 38, pp. 727-743, 1998.
106. An Improved Algorithm for Coherent System Reliability, with Tong Luo, *IEEE Transactions on Reliability*, Vol. 47, No. 1, pp. 73-78, March 1998.
107. Increasing Application Accessibility Through Java, with A. Puliafito, O. Tomarchio and L. Vita, *IEEE Internet Computing*, Vol. 2, No. 4, pp. 70-77, August 1998.
108. An Algorithm for Reliability Analysis of Phased-Mission Systems, with Yue Ma, *Reliability Engineering and System Safety*, Vol 66, No. 2, pp. 157-170, 1999.
109. A Stochastic Reward Net Model for Performance Analysis of Prioritized DQDB MAN, with Hairong Sun and Xinyu Zang, *Computer Communications*, Elsevier Science, Vol.22, No.9, pp.858-870, June, 1999
110. The Effect of Web Caching on Network Planning, with Hairong Sun and Xinyu Zang, *Computer Communications*, Vol. 22, No.14, pp. 1343-1350, Sept. 1999

111. A BDD-based Algorithm for Reliability Analysis of Phased-Mission Systems, with Hairong Sun and Xinyu Zang, *IEEE Transactions on Reliability*, Vol. 48, No. 1, pp. 50-60, March 1999.
112. An Integrated Reliability Modeling Environment, with A. Ramesh, A. Somani, D. Twigg, U. Sandadi and T. Sharma, *Reliability Engineering and System Safety*, Vol. 65, pp. 55-75, 1999.
113. A Time/Structure Based Software Reliability Model, with S. Gokhale, *Annals of Software Engineering*, Vol. 8, pp. 85-121, 1999.
114. Performance Analysis of Distributed Real-Time Databases, with R. Fricks and A. Puliafito, *Performance Evaluation*, Vol. 35, pp. 145-169, 1999.
115. Discrete-Event Simulation of Fluid Stochastic Petri-Nets, with G. Ciardo and D. M. Nicol, *IEEE Transactions on Software Engineering*, Vol. 25, No. 2, pp. 207-217, 1999.
116. SREPT: Software Reliability Estimation and Prediction Tool, with S. Ramani and S. Gokhale, *Performance Evaluation*, Vol. 39, pp. 37-60, 2000.
117. Failure Correlation in Software Reliability Models, with K. Goševa - Popstojanova, *IEEE Transactions on Reliability*, Vol. 49, No. 1, pp. 37-48, March 2000.
118. Channel Allocation with Recovery Strategy in Wireless Networks, with Yue Ma and James J. Han, *European Transactions on Telecommunications (ETT)*, Vol. 11, No. 4, pp. 395-406, 2000.
119. Comparison of Hybrid Systems and Fluid Stochastic Petri Nets, with Bruno Tuffin and Dong Chen, *Discrete Event Dynamic Systems: Theory and Applications*, Vol 11, No. 1 & 2, pp. 77-95, 2001.
120. Loss Formulae and their Optimization for Cellular Networks, with G. Haring, R. Marie and Ramon Puigjaner, *IEEE Transactions on Vehicular Technology*, Vol. 50, No. 3, pp. 664-673, May 2001.
121. Architecture Based Approach to Reliability Assessment of Software Systems, with K. Goševa - Popstojanova, *Performance Evaluation*, Vol.45/2-3, pp. 179-204, 2001. [Ranked 21 among the top 25 hottest articles.]
122. A Performance Model of Partial Packet Discard and Early Packet Discard Scheme in ATM Switches, with H. Sun and X. Zang, *Computer Communications*, Vol. 24, No. 15-16, pp. 1540-1553, October 2001.
123. Performance of Broadcast and Unknown Server (BUS) in ATM LAN Emulation, with H.Sun and X.Zang, *ACM/IEEE Transactions on Networking*, Vol.9, No.3, pp. 361-372, June 2001.
124. A Method for Multiple Channel Recovery in TDMA Wireless Communications Systems, with Y. Ma and J. Han, *Computer Communications*, Vol. 24, No. 12, pp. 1147-1157, July 2001.
125. Estimating Software Rejuvenation Schedule in High Assurance Systems, with T. Dohi and K. Goševa - Popstojanova, *Computer Journal*, Vol.44, No.6, pp. 473-485, 2001. [It is ranked 14th among the 50 Most-Frequently-Cited Articles of this journal.]
126. Composite Performance & Availability Analysis of Wireless Communication Networks, with Y. Ma and J. Han, *IEEE Transactions on Vehicular Technology*, Vol. 50, No. 5, pp. 1216-1223, Sept. 2001.
127. Call Admission Control for Reducing Dropped Calls in CDMA Cellular Systems, with Y. Ma and J. Han, *Computer Communications*, Vol. 25, No. 7, pp. 689-699, 2002.

128. Proactive Management of Software Aging, with V. Castelli, R. E. Harper, S. W. Hunter, P. Heidelberger, K. Vaidyanathan and W. Zeggert. *IBM Journal of Research & Development*, Vol. 45, No. 2, pp. 311-332, March 2001. This research was listed as an Accomplishment of 2002 by IBM Servers and Embedded Systems. <http://w3.research.ibm.com/tp/acc02/02servers.html>.
129. Architecture Based Approaches to Software Reliability Prediction, with K. Goševa – Popstojanova, *International Journal Computers & Mathematics with Applications*, vol. 46, No. 7, 1023-1036, 2003.
130. RED Parameters and Performance of TCP Connections, with Yiguang Hong, Yonghuan Cao and Hairong Sun, *Electronics Letters*, Vol. 37, No. 24, pp. 1489-1491, November 2001.
131. A Methodology Towards Automatic Implementation of N-Body Algorithms, with V. P. Pauca, A. F. Rodriguez and X. Sun, *Applied Numerical Mathematics*, Vol. 40, pp. 3-21, 2002.
132. Closed-form Analytical Results for Condition-Based Maintenance, with D. Chen, *Reliability Engineering and System Safety*, Vol. 76, pp. 43-51, 2002.
133. Analysis of Software Rejuvenation in Cluster Systems Using Stochastic Reward Nets, with K. Vaidyanathan, R. E. Harper and S. W. Hunter, *Journal of Mathematical Sciences*, New Series, Vol. 1, 2002.
134. System Availability with Non-Exponentially Distributed Outages, with Y. Cao, H. Sun and J. Han, *IEEE Transactions on Reliability*, Vol. 51, No. 2, pp. 193-198, 2002.
135. Performance Analysis of Cellular Networks with Generally Distributed Hand off Interarrival Times, with S. Dharmaraja and D. Logothetis, *special issue of the Computer Communications Journal on, "Recent Advances in Communication Networking"*, Vol. 26, issue 15, pp. 1747-1755, Sept. 2003.
136. Analytic Models of Handoffs in Wireless Cellular Networks, with S. Dharmaraja and X. Ma, *Informations Sciences*, Vol. 148, pp. 155-166, 2002.
137. Performability Modeling of Wireless Communication Systems, with X. Ma and S. Dharmaraja, *International Journal of Communication Systems*, Vol. 16, Issue 6, pages 561-577, August 2003.
138. Second Order Stochastic Fluid Flow Models with Fluid Dependent Flow rates, with Dongyan Chen and Y. Hong, *Performance Evaluation*, Vol. 49, No. 1-4, pp. 341-358, 2002.
139. Hierarchical Composition and Aggregation of State-based Availability and Performability models, with M. Lanus and Liang Yin, *IEEE Transactions on Reliability*, Vol. 52, Issue 1, pp. 44-52, March 2003.
140. Preventive Maintenance of Multi-State System with Phase-Type Failure Time Distribution and Non-Zero Inspection Time, with Dongyan Chen, Y. Hong and Y.cao, *International Journal of Quality and Safety Engineering*, Vol. 10, No. 3, pp. 323-344, September 2003.
141. Optimal Estimation of Training Interval for Channel Equalizations, with Dongyan Chen and Y. Hong, *IEEE Transactions on Wireless Communications*, Vol. 3, No. 5, Sept. 2004.
142. Performance Analysis of Reservation Media Access Protocol with Access Queue and Serving Queue Under Bursty Traffic in GPRS/EGPRS, with Y. Cao and H. Sun, *IEEE Transactions on Vehicular Technology*, Vol. 52, No. 6, pp. 1627-1641, November 2003.
143. Modeling and Quantification of Security Attributes of Software Systems, with B. Madan, K. Goseva-Popstojanova and K. Vaidyanathan, *Performance Evaluation*, Vol. 56, issues 1-4, pp. 167-186, March 2004.

144. Security Modeling and Quantification of Intrusion Tolerant Systems using Attack-Response Graphs, with B. Madan, *Journal of High Speed Networks*, Vol. 13, No. 4, pp. 297-308, 2004.
145. Recent Advances in Modeling Response-Time Distributions in Real-Time Systems, with S. Ramani and R. Fricks, *IEEE Proceedings*, Vol. 91, No. 7, pp. 1023-1037, July 2003.
146. A BDD-Based Algorithm for Analysis of Multistate Systems with Multistate Components, with X. Zang, D. Wang and H. Sun, *IEEE Transactions on Computers*, Vol. 52, No. 12, pp. 1608-1618, December 2003.
147. The effect of access delay in capacity-on-demand access over a wireless link under bursty packet-switched data, with Y. Cao and H. Sun, *Performance Evaluation*, Vol. 57, No. 1, pp. 69-87, 2004.
148. Analysis of Software Fault Removal Policies Using a Non-Homogeneous Continuous Time Markov Chain, with S. Gokhale and M. Lyu, *Software Quality Journal*, Vol. 12, No. 3, pp. 211-230, Sept. 2004.
149. An Analytical Approach to Architecture-Based Software Performance and Reliability Prediction, with S. Gokhale, Eric Wong and J. R. Horgan, *Performance Evaluation*, Vol 28, No. 1, pp. 51-64, 2004.
150. Analysis of a Two-Level Software Rejuvenation Policy, with W. Xie and Y. Hong, *Reliability Engineering and System Safety*, Vol. 87, No. 1, pp. 13-22, January 2005.
151. Optimization for Condition-Based Maintenance with Semi-Markov Decision Process, with Dongyan Chen, *Reliability Engineering and System Safety*, Vol. 90, pp. 25-29, 2005. [Ranked 13 among the top 25 hottest articles.]
152. Comparing Software Rejuvenation Policies under Different Dependability Measures, with T. Dohi and H. Suzuki, *IEICE Transactions on Information and Systems (D)*, Vol. E87-D, No. 8, pp. 2078-2085, 2004.
153. A Proactive Approach Towards Always-On Availability in Broadband Cable Networks, with Yun Liu, Yue Ma and J. Han, *Computer Communications*, Vol. 28, No., 1, pp. 51-64, January 2005.
154. Model-Based Evaluation: From Dependability to Security, with D. Nicol and W. Sanders, *IEEE Transactions on Dependable and Secure Computing*, Vol. 1, No. 1, pp. 48-65, January-March 2004. Invited paper, inaugural issue.
155. Computing Steady-State Mean Time to failure for Non-Coherent Repairable Systems, with Dazhi Wang, *IEEE Transactions on Reliability*, Vol. 54, No. 3, pp. 506-516, 2005.
156. A workload-based analysis of software aging and rejuvenation, with Y. Bao and X. Sun, *IEEE Transactions on Reliability*, Vol. 54, No. 3, pp. 541-548, Sept. 2005.
157. A Comprehensive Model for Software Rejuvenation, With K. Vaidyanathan, *IEEE Transactions on Dependable and Secure Computing*, Vol. 2, No.2, pp. 124-137, April-June, 2005.
158. Incorporating fault debugging activities into software reliability models: A simulation approach, with S. Gokhale and M. Lyu, *IEEE Transactions on Reliability*, Vol. 55, No. 2, pp. 281-292, June 2006.
159. Software Faults, Software Aging and Software Rejuvenation, with M. Grottke, *The Journal of Reliability Engineering Association of Japan*, Vol. 27, No. 7, October, pp. 425-438, 2005.
160. Truncated Non-homogeneous Poisson Process Models - Properties and Performance, with M. Grottke, *Opsearch - The Journal of the Operational Research Society of India*, Vol. 42, No. 4, pp. 310-321, 2005.

161. Analysis of software aging in a web server, with M. Grottke, L. Li and K. Vaidyanathan, *IEEE Transactions on Reliability*, Vol. 55, No. 3, pp. 411-420, September 2006.
162. Survivability Quantification: The Analytical Modeling Approach, with Y. Liu, *Int. Journal of Performability Engineering*, Vol. 2, No. 1, pp. 29-44, January 2006.
163. Modeling and Performance Analysis for Soft Handoff Schemes in CDMA Cellular Systems, with X. Ma and Y. Liu, *IEEE Transactions on Vehicular Technology*, Vol. 55, No. 2, pp. 670-680, March 2006.
164. Performability Analysis of Clustered Systems with Rejuvenation under Varying Workload, with D. Wang and W. Xie, *Performance Evaluation*, Vol. 64, Issue 3, pp. 247-265, 2007.
165. Quantifying Software Performance, Reliability and Security: An Architecture Based Approach. with Vibhu Saujanya Sharma, *Journal of Software and Systems*, Vol. 80, No. 4 (2007).
166. Stack Overflow Fence: A Technique for Defending Against Buffer Overflow Attacks, with B. Madan, *Journal of Information Assurance and Security*, Vol. 1, No. 2, pp. 129-136, June 2006.
167. Design and Performance Analysis of a New Soft Handoff Scheme for CDMA Cellular Systems, with X. Ma and Y. Liu, *IEEE Transactions on Vehicular Technology*, Vol. 55, No. 5, pp. 1603-1612, September 2006.
168. Fighting Bugs: Remove, Retry, Replicate and Rejuvenate, with M. Grottke, *IEEE Computer*, Vol. 40, No. 2, pp. 107-109, February 2007.
169. Performance and Reliability of Tree-Structured Grid Services Considering Data Dependence and Failure Correlation, with Y. Dai and G. Levitin, *IEEE Transactions on Computers*, Vol. 56, No. 7, pp. 925-936, July 2007.
170. Reliability Analysis of Phase Mission Systems with Independent Component Repairs, with Dazhi Wang, *IEEE Transactions on Reliability*, Vol. 56, No. 3, pp. 540-551, September 2007.
171. A Best Practice Guide to Resource Forecasting for the Apache Webserver, with G. Hoffman and M. Malek, *IEEE Transactions on Reliability*, Vol. 56, No. 4, pp. 615-628, December 2007.
172. Combined Guard Channel and Mobile Assisted Handoff for Cellular Networks, with B. Madan and S. Dharmaraja, *IEEE Transactions on Vehicular Technology*, Vol. 57, No. 1, pp. 502-510, January, 2008.
173. Availability analysis of blade server systems, with W. Earl Smith, Lorrie Tomek and Jerry Ackaret, *IBM Systems Journal*, Vol. 47, No. 4, pp. 621-640, October-December 2008.
174. Decompositional analysis of Kronecker structured Markov chains, with Y. Bao, I. N. Bozkurt, T. Dayar and X. Sun, *Electronic Transactions on Numerical Analysis*, Vol. 31 (2008), pp. 271-294.
175. Network Survivability Modeling, with Poul Heegaard, *Computer Networks*, Vol. 53, Issue 8, pp. 1215-1234, June 2009.
176. Markovian Arrival Process Parameter Estimation with Group Data, with H. Okamura and T. Dohi, *ACM/IEEE Transactions on Networks*, Vol. 7, No. 4, pp. 1326-1339, August 2009.
177. Modeling User-Perceived Reliability Based on User Behavior Graphs, with Dazhi Wang, *International Journal of Reliability, Quality & Safety Engineering*, Vol. 16, No. 4, pp. 303-330, August 2009.
178. Accelerated Degradation Tests Applied to Software Aging Experiments, with Rivalino Matias, Jr., Paulo J. F. Filho and Pedro A. Barbetta, *IEEE Transactions on Reliability*, Vol. 59, Issue 1, pp. 102-114, March 2010.

179. Software Reliability and Testing Time Allocation: An Architecture-Based Approach, with Roberto Pietrantuono and Stefano Russo, *IEEE Transactions on Software Engineering*, Vol. 36, No. 3, pp. 323-337, May/June 2010.
180. In Memorium: Dr. Chandra Kintala, with Sachin Garg, *Journal of Systems and Softwarej*, Vol. 83, No. 9, pp. 1555-1555, 2010.
181. Performability Analysis of Multi-State Computing Systems Using Multi-Valued Decision Diagrams, with L. Xing, S. Amari, G. Shrestha and J. Akers, *IEEE Transactions on Computers*, Vol. 59, No. 10, pp. 1419-1433, October 2010.
182. Attack Countermeasure Trees: Towards unifying the constructs of attack and defense trees, with Arpan Roy and Dong Seong Kim, *Journal of Security and Communications Networks*, Vol. 4, issue 3, pp. 1-15, February 2011.
183. Software Fault Mitigation and Availability Assurance Techniques, with M. Grottke and E. Andrade, *International Journal of System Assurance Engineering and Management*, Vol. 1, Issue 4, pp. 340-350, Springer, 2011.
184. A Refined EM Algorithm for PH Distributions, with H. Okamura and T. Dohi, *Performance Evaluation*, Vol. 68, No. 10, pp. 938-954, 2011.
185. A Stochastic Model for Beaconless IEEE 802.15.4 MAC Operation, with Mukul Goyal, D. Rahm, W. Xie, S. Hosseini, Y. Bashir and A. Divjak, *Computer Communications*, Vol. 34, No. 2, pp. 1460-1474, 2011.
186. Markov Modeling Approach for Survivability Analysis of Cellular Networks, with V. Jindal and S. Dharmaraja, *International Journal of Performability Engineering*, Vol. 7, No. 5, pp. 429-440, September 2011.
187. An Unobtrusive Method for Uncertainty Propagation in Stochastic Dependability Models, with Kesari Mishra, *International Journal of Reliability and Quality Performance*, Vol. 3, No. 1, pp. 49 -65, 2011.
188. Design and Analysis of a Robust Broadcast Scheme for VANET Safety-Related Services, with X. Ma, J. Zhang and X. Yin, *IEEE Transactions on Vehicular Technology*, Vol. 61, No. 1, pp. 46 - 60, January 2012.
189. Uncertainty Analysis of Reliability of the JPL Remote Exploration and Experimentation System, with Kesari Mishra and Rafi Some, *Journal of Spacecraft and Rockets*, Vol. 49, No. 6, pp. 1032-1042, 2012.
190. Software Rejuvenation in Eucalyptus Cloud Computing Infrastructure: A Hybrid Method Based on Multiple Thresholds and Time Series Prediction, with Rubens Matos, J. Araujo, Paulo Maciel and F. Vieira de Souza, *International Transactions on Systems Science and Applications*, Vol. 8, pp. 1-16, 2012.
191. Improving Convergence Speed and Scalability in OSPF: A Survey, with Mukul Goyal, M. Soperi, E. Baccelli, G. Choudhury, A. Shaikh and H. Hosseini, *IEEE Communications Surveys and Tutorials*, Vol. 14, No. 2, pp. 443-463, 2012.
192. Dynamic Aspects and Behaviors of Complex Systems in Performance and Reliability Assessment, with Salvatore Distefano and Antonio Puliafito, *ACM Performance Evaluation Review*, Vol. 39, No. 4, pp. 71-78, 2012.
193. Investigating Dynamic Reliability and Availability through State-space Models, with Salvatore Distefano and Francesco Longo, *Computers & Mathematics with Applications*, Vol. 64, No. 12, pp. 3701-3716, 2012.

194. On the Reliability of Safety Applications in VANETs, with Xiaoyan Yin and Xiaomin Ma, *International Journal of Performability Engineering: Special Issue on Dependability of Wireless Systems and Networks*, Vol. 8, No. 2, pp. 115-130, March 2012.
195. Sensitivity Analysis of Server Virtualized System Availability, with Rubens Matos, Fumio Machida, Dong Seong Kim and Paulo Maciel, *IEEE Transactions on Reliability*, Vol. 61, No. 4, pp. 994-1006, 2012.
196. Optimal Random Age Replacement for Availability, with Meng-Lai Yin and John Argus, *International Journal of Reliability, Quality and Safety Engineering*, Vol. 19, No. 5, 2012.
197. Non-Markovian State-Space Models in Dependability Evaluation, with S. Distefano, *Quality and Reliability Engineering International*, John Wiley, Vol. 29, No. 2, pp. 225-239, 2013.
198. An Interacting Stochastic Models Approach for the Performance Evaluation of DSRC Vehicular Safety Communication, with Xiaoyan Yin and Xiaomin Ma, *IEEE Transactions on Computers*, Vol. 62, No. 5, pp. 873-885, May 2013.
199. Modeling and Performance Analysis of Large Scale IaaS Clouds, with Rahul Ghosh, Francesco Longo and Vijay Naik, *Future Generation Computer Systems*, Vol. 29, Issue 5, pp. 1216-1234, July 2013.
200. Modeling and Analysis of Software Rejuvenation in A Server Virtualized System with Live VM Migration, with Fumio Machida and Dong Seong Kim, *Performance Evaluation*, Vol. 70, No. 3, pp. 212-230, 2013.
201. A Comparative Experimental Study of Software Rejuvenation Overhead, with J. Alonso, Rivalino Matias Jr., E. Vicente and A. Maria, *Performance Evaluation*, Vol. 70, Issue 1, pp. 231-250, March 2013.
202. System Availability Assessment Using Stochastic Models, with Rahul Ghosh and Dong Seong Kim, *Applied Stochastic Models in Business and Industry*, Wiley, Vol. 29, Issue 2, pp. 94-109, March/April 2013.
203. System Resiliency Quantification Using Non-state-space and State-space Analytic Models, with Rahul Ghosh and DongSeong Kim, *Reliability Engineering and System Safety*, Vol. 116, pp. 109-125, August 2013.
204. Optimal Preventive Maintenance Duration for Best Availability with Hypo-exponential Failure Distributions, with Meng-Lai Yin and John Argus, *IEEE Transactions on Reliability*, Vol. 62, No. 2, pp. 351-361, 2013.
205. System Resiliency Quantification Using Non-state-space and State-space Analytic Models, with Ghosh R, Kim D, *Reliability Engineering and System Safety*, Vol. 116, pp. 109-125, 2013.
206. Semi-Markov Models for Performance Evaluation of Failure-prone IMS core networks, with Maurizio Guida, Maurizio Longo, Fabio Postiglione and Xiaoyan Yin, *Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability*, Vol. 227, No. 3, pp. 290-301, 2013.
207. A Comprehensive Approach to Optimal Software Rejuvenation, with Jing Zhao, Yanbin Wang, GaoRong Ning, Rivalino Matias Jr. and Kai-Yuan Cai, *Performance Evaluation*, Vol. 70, No. 11, pp. 917-933, 2013.
208. Modeling and Performance Analysis of Large Scale IaaS clouds, with Rahul Ghosha, Francesco Longob and Vijay K. Naikc, *Future Generation Computer Systems*, Vol. 29, No. 5, pp. 1216-1234, 2013.

209. Job Completion Time on a Virtualized Server with Software Rejuvenation, with F. Machida and Victor Nicola, *ACM Journal of Emerging Technologies in computing (JETC) Special Issue on Software Aging and rejuvenation.*, Vol. 10, 2014.
210. Scalable Analytics for IaaS Cloud Availability, with Rahul Ghosh, Francesco Longo, Flavio Frattini, Stefano Russo, *IEEE Transactions on Cloud Computing*, Vol. 2, No. 1, pp. 57-70, 2014.
211. Performance and Availability Modeling of IT Systems with Data Backup and Restore, with Ruofan Xia, Xiaoyan Yin, Alonso Lopez, J., Machida F., *IEEE Transactions on Dependable and Secure Computing*, Vol. 11, No. 4, pp. 375-389, 2014.
212. Analysis of Propagation Dynamics in Complex Dynamical Network Based on Disturbance Propagation Model, with Sheng Hong, Hongqi Yang, Guoqi Li, Ning Huang and Xiaomin Ma, *International Journal of Modern Physics B*, Vol. 28, No. 22, 2014.
213. Stochastic Model Driven Capacity Planning for an Infrastructure-as-a-Service Cloud, with Rahul Ghosh, F. Longo, Ruofan Xia and V. Naik, *IEEE Transactions on Services Computing*, Vol. 7, No. 4, pp. 667-680, 2014.
214. Fast Computation of Bounds for Two-terminal Network Reliability, with Stefano Sebastio, Dazhi Wang, Xiaoyan Yin, *European Journal of Operational Research*, Vol. 238, No. 3, pp. 810-823, 2014.
215. Performance and Reliability Evaluation of BSM Broadcasting in DSRC with Multi-channel Schemes, with Xiaoyan Yin, Xiaomin Ma and Alexey Vinel *IEEE Transactions on Computers*, Vol. 63, No. 12, pp. 3103-3113, 2014.
216. Software Rejuvenation Scheduling Using Accelerated Life Testing with Jing Zhao, Yuliang Jin, Rivalino Matias Jr., YanBin Wang, *ACM Journal of Emerging Technologies in computing, Special Issue on Software Aging and rejuvenation*, Vol. 10, No. 1, pp. 1-23, 2014.
217. MAC and Application Level Performance Evaluation of Beacon Message Dissemination in DSRC Safety Communication, with Xiaoyan Yin and Xiaomin Ma, *Performance Evaluation*, Vol. 71, pp. 1-24, 2014.
218. Assessing Survivability of Smart Grid Distribution Network Designs Accounting for Multiple Failures, with Daniel Sadoc Menasch, Alberto Avritzer, Sindhu Suresh, Rosa M. Leo, Edmundo de Souza e Silva, Morganna Diniz, Lucia Happe and Anne Koziolk, *Concurrency and Computation: Practice and Experience*, Vol. 26, No. 12, pp. 1949-1974, 2014.
219. Ensuring the Performance of Apache HTTP Server Affected by Aging, with Jing Zhao, Michael Grottke, Javier Alonso and Yanbin Wang *IEEE Transactions on Dependable and Secure Computing*, Vol. 11, pp. 130-141, 2014.
220. Performance and Availability Modeling of IT Systems with Data Backup and Restore, with Ruofan Xia, Xiaoyan Yin, Fumio Machida and Javier Alonso, *IEEE Transaction of Dependable and Secure Computing*, Vol. 11, No. 4, 375-389, 2014.
221. Sensitivity Analysis of a Hierarchical Model of Mobile Cloud computing, with Rubens Matos, Jean Araujo, Danilo Oliveira and Paulo Maciel, *Simulation Modelling Practice and Theory*, Vol. 50, pp. 151-164, 2015.
222. Recovery From Software Failures Caused by Mandelbugs, with Michael Grottke, Dong Seong Kim, Rajesh Mansharamani, Manoj Nambiar and Roberto Natella, *IEEE Transactions on Reliability*, Vol. 65, No. 1, pp. 70-87, March 2016.

223. Defects per Million Computation in Service-Oriented Environments, with Subrota K. Mondal, Xiaoyan Yin, Jogesh K. Muppala and Javier Alonso Lopez, *IEEE Transactions on Services Computing*, Vol. 8, No. 1, pp. 32-46, 2015.
224. Performability Evaluation of Grid Environments Using Stochastic Reward Nets, with Reza Entezari-Maleki and Ali Movaghar, *IEEE Transactions on Dependable and Secure Computing*, Vol. 12, No. 2, pp. 204-216, 2015.
225. Future Research Directions in Design of Reliable Communication Systems, with Jacek Rak, Mario Pickavet, Javier Alonso Lopez, Arie M. C. A. Koster, James P. G. Sterbenz, Egemen K. etinkaya, Teresa Gomes and Matthias Gunkel, *Telecommunication Systems*, Vol. 60, No. 4, pp. 423-450, 2015.
226. Largeness Avoidance in Availability Modeling Using Hierarchical and Fixed-point Iterative Techniques, with Sukhwani Harish, Bobbio Andrea, *International Journal of Performability Engineering*, Vol. 11, No. 4, 2015.
227. Quantification of System Survivability, with Ruofan Xia, *Special Issue of Telecommunication Systems Journal*, Vol. 60, Issue 4, pp. 451-470, 2015.
228. Reliability and Performance of General two-dimensional broadcast wireless network, with Xiaomin Ma, *Performance Evaluation*, Vol. 95, pp. 41-59, 2016.
229. How Do Bugs surface? A Comprehensive study on the Characteristics of Software Bugs Manifestation, with Domenico Cotroneo, Roberto Pietrantuono and Stefano Russo, *Journal of Systems and Software*, Vol. 113, pp. 27-43, 2016.
230. Semi-Markov Models of composite Web services for their performance, reliability and bottlenecks, with Zheng Zheng, Kun Qiu and Ruofan Xia, *IEEE Transactions on Services Computing*, to appear, 2016.
231. Reliability and survivability of vehicular ad hoc networks: An analytical approach, with Selvamuthu Dharmaraja and Resham Vinayak, *Reliability Engineering and System safety*, Vol. 153, pp. 28-38, 2016.
232. Effective Modeling Approach for IaaS Data Center Performance Analysis under Heterogeneous Workload, with Xiaolin Chang, Ruofan Xia, Jogesh Muppala and J. Liu, *IEEE Transactions on Cloud Computing*, to appear, 2016.

C. Chapters of Books

1. Prepaging and Applications to the STAR-100 Computer, in: *High Speed Computer and Algorithm Organization*, Kuck, Lawrie and Sameh (eds.), Academic Press, NY., 1977.
2. On the Design and Use of High Performance Computer Systems, in: *Parallel Computers - Parallel Mathematics*, Feilmeir (ed.), North-Holland, Amsterdam, 1977.
3. A Mathematical Model for Computer System Configuration Planning, with R.E. Kinicki, in: *The Performance of Computer Installations*, D. Ferrari (ed.), North-Holland, Amsterdam, 1978.
4. Main Memory and High Speed Storage: Organization, in: *Fundamentals Handbook of Electrical and Computer Engineering, Vol. III*, (invited) S. Chang (ed.), John Wiley & Sons, 1983.
5. The Integration of User Perception in the Heterogeneous M/M/2 Queue, with R.M. Geist, in: *PERFORMANCE '83*, A. Agrawala and S.K. Tripathi (eds.), North-Holland 1983, pp. 203-216.

6. Analysis of an M/G/2 Standby Redundant System, with F. Baccelli, in: *PERFORMANCE '83*, A. Agrawala and S.K. Tripathi (eds.), North-Holland 1983, pp. 457-476.
7. Reliability Evaluation for Fault-Tolerant Systems, invited paper, in: *Mathematical Computer Performance and Reliability*, G. Iazeolla , P. J. Courtois and A. Hordijk (eds.), Elsevier Science Publishers B.V. (North-Holland), 1984, pp. 403-414 (invited).
8. Modeling and Analysis of Fault-Tolerant Systems, invited paper, in: *Modelling Techniques and Tools for Performance Analysis*, D. Potier (ed.), North-Holland, Amsterdam, 1985, pp. 463-482 (invited).
9. Issues in Reliability Modeling of Fault-Tolerant Systems, with J. Bechta Dugan, R. M. Geist, and M. Smotherman, in: *Informatik-Fachberichte, Vol. 84: Fehlertolerierende Rechensysteme*, K. -E. Grosspietsch and M. Dal Cin (eds.), Springer-Verlag, Berlin, 1984, pp. 228-239.
10. Extended Stochastic Petri Nets: Applications and Analysis, with J. Bechta Dugan, V. Nicola and R. Geist, in: *Performance'84*, E. Gelenbe (ed.), North-Holland, Amsterdam, 1985, pp. 507-519. This paper is heavily referenced.
11. Computing Noise Margins For CMOS And NMOS Inverters, in: *Principles of CMOS VLSI Design*, N. Weste and K. Eshraghian, Addison-Wesley, Menlo Park, CA, 1985, pp. 505-510.
12. On the Optimal Distribution of Processing Power in a Star Configured System, with G. Haring, in: *Informatik-Fachberichte Vol. 61, Messung, Modellierung und Bewertung von Rechensystemen*, P. J. Kuhn and K. M. Shulz (eds.), Springer-Verlag, Berlin, 1983, pp. 353-365.
13. SPADE: A Tool for Performance and Reliability Evaluation, with R. Sahner, in: *Modelling Techniques and Tools for Performance Analysis'85*, N. Abu El Ata (ed.), Elsevier Science Publishers B.V. (North-Holland), 1986, pp. 147-163.
14. Dependability Evaluation of Fault Tolerant Multiple Processor Systems, with G. Ciardo and J. Bechta Dugan, in: *Modelling Techniques and Tools for Performance Analysis'85*, N. Abu El Ata (ed.), Elsevier Science Publishers B.V. (North-Holland), 1986 (invited).
15. Optimization Methods in Computer System design, with V.V.S. Sarma and A. Reibman, in: *Engineering Design: Better Results Through Operations Research Methods*, (invited), R. R. Levary (ed.), North-Holland, Elsevier Science Publishing Co., Inc., 1988.
16. Modeling and Analysis of Fault Tolerant Multiple Processor Systems, with R. Geist, in: *Handbook of Advanced Semiconductor Technology and Computer Systems*, G. Rabbat (ed.), Van Nostrand Reinhold, New York, 1988, pp. 776-796.
17. A Measurement-Based Performability Model for a Multiprocessor System, with M. C. Hsueh and R. Iyer, in: *Proc. of the Second Int. Workshop on Applied Mathematics and Performance Reliability Models of Computer/Communication Systems*, Rome, Italy, May 1987 (invited).
18. Hierarchical Modeling for Reliability and Performance Measures, with M. Veeraraghavan, in: *Concurrent Computations: Algorithms, Architecture and Technology*, S. K. Tewksbury, B. W. Dickson and S. C. Schwartz (eds.), Plenum Press, New York, 1988.
19. Transient Analysis of Markov and Markov Reward Models, with A. Reibman and Roger Smith, in: *Computer Performance and Reliability*, G. Iazeolla , P. J. Courtois and O. J. Boxma (eds.), Elsevier Science Publishers B.V. (North-Holland), 1988, pp. 535-545.
20. The Performance of Block Structured Programs on Processors Subject to Failure and Repair, with P. Chimento, in: *Performance of Parallel and Distributed Systems*, E. Gelenbe (ed.), pp. 269-280, Elsevier Science Publishers B.V. (North-Holland), 1988.

21. The Analysis of Computer Systems Using Markov Reward Processes, with R. M. Smith, in: *Stochastic Analysis of Computer and Communication Systems*, H. Takagi (ed.), pp. 589-629, Elsevier Science Publishers B.V. (North-Holland), 1990.
22. Availability and Reliability Modeling for Computer Systems, with D. Heimann and N. Mittal, in: *Advances in Computers*, M. Yovitts (Ed.), Vol. 31, pp. 175-233, Academic Press, San Diego, 1990.
23. The Solution of Large Stochastic Petri Net Models, with G. Ciardo, in: *Numerical Solution of Markov Chains*, (invited) W. J. Stewart (ed.), pp. 565-595, Marcel Dekker, New York, 1991.
24. Numerical Transient Solution of Finite Markovian Queueing Systems, with J. Muppala, in: *Queueing and Related Models*, U. N. Bhat and I. V. Basawa (ed.), pp. 262-284, Oxford University Press, 1992.
25. Fixed-Point Iteration in Availability Modeling, with Lorrie Tomek, in: *Informatik-Fachberichte, Vol. 283: Fehlertolerierende Rechensysteme*, M. Dal Cin (ed.), pp. 229-240, Springer-Verlag, Berlin, 1991.
26. Dependability Modeling of a Heterogeneous VAXcluster System Using Stochastic Reward Nets, with J. Muppala, A. Sathaye and Rick Howe, in: *Hardware and Software Fault Tolerance in Parallel Computing Systems*, D. Avresky (ed.), pp. 33-59, Ellis Horwood Ltd., 1992.
27. On Modeling Performance of Real-Time Systems in the Presence of Failures, with J. K. Muppala and S. P. Woollet, in: *Readings in Real-Time Systems*, (invited) Y.-H. Lee and C. M. Krishna (eds.), pp. 219-239, IEEE Press, 1993.
28. Automated Generation and Analysis of Markov Reward Models Using Stochastic Reward Nets, with G. Ciardo, A. Blakemore, P. F. Chimento and J. Muppala, in: *Linear Algebra, Markov Chains, and Queueing Models*, (invited) Carl Meyer and R. J. Plemmons (eds.), IMA Volumes in Mathematics and its Applications, Vol. 48, pp. 145-191, Springer-Verlag, Heidelberg, 1993.
29. Efficient Multiple Variable Inversion Techniques for Two-Terminal Network Reliability Evaluation, with Malathi Veeraraghavan, in: *New Trends in System Reliability Evaluation*, (invited) K. Misra (ed.), pp. 39-74, Elsevier Science Publishers, Amsterdam, 1993.
30. Dependability and Performability Analysis with G. Ciardo, M. Malhotra and R.A. Sahner, in: *Performance Evaluation of Computer and Communication Systems*, Lecture Notes in Computer Science, L. Donatiella, R. Nelson (eds.), pp. 587-612, Springer-Verlag, 1993.
31. Reliability Modeling with Computer-Based Tools, with Manish Malhotra, Sandy Wang and Malathi Veeraraghavan, in: *Quality & Reliability in Computer-Based Medical Products*, (invited) H. Troy Nagle and Roger Schneider (eds.), IEEE Press, 1993.
32. Techniques and Tools for Reliability and Performance Evaluation: Problems and Perspectives, with B. Haverkort, A. Rindos and V. Mainkar, *Computer Performance Evaluation: Modelling Techniques and Tools*, (invited) Lecture Notes in Computer Science 794, G. Haring and G. Kotsis (eds.), Springer Verlag, pp. 1-24, 1994.
33. Analyses Using Stochastic Reward Nets, with Lorrie Tomek, in: *Software Fault Tolerance*, (invited) M. Lyu (ed.), John Wiley & Sons, 1994.
34. Markov Renewal Theory Applied to Performability Evaluation, with R. Fricks, M. Telek and A. Puliafito, in *State-of-the Art in Performance Modeling and Simulation. Modeling and Simulation of Advanced Computer Systems: Applications and Systems*, K. Bagchi and G. Zobrist (eds.), pp. 193-236; Gordon and Breach Publishers, Newark, NJ, 1998.

35. Exact Methods for the Transient Analysis of Nonhomogeneous Continuous-Time Markov Chains, with A. Rindos, S. Woollet and I. Viniotis, *2nd International Workshop on the Numerical Solution of Markov Chains*, W. J. Stewart (ed.), Kluwer Academic Publishers, 1995.
36. Time-dependent Behavior of Redundant Systems with Deterministic Repair, with D. Logothetis, *2nd International Workshop on the Numerical Solution of Markov Chains*, W. J. Stewart (ed.), pp. 135-150. Kluwer Academic Publishers, 1995.
37. Markov Dependability Models of Complex Systems: Analysis Techniques, with J. Muppala and M. Malhotra, *Reliability and Maintenance of Complex Systems*, S. Ozekici (ed.), pp. 442-486, Springer-Verlag, Berlin, 1996.
38. Transient Analysis of Non-Markovian Queues via Markov Regenerative Processes, with D. Logothetis and V. Mainkar, in *Probability Models and Statistics: a J. Medhi Festschrift*, A. C. Borthakur and H. Choudhury (eds.), pp. 109-131, New Age International Limited, New Delhi, 1996.
39. A BDD Approach to Dependability Analysis of Distributed Computer Systems with Imperfect Coverage, with X. Zang and H. Sun, in *Dependable Network Computing*, D. R. Avresky (ed.), pp. 167-190, Kluwer Academic Publishers, The Netherlands, 1999.
40. Techniques for System Dependability Evaluation, with J. Muppala and R. Fricks, in *Computational Probability*, W. Grassman (ed.), pp. 445-480, Kluwer Academic Publishers, The Netherlands, 2000.
41. Stochastic Modeling Formalisms for Dependability, Performance and Performability, with K. Goševa - Popstojanova, in *Performance Evaluation - Origins and Directions*, Lecture Notes in Computer Science, G. Haring, C. Lindemann, M. Reiser (eds.), pp. 385-404, Springer Verlag, 2000.
42. Stochastic Petri Nets and Their Applications to Performance Analysis of Computer Networks, with Hairong Sun, in *Recent Developments in Operational Research*, M. L. Agarwal and K. Sen (eds.), pp. 421-435, Narosa Publishing House, New Delhi, India, 2001.
43. "Software rejuvenation – modeling and applications," with T. Dohi, K. Goseva-Popstojanova, K. Vaidyanathan and S. Osaki, in: *Handbook of Reliability Engineering*, Hoang Pham (ed.), Springer-Verlag, London, pp. 245-263, 2003.
44. Software Reliability and Rejuvenation: Modeling and Analysis, with K. Vaidyanathan, in *Performance Evaluation of Complex Systems: Techniques and Tools*, M. C. Calzarossa and S. Tucci (eds.), Lecture Notes in Computer Science, LNCS 2459, pp. 318-345, Springer Verlag, Heidelberg, 2002.
45. Analysis and Estimation of Multistep Failure Models with Periodic Software Rejuvenation, with H. Suzuki, T. Dohi and K. Goseva-Popstojanova, in *Advances in Stochastic Modeling*, J. R. Artalejo and A. Krishnamoorthy (eds.), Notable Publications, Neshanic Station, New Jersey, pp. 85-108, 2002.
46. Analysis of software aging and rejuvenation, with K. Vaidyanathan and K. Goseva-Popstojanova, In: *Recent Developments in Quality Reliability and Information Technology -Trends and Future Directions*, P. K. Kapur, A. Kumar, Y. Singh, P. C. Jha and A. K. Bardhan (eds.), pp. 25-42, IMH, New Delhi, INDIA (2004).
47. Dealing with Non-exponential Distributions in Dependability Models, with Dazhi Wang and Ricardo Fricks, in *Performance Evaluation - Stories and Perspectives*, G. Kotsis (ed.), Oesterreichische Computer Gesellschaft, pp. 273-302, 2003.

48. Availability Modeling in Practice, with A. Sathaye and S. Ramani, in: *Dependable Computing Systems: Paradigms, Performance Issues, and Applications*, Zomaya and Diab (eds.), John Wiley, 2005.
49. Network Survivability Performance Evaluation: A Quantitative Approach with Applications in Wireless Ad-hoc Networks, with Dongyan Chen and Sachin Garg, in: *Performance Analysis of Mobile and Ad Hoc Networks*, C. Yu, C. Das and Y. Pan (eds.), Nova Science Publishers, 2006.
50. Software Rejuvenation, with Y. Bao, in: *Advanced Parallel and Distributed Computing*, Editor: Yuan-Shun Dai, et. al., pp. 165, Nova Publishers, 2006.
51. Software Aging and Rejuvenation, with K. Vaidyanathan, pp. xx-xxx, in: *Wiley Encyclopedia of Computer Science and Engineering*, B. Wah (ed.), 2008.
52. Stochastic Modeling Techniques for Secure and Survivable Systems, with D. Selvamuthu and V. Jindal, pp. 171–207, in: *Information Assurance*, Y. Qian, J. Joshi, D. Tipper and P. Krishnamurthy (eds.) Morgan Kaufman, 2008.
53. Imprefect Coverage Models, with S. Amari, A. Myers and A. Rauzy, pp. 321–348, in: *Handbook of Performability Engineering*, K.B. Misra (ed.), Springer, 2008.
54. Transient Behavior of CTMCs, with S. Distefano, in: *Wiley Encyclopedia of Operations Research and Management Science*, J. Kharoufeh (ed.), John Wiley, 2010.
55. Response Time Distributions in Networks of Queues, with Michael Grottke, Varsha Apte and Steve Woollet, in: *Queueing Networks*, R. Boucherie and Nico van Dijk (eds.), Springer, New York, 2011.
56. Accelerated Life Tests and Software Aging, with Rivalino Matias Jr., in: *Adaptive Control Approach for Software Quality Improvement*, W. Eric Wong and Bojan Cukic (eds.), World Scientific, Singapore, 2011.
57. Software Aging and Rejuvenation for Increased Resilience: Modeling, Analysis and Applications, with Alberto Avritzer, Ricardo M. Czekster and Salvatore Distefano, in: *Resilience Assessment and Evaluation*, ed., 2011.
58. Multi-State Availability Modeling in Practice, with Dong Seong Kim and Xiaoyan Yin, in: *Recent Advances in System Reliability*, A. Lisnianski and I. Frekel (editors), Springer, 2012, pp. 165–180.
59. Dependability Modeling, with Paulo Maciel, Rivalino Matias Jr. and Dong Seeong Kim, In: *Performance and Dependability in Service Computing: Concepts, Techniques and Research Directions*, Hershey, Pennsylvania: IGI Global, 2011.
60. Availability Analysis of IaaS Cloud Using Analytic Models, with F. Longo, R. Ghosh and V. K. Naik, in: *Achieving Federated and Self-Manageable Cloud Infrastructures: Theory and Practice*, Massimo Villari, Ivona Brandic, Francesco Tusa (Eds.), IGI Global, 2012: 134.
61. Combining Performance and Availability Analysis in Practice, with Ermeson Andrade and Fumio Machida, in: *Advances in Computers*, Ali Hurson and S. Sedigh (editors), Vol. 84, ADCOM, UK: Academic Press, pp. 1-38, 2012.
62. Reliability Indices, with F. Frattini, A. Bovenzi and J. Alonso, in: *Wiley Encyclopedia of Operations Research and Management Science*, John Wiley & Sons, DOI 121.10.1002/9780470400531.eorms1063, Jan. 2013.
63. Performance and Availability Evaluation of IMS-based Core Networks, with Fabio Postiglione and Xiaoyan Yin, in: *Applied Reliability Engineering and Risk Analysis: Probabilistic Models and Statistical Inference*, I. Frekel (editors), John Wiley & Sons, 2014.

64. Markov chain models and applications, with Kalyanaraman Vaidyanathan and Dharmaraja Selvamuthu, in: *Modeling and Simulation of Computer Networks and Systems: Methodologies and Applications*, Mohammad S. Obaidat, Petros Nicopolitidis and Faouzi Zarai (editors), Morgan Kaufmann(Elsevier), pp. 393-421, 2015.
65. An SRN-Based Resiliency Quantification Approach, with Dario Bruneo, Francesco Longo, Marco Scarpa, Antonio Puliafito, Rahul Ghosh, in: *Lecture notes in computer science: Application and Theory of Petri Nets and Concurrency*, Raymond Devillers and Antti Valmari (editors), Springer International Publishing, Vol. 9115, pp. 98-116, 2015.

D. Articles in Symposia Proceedings

1. The Design and Analysis of a Functionally Distributed Computer System, with Col. R.L. Leech, *Proc. 1978 International Conference on Parallel Processing*, Michigan, August 1978.
2. Higher-Radix On-Line Division, with J.G. Rusnak, *Proc. Fourth IEEE Symposium on Computer Arithmetic*, Santa Monica, October 1978.
3. Mathematical Models for the Design and Analysis of On-Line Built-In-Test, *1978 Government Microcircuit Applications Conference*, Monterey, California, October 1978.
4. A Performance Comparison of Optimally Designed Computer Systems With and Without Virtual Memory, with T.M. Sigmon, *Proc. 1979 International Symposium on Computer Architecture*.
5. Designing Linear Storage Hierarchies so as to Maximize Reliability Subject to Cost and Performance Constraints, *Proc. 1980 International Conf. on Computer Architecture*, La Baule, France, May 1980.
6. Hardware Configuration Selection Through Discretizing a Continuous Variable Solution, with R. Wagner, *Proceedings, 1980 International Symposium on Comp. Performance Modeling, Measurement, and Evaluation*, Toronto, Canada, May 1980.
7. A Validation Prototype of System Reliability in Life-Critical Applications, with J.W. Gault and J.B. Clary, *Proc. 19th Annual Tech. Symp. on Pathways to System Integrity*, June 1980 (won the best paper award).
8. Towards Optimal Designs of Interactive Computer Systems, with A.K. von Mayrhauser, *Proc. ECOMA-8 Int. Conf. on The Challenge of a New Generation of Computer Performance Technology*, London, October 1980.
9. Optimal Selection of CPU Speed, Device Capacities, and Allocation of Files with Variable Record Sizes, with R.A. Wagner, *Proc. Annual Meeting of Comp. Perf. Eval. User's Group*, Orlando, Florida, October 1980.
10. Optimum Computer Configuration Selection, with R.A. Wagner, *Proc. IEEE Int. Conf. on Circuits and Computers* (Invited Paper), New York, October 1980.
11. Optimal Design of an Interactive System: File Allocation, Device Capacity Selection, and CPU Speed Selection, with A.K. von Mayrhauser, *Proc. of CMG (Computer Measurement Group) Conf.*, November, 1981.
12. Task Allocation and Load Balancing in Fault-Tolerant Distributed Systems, with J.A. Bannister, *Proc., International AMSE Conference*, Vallee de Chevreuse, Paris, July 1982.
13. Task and File Allocation in Fault-Tolerant Distributed Systems, with J.A. Bannister, *Proc., The Second Symposium on Reliability in Distributed Software and Database Systems*, Pittsburgh, July 1982.

14. Computer Systems Analysis, *Proceedings*, The Fifth Annual Int. Conf. on Comp. Capacity Management, New Orleans, April 1983.
15. Analysis of Computer Performance and Reliability, *Proceedings*, IEEE Int. Conf. on Comp. Design: VLSI in Computers (ICCD), Port Chester, NY, November 1983.
16. Design of the Hybrid Automated Reliability Predictor, with R. Geist, J. Dugan and M. Smotherman, *Proceedings*, The IEEE/AIAA 5th Digital Avionics Systems Conference, Seattle, November 1983.
17. Computer Systems Analysis, *Proceedings*, *Computer Measurement Group Conference*, Washington D.C., December 1983.
18. Hybrid Modeling Techniques and Their Applications to Fault Tolerant Computer Systems, with R. M. Geist, *Proc. Fifteenth Annual Pittsburgh Conference on Modeling and Simulation*, Pittsburgh, Pa., April 1984.
19. Computer Systems Analysis, *Proc. Fifteenth Annual Pittsburgh Conference on Modeling and Simulation*, Pittsburgh, Pa., April 1984.
20. Modeling Imperfect Coverage in Fault-Tolerant Systems, with R. Geist, J. Dugan and M. Smotherman, *Proc. Fourteenth Int. Symp. on Fault-Tolerant Computing*, Orlando, Florida, June 1984.
21. The Design of a Unified Package for the Solution of Stochastic Petri Net Models, with J. Bechta Dugan, A. Bobbio and G. Ciardo, *Proc. International Workshop on Timed Petri Nets*, Torino, Italy, July 1985.
22. Dependability Prediction: Comparison of Tools and Techniques, with M. Mulazzani, *Proc. IFAC SAFECOMP*, France, 1986.
23. Numerical Evaluation of Performability Measures and Job Completion Time in a Repairable Fault-Tolerant System, with V. Kulkarni, V. Nicola and R. Smith, *Proc. Sixteenth International Symposium on Fault-Tolerant Computing*, Vienna, Austria, July 1986.
24. The System AVailability Estimator (SAVE), with A. Goyal, W. Carter, E. de Souza e Silva and S. Lavenberg, *Proc. Sixteenth International Symposium on Fault-Tolerant Computing*, Vienna, Austria, July 1986.
25. A Hierarchical Combinatorial-Markov Method of Solving Complex Reliability Models, *Proceedings*, *ACM/IEEE Fall Joint Computer Conference*, Dallas, Texas, November 1986.
26. Performance Analysis Using User Behavior Graphs, with M. Calzarossa, *Proc. Computer Measurement Group (CMG) Conference*, Las Vegas, December 1986.
27. Reliability and Performance Analysis of a Ringnet, with P. Yu and W. E. Smith, *Local Communication Systems: LAN and PBX*, J. P. Cabanel, G. Pujolle and A. Danthine (eds.), Elsevier Science Publishers B.V. (North-Holland), 1987, pp. 111-123.
28. An Analysis of Performability of Two Multiprocessor Systems, with Roger Smith, *Proc. Seventeenth International Symposium on Fault-Tolerant Computing*, Pittsburgh, PA, IEEE Press, pp. 224-229, 1987.
29. Reliability of the Shuffle-Exchange Network and Its Variants, with J. Blake, *21st Annual Hawaii Conference on System Sciences*, January 1988.
30. Sensitivity Analysis of Reliability and Performability for Multiprocessor Systems, with J. Blake and A. Reibman, *Proc. 1988 ACM SIGMETRICS Conference*, Santa Fe, New Mexico, pp. 177-186, May 1988.

31. Reliabilities of Two Fault-Tolerant Interconnection Networks, with J. Blake, *Proc. Eighteenth International Symposium on Fault-Tolerant Computing*, Tokyo, Japan, June 1988.
32. An Approach to Solving Large Reliability Models, with M. Boyd, M. Veeraraghavan and J. B. Dugan, *Proc. of AIAA/IEEE Digital Avionics Systems Conference*, October 17-20, 1988, pp. 243-250.
33. On Reliability Modelling of Fault-Tolerant Distributed Systems, with P. Thambidurai and Y.-K. Park, *Proc. The 9th Int. Conf. on Distributed Computing Systems*, Newport Beach, CA, June 1989.
34. Completion Times of Programs on Concurrent Processors with Failures and Repair, with P. F. Chimento, *Proc. International Conference on Parallel Processing*, St. Charles, IL, August 1989.
35. SPNP: Stochastic Petri Net Package, with G. Ciardo and J. Muppala, *Proc. Third Int. Workshop on Petri Nets and Performance Models (PNPM)*, Kyoto, pp. 142 - 151, 1989.
36. Stochastic Petri Net Modeling of VAXcluster Availability, with O. Ibe, A. Sathaye and R. Howe, *Proc. Third Int. Workshop on Petri Nets and Performance Models (PNPM)*, Kyoto, pp. 112-121, 1989.
37. Transient Overloads in Fault-Tolerant Real-Time Systems, with P. Thambidurai, *IEEE Tenth Real-Time Systems Symposium*, December 1989.
38. Should I Add a Processor? with O. Ibe, A. Sathaye and R. Howe, *23rd Annual Hawaii Conference on System Sciences*, pp. 214-221, January 1990.
39. Modeling Using SHARPE, with R. Sahner (invited), *QPASSPORT*, Issue 8, April 1990, Centre for Mathematics and Computer Science, Amsterdam.
40. Availability Modeling of Heterogeneous VAXcluster Systems: A Stochastic Petri Net Approach, with A. Sathaye and R. Howe, *Bulgarian Fault-Tolerant Systems Conference*, Varna, 1990.
41. GSPN Models: Sensitivity Analysis and Applications, with J. Muppala, *Proc. 28th Annual ACM SE Region Conference*, Greenville, SC, April 1990.
42. An Improved Algorithm for the Symbolic Reliability Analysis of Networks, with M. Veeraraghavan, *Ninth Symposium on Reliable Distributed Systems*, Huntsville, October 1990, pp. 34-43.
43. Composite Performance and Availability Analysis using a Hierarchy of Stochastic Reward Nets, with J. Muppala, *Fifth International Conference on Modelling Techniques and Tools for Computer Performance Evaluation*, Turin, Italy, February 13-15, 1991.
44. Dependability Modeling for Computer Systems, with D. Heimann and N. Mittal, *Annual Reliability and Maintainability Symposium*, Orlando, FL, January 29-31, 1991.
45. Performance Modeling Using SHARPE, with V. Mainkar, *Eighth Symp. on Reliability in Electronics, RELECTRONIC'91*, Budapest, Hungary, August 1991.
46. Higher order methods for the transient analysis of stiff Markov chains, with M. Malhotra, *Proc. Int. Conf. on the Performance of Distributed Systems and Integrated Communication Networks*, Kyoto, Sept. 1991.
47. A Decomposition Approach for Stochastic Petri Net Models, with G. Ciardo, *International Conference on Petri Nets and Performance Models*, Melbourne, Australia, pp. 74-83, December 1991.

48. Reliability Modeling of the MARS System: A Case Study in the Use of Different Tools and Techniques, with H. Kantz, *International Conference on Petri Nets and Performance Models*, Melbourne, Australia, December 1991.
49. Reliability Analysis of the FDDI Token Ring, with D. Logothetis, *Proceedings of the 16th Conference on Local Computer Networks*, pp. 41 - 51, Minneapolis, MN, October 14 - 17, 1991.
50. A Toolchest for Stochastic Models, with Robin Sahner, *Proc. Int. Conf. on Simulation in Engineering Education*, Newport Beach, CA, January 1992, pp. 25-30.
51. Approximate Performance Models of Polling Systems Using Stochastic Petri Nets, with H. Choi, *Proceedings of the IEEE INFOCOM 92*, Florence, Italy, May 4-8, 1992.
52. Reliability Modeling of Disk Array Systems, with Manish Malhotra, *Sixth International Conference on Modelling Techniques and Tools for Computer Performance Evaluation*, Edinburgh, Scotland, Sept. 16-18, 1992.
53. Conditional MTTF and its Computation in Markov Reliability Models, with H. Choi, *Annual Reliability and Maintainability Symposium*, Atlanta, GA, January 25-28, 1993.
54. Sensitivity Analysis of Deterministic and Stochastic Petri Nets with H. Choi and V. Mainkar, *MASCOTS Conf. Proc.*, Jan 17-20, 1993.
55. Reliability Analysis of Various Station Attachment Schemes in a FDDI Token Ring, with D. Logothetis, *Proceedings of the IEEE INFOCOM 93*, San Francisco, CA, March 1993.
56. On the Sensitivity of Transient Solution of Markov Models, with A. V. Ramesh, *Proc. 1993 ACM SIGMETRICS Conference*, Santa Clara, CA, May 1993.
57. Approximate Analysis of Priority Scheduling Systems Using Stochastic Reward Nets, with Varsha Mainkar, *Proc. 13th International Conference on Distributed Computing Systems*, pp. 466-473, Pittsburgh, May 1993.
58. Transient Analysis of Deterministic and Stochastic Petri Nets, with Hoon Choi and Vidyadhar Kulkarni, *Lecture Notes in Computer Science*, Vol 691, M. Ajmone Marsan (ed.), *Proc. 14th International Conference on Application and Theory of Petri Nets*, Springer-Verlag, Heidelberg, pp. 166-185, 1993.
59. Integration of Specification for Modeling and Specification for System Design, with C.Y. Wang, *Lecture Notes in Computer Science*, Vol 691, M. Ajmone Marsan (ed.), *Proc. 14th International Conference on Applications and Theory of Petri Nets*, Springer-Verlag, Heidelberg, pp. 473-492, 1993.
60. FSPNs: Fluid Stochastic Petri Nets, with Vidyadhar Kulkarni (invited paper), *Lecture Notes in Computer Science*, Vol 691, M. Ajmone Marsan (ed.), *Proc. 14th International Conference on Applications and Theory of Petri Nets*, Springer-Verlag, Heidelberg, pp. 24-31, 1993.
61. An Analytic Treatment of the Reliability and Performance of Mirrored Disk Subsystems, with Robert Geist, *Proc. Twenty-third International Symposium on Fault-Tolerant Computing*, Toulouse, France, June 1993.
62. A Combinatorial Algorithm for Performance and Reliability Analysis using Multistate Models, with M. Veeraraghavan, *Twelveth Symposium on Reliable Distributed Systems*, Holmdel, October 1993.
63. Sensitivity Analysis of Markov Regenerative Stochastic Petri Nets, with H. Choi and V. Mainkar, *Proc. Fifth Int. Workshop on Petri Nets and Performance Models (PNPM)*, 1993, Toulouse.

64. A Methodology for Formal Expression of Hierarchy in Model Solution, with Manish Malhotra, *Proc. Fifth Int. Workshop on Petri Nets and Performance Models (PNPM)*, Toulouse, pp. 258-267, October 1993.
65. Optimal Transient Service Strategies for Adaptive Heterogeneous Queuing Systems, with Hermann de Meer, Gunter Bolch and Fridolin Hofmann, *Proc. 7th ITG/GI Conference on Measurement, Modelling and Evaluation of Computer and Communication Systems*, Aachen University of Technology, pp. 159-172, Sept. 1993.
66. Reliability and Performability Techniques and Tools: A Survey (invited paper), with Manish Malhotra, *Proc. 7th ITG/GI Conference on Measurement, Modelling and Evaluation of Computer and Communication Systems*, Aachen University of Technology, pp. 27-48, Sept. 1993.
67. Transient Analysis of the Leaky Bucket Rate Control Scheme Under Poisson and ON-OFF Sources, with D. Logothetis, *Proceedings of the IEEE INFOCOM 94*, Toronto, Canada, June 1994.
68. Phased-Mission System Analysis Using Boolean Algebraic Methods, with Arun K. Somani, *Proc. 1994 ACM SIGMETRICS Conference*, Nashville, TN, pp. 98-107, May 1994.
69. Techniques and Tools for Reliability and Performance Evaluation: Problems and Perspectives, with Boudewijn R. Haverkort, Andy Rindos and Varsha Mainkar, *Seventh International Conference on Modelling Techniques and Tools for Computer Performance Evaluation*, Vienna, Austria, May 1994 (invited paper).
70. Markov reward approach to performability and reliability analysis, with M. Malhotra and R.M. Fricks, *Proc. MASCOTS 1994, the Second International Workshop*. pp. 7-11 1994
71. The Impact of Fault Expansion on the Interval Estimate for Fault Detection Coverage, with Wei Wang, B. Shah and Joe Profeta, *Proc. Twenty-fourth International Symposium on Fault-Tolerant Computing*, Austin, Texas, June 1994.
72. Coverage Evaluation Through Fault Injection: Fault Sampling And Statistical Analysis, with Wei Wang, *Third Int'l Workshop on Integrating Error Models with Fault Injection*, pp 31-32, 1994
73. Buffer Sizing for Available Bit Rate (ABR) Traffic in an ATM Switch, with A. Puliafito, M. Balakrishnan and I. Viniotis, *IEEE International Conference on Communications*, Seattle, WA, pp. 316-320, July 1995.
74. Componentwise Decomposition for an Efficient Reliability Computation of Systems with Repairable Components, with M. Balakrishnan, *Proc. Twenty-fifth International Symposium on Fault-Tolerant Computing*, Pasadena, CA, pp. 259-268, July 1995.
75. Markov Regenerative Models, with Dimitris Logothetis and Antonio Puliafito, *Proc. Int. Computer Performance and Dependability Symp.*, Erlangen, Germany, pp. 134-143, 1995.
76. Preemptive repeat identical transitions in Markov Regenerative Stochastic Petri Nets, with A. Bobbio, V. G. Kulkarni, A. Puliafito and M. Telek, *Proc. of Petri Net and Performance Models PNPM95*, Durham, NC., pp. 113-123, October 1995.
77. Steady state analysis of Markov regenerative spn with age memory policy, with M. Telek, A. Bobbio and L. Jereb, *Proceedings of the International Conference on Performance Tools and MMB '95*, pp. 165-179, Heidelberg, Germany, 1995.
78. Fixed Point Iteration Using Stochastic Reward Nets, with V. Mainkar, *Proc. of Petri Net and Performance Models PNPM95*, Durham, NC, October pp. 21-31, 1995.

79. Performance Evaluation of Dynamic Priority Operating Systems, with S. Greiner, A. Puliafito and G. Bolch, *Proc. of Petri Net and Performance Models PNPM95*, Durham, NC, pp. 241-251, October 1995.
80. Transient analysis of Markov regenerative stochastic Petri nets: a comparison of approaches, with R. German and D. Logothetis, *Proc. Sixth International Workshop on Petri Nets and Performance Models*. pp 103-112, 1995
81. From stochastic Petri nets to Markov regenerative stochastic Petri nets, with A. Puliafito and D. Logothetis, *Proc. MASCOTS '95, the Third International Workshop*. pp 194-198, 1995
82. Analysis of software rejuvenation using Markov regenerative stochastic Petri nets, with S. Garg, A. Puliafito and M. Telek, in *Proceedings of Sixth Intl. Symposium on Software Reliability Engineering*, Toulouse, France, pp. 180-187, October 24-27, 1995.
83. Analysis of A Realistic Bulk Service System, with Chang-Yu Wang, A.J. Rindos, S.P. Woolet and L. Groner, *Proc. International Conference on High Performance Computing (HiPC)*, New Delhi, India, pp. 503-508, December 1995.
84. Software Reliability Modeling with Time-dependent Test-coverage: Relating Testability to Reliability, with Ashutosh Aggarwal and Peter N. Marinos, *the First Conference on Fault Tolerant Systems*, (invited), FTS-95, IIT Madras, India, December 20-22, 1995.
85. System dependencies in Markov dependability modelling, with J. K. Muppala, *Fault-Tolerant Systems and Software, Proceedings of FTS-95*, pp. 38-47, Narosa Publishing House, New Delhi, India, 1995.
86. Time and load based software rejuvenation: policy, evaluation and optimality, with S. Garg, Y. Huang and C. Kintala, *Proc. of First Fault-tolerant Symposium*, Madras, India, December 1995.
87. Transient Behavior of ATM Networks under Overloads, with Chang-Yu Wang, D. Logothetis and I. Viniotis, *Proceedings of the IEEE INFOCOM 96*, San Francisco, CA, pp. 978-985, March 1996.
88. Minimizing Completion Time of a Program by Checkpointing and Rejuvenation, with Sachin Garg, Y. Huang and C. Kintala, *Proc. 1996 ACM SIGMETRICS Conference*, Philadelphia, PA, pp. 252-261, May 1996.
89. A User-Friendly Dependability Evaluation Tool, with Herbert Hecht, Ann T. Tai and Andrew J. Chruscicki, *Proc. IEEE NAECON*, Dayton, Ohio, May 1996.
90. IDEA: Integrated Design Environment for Assessment of ATM Networks, with R. Fricks, S. Hunter and S. Garg, *Proc. Second IEEE International Conference on Engineering of Complex Computer Systems*, Montreal, October 21-25, 1996, pp. 27-34.
91. SHARPE: a modeler's toolkit, with R.A. Sahner, *Proc. IEEE International Computer Performance and Dependability Symposium*, pp 58, 1996.
92. Unification of Finite Failure NHPP Models through Test Coverage, with S. Gokhale, T. Philip and P. N. Marinos, *Proc. Seventh Intl. Symposium on Software Reliability Engineering*, White Plains, NY, October 1996, pp 289-299.
93. Modeling Failure Dependencies in Reliability Analysis Using Stochastic Petri Nets, with R. Fricks, *Proc. European Simulation Multi-conference (ESM)*, Istanbul, June 1997.
94. Discrete-event Simulation of Fluid Stochastic Petri Nets, with G. Ciardo and D. Nicol, *Proc. 7th Int. Workshop on Petri Nets and Performance Models (PNPM)*, pp. 217-225, St. Malo, France, June 1997. IEEE Comp. Soc. Press.

95. Effect of Repair Policies on Software Reliability, with S. Gokhale, P. N. Marinos and M. R. Lyu, *Proc. 12th Annual Conference on of Computer Assurance (COMPASS)*, June 16-20, Gaithersburg, MD, June 1997.
96. On the Analysis of Software Rejuvenation Policies, with S. Garg, A. Puliafito and M. Telek, *Proc. 12th Annual Conference on Computer Assurance (COMPASS)*, June 16-20, Gaithersburg, MD, 1997.
97. Toward Accessibility of Dependability Modeling Techniques and Tools, with Ann T. Tai, Herbert Hecht and Bing Zhang, *Proc. Twenty-Seventh International Symposium on Fault-Tolerant Computing (FTCS)*, Seattle, June 24-26, 1997, pp. 37-41.
98. Stochastic Reward Nets for Reliability and Performability Prediction, invited talk presented to *VII Simposio de Computadores Tolerantes a Falhas (VII SCTF)*, Campina Grande, Brazil, July 1997.
99. On Computing Importance Measures Using Reward Models, with R. M. Fricks, *VII Simposio de Computadores Tolerantes a Falhas (VII SCTF)*, pp. 169 – 183, Campina Grande, Brazil, July 1997.
100. Performability Analysis of Handoff Calls in Personal Communication Networks, with C. W. Ro, *Proc. Sixth International Conference on Computer Communications and Networks (IC3N)*, Las Vegas, Nevada, September 1997.
101. On the development of dependability-evaluation workbench for high-assurance system designers, with A.T. Tai and H. Hecht, *Proc. High-Assurance Systems Engineering Workshop*. pp 2-7, 1997.
102. The Evolution of Stochastic Petri Nets, with A. Puliafito and M. Telek, *Proc. World Congress on Systems Simulation (WCSS)*, (2nd Joint Conference of International Simulation Societies), Singapore, Sept. 1-3, 1997, pp. 3-15 (Keynote paper).
103. The Development of an Integrated Modeling Environment, with R. Fricks, C. Hirel and S. Wells, *Proc. World Congress on Systems Simulation (WCSS)*, (2nd Joint Conference of International Simulation Societies), Singapore, Sept. 1-3, 1997, pp. 471-476.
104. A cache error propagation model, with A.K. Somani, *Proc. Pacific Rim International Symposium on Fault-Tolerant Systems*, pp 15-21, 1997
105. Reliability Simulation of Fault-Tolerant Software and Systems, with S. Gokhale and M. R. Lyu *1997 Pacific Rim International Symposium on Fault Tolerant Systems*, Taipei, Taiwan, December 1997.
106. Modeling Failure Dependencies in Reliability Analysis Using Stochastic Petri Nets, with R.M. Fricks, *Proceedings of the 1997 European Simulation Multiconference – ESM'97*, Turkey, 1997.
107. Performability Analysis of Channel Allocation with Channel Recovery Strategy in Cellular Networks, with Yue Ma and C. W. Ro, *Proc. of IEEE 1998 International Conference on Universal Personal Communications (ICUPC)*, Florence, Italy, pp. 71-75, October 5-9, 1998.
108. Dependency characterization in path-based approaches to architecture-based software reliability prediction, with S.S. Gokhale, *Proc. IEEE Workshop on Application-Specific Software Engineering Technology. (ASSET)* pp 86-89, 1998.
109. Model validation using simulated data, with S.S. Gokhale and M.R. Lyu, *Proc. IEEE Workshop on Application-Specific Software Engineering Technology. (ASSET)* pp 22-27, 1998.
110. Performance analysis of distributed real-time databases, with R. M. Fricks and A. Puliafito, *Proc. IEEE International Computer Performance and Dependability Symposium*, pp 184-194, 1998.

111. An Analytical Approach to Architecture-Based Software Reliability Prediction, with S. Gokhale, W. E. Wong and J. R. Horgan, *IEEE Int. Comp. Perf. and Dependability Symposium*, Durham, NC, Sept. 1998.
112. SREPT: Software Reliability Estimation and Predicting Tool, with S. Ramani and S. Gokhale, *10th International Conference for Computer Performance Evaluation, TOOLS'98*, Palma, Spain, Sept. 98.
113. An Improved Multiple Variable Inversion Algorithm for Reliability Calculation, with T. Luo, *10th International Conference for Computer Performance Evaluation, TOOLS'98*, Palma, Spain, Sept. 98.
114. Reliability Simulation of Component-Based Software Systems, with S. Gokhale and M. Lyu, *Int. Symp. on Soft. Rel. Engg.*, Paderborn, Germany, November 1998, (Selected as the best paper at the conference).
115. Software Reliability Process Simulation Incorporating Fault Detection and Debugging Activities, with S. Gokhale and M. Lyu, *Int. Symp. on Soft. Rel. Engg.*, Paderborn, Germany, November 1998.
116. A Methodology for Detection and Estimation of Software Aging, with S. Garg, A. van Moorsel and K. Vaidyanathan, *Proc. of the Ninth Int. Symp. on Soft. Rel. Engg.*, Paderborn, Germany, November 1998.
117. Log-Logistic Software Reliability Growth Model, with S. Gokhale, *Proc. 3rd IEEE Int. High Assurance Systems Engineering Symposium, HASE98*, Washington D.C., November 1998.
118. Dependability Modeling and Evaluation of Phased Mission Systems: a DSPN Approach, with Ivan Mura, Andrea Bondavalli and Xinyu Zang, *Proc. of Dependable Computing for Critical Applications (DCCA) 7*, January 1999, San Jose.
119. Transient Analysis of Minimum Duration Outage for RF Channel in Cellular Systems, with Yue Ma and James J. Han, *Proc. IEEE Vehicular Technology Conference (VTC)*, Houston, Texas, pp.1698-1702, May 1999.
120. Performability Analysis of Fault Tolerant RF Link Design in Wireless Communications Networks, invited paper, with Yue Ma and James J. Han, *Proc. of 13th European Simulation Multiconference (ESM)*, Warsaw, Poland, pp. 33-44, June 1-4, 1999.
121. Dependability analysis of distributed computer systems with imperfect coverage, with Hairong Sun and Xinyu Zang, *Proc. Twenty-Ninth International Symposium on Fault-Tolerant Computing (FTCS-29)*, June 1999.
122. Performance and Reliability Evaluation of Passive Replication Schemes in Application Level Fault Tolerance, with Garg, S., Huang, Y., Kintala, C. M. R. and Yajnik, S. *Proc. Twenty-Ninth International Symposium on Fault-Tolerant Computing (FTCS-29)*, June 1999.
123. Modeling Failure Dependencies in Real-Time Computer Architectures with R.M. Fricks and S. Garg, *Proceedings of the 10th INFORMS Applied Probability Conference*, University of Ulm, Germany, July 26-28, 1999.
124. A Channel Recovery Method in TDMA Wireless Systems, with Yue Ma and James J. Han, *Proc. IEEE Vehicular Technology Conference (VTC)*, Amsterdam, The Netherlands, pp. 1750-1754, Sept. 1999.
125. A Channel Recovery Method for RF Channel Failure in Wireless Communications Systems, with Yue Ma and James J. Han, *Proc. of IEEE Wireless Communications and Networking Conference (WCNC)*, New Orleans, LA, 21-25 September, 1999.

126. Locating program features using execution slices, with W. E. Wong, S. S. Gokhale and J. R. Horgan, *Proc. IEEE Symposium on Application-Specific Systems and Software Engineering and Technology*, pp 194-203, 1999
127. Dependability Modeling and Sensitivity Analysis of Scheduled Maintenance Systems, with A. Bondavalli and I. Mura, *Proc. Third European Dependability Computing Conference EDCC 3*, Prague, Czech Republic, Sept. 1999.
128. A Measurement-Based Model for Estimation of Resource Exhaustion in Operational Software Systems, with K. Vaidyanathan, *Proc. of the Tenth Int. Symp. on Soft. Rel. Engg.*, Boca Raton, Florida, November 1999.
129. Failure Correlation in Software Reliability Models, with K. Goševa - Popstojanova, *Proc. of the Tenth Int. Symp. on Soft. Rel. Engg.*, Boca Raton, Florida, November 1999.
130. Confidence Interval Estimation of NHPP-Based Software Reliability Models, with L. Yin, *Proc. of the Tenth Int. Symp. on Soft. Rel. Engg.*, Boca Raton, Florida, pp. 6-11, November 1999.
131. A reliable CORBA-based network management system, with Tong Luo, Tony Confrey, In *Proc. ICC99, 1999 IEEE International Conference on Communication*, Vancouver, Canada, volume: 2, pp:1374-1387, June 1999.
132. Transient analysis of a reliable CORBA event channel without event backup, with Tong Luo, *Proc. of PDCS99, the IASTED Parallel and Distributed Computing and Systems*, November, 1999, MIT, Boston USA.
133. Availability and performance evaluation for automatic protection switching in TDMA wireless system, with Hairong Sun, Yonghuan Cao and James J. Han, *Pacific Rim International Symposium on Dependable Computing, Hong Kong (PRDC)*, p15-22, December, 1999.
134. Implementation of Importance Splitting techniques in Stochastic Petri Net Package, with B. Tuffin in *Computer performance evaluation: Modelling tools and techniques; 11th International Conference; TOOLS 2000, Schaumburg, Il., USA*, B. Haverkort, H. Bohnenkamp, C. Smith(eds.), Lecture Notes in Computer Science 1786, Springer Verlag, 2000.
135. SPNP: Stochastic Petri Nets. Version 6.0, with C. Hirel and B. Tuffin in *Computer performance evaluation: Modelling tools and techniques; 11th International Conference; TOOLS 2000, Schaumburg, Il., USA*, B. Haverkort, H. Bohnenkamp, C. Smith(eds.), Lecture Notes in Computer Science 1786, Springer Verlag, 2000.
136. Call Admission Control for Reducing Dropped Calls in Code Division Multiple Access (CDMA) Cellular Systems, with Yue Ma and James J. Han, *Proc. IEEE INFOCOM 2000*, Tel-Aviv, Israel, March 26-30, 2000.
137. Architecture Based Software Reliability, with K. Goševa - Popstojanova, *Proc. of ASSM2000 Int. Conf on Applied Stochastic System Modeling*, March 2000, Kyoto, Japan.
138. Modeling and Analysis of Software Aging and Rejuvenation, with K. Vaidyanathan and K. Goševa - Popstojanova, *Proc. of the 33rd Annual Simulation Symposium*, pp 270-279, April 2000, Washington D.C.
139. Building a Reliable Message Delivery System Using the CORBA Event Service, with S. Ramani and B. Dasarathy, *Proc. of IEEE Workshop on Fault-Tolerant Parallel and Distributed Systems, Lecture Notes in Computer Science, No. 1800*, Cancun, Mexico, May 1-5 2000.
140. Heuristic self-organization algorithms for software reliability assessment and their applications, with Tadashi Dohi and S. Osaki, *Proc. Int. Symp. on Soft. Rel. Engg., ISSRE2000*, San Jose, CA, October 2000.

141. Performance Analysis of the CORBA Event Service Using Stochastic Reward Nets, with S. Ramani and B. Dasarathy, *Proc. of 19th IEEE Symposium on Reliable Distributed Systems*, pp 238-247, Nürnberg, Germany, October 16–18 2000.
142. Availability Evaluation for Redundant Load-sharing Communication Systems with Planned Outage under Different Upgrade Schemes, with Yonghuan Cao, Hairong Sun and James J. Han, *The 8th International Conference on Software, Telecommunications and Computer Networks, SoftCOM 2000*, Split, Croatia, October, 2000.
143. Performability Analysis of TDMA Cellular Systems, with Yonghuan Cao, and Hairong Sun, *International Conference on the Performance and QoS of Next Generation Networking, P & QNet2000*, Nagoya, Japan, November, 2000.
144. Analysis of Software Cost Models with Rejuvenation, with T.Dohi and K.Goševa - Popstojanova, *Proc. of the 5th IEEE International Symposium on High Assurance Systems Engineering, HASE 2000*, Albuquerque, New Mexico, November 2000.
145. Composite performance and availability analysis of communications networks: a comparison of exact and approximate approaches, with Yue Ma and James J. Han, *Proc. of IEEE Globecom 2000*, San Francisco, CA, November 27 - December 1 2000.
146. Effects of Failure Correlation on Software in Operation, with K.Goševa - Popstojanova, *Proceedings of the 2000 Pacific Rim International Symposium on Dependable Computing, PRDC 2000*, Los Angeles, CA, December 2000.
147. Statistical Non-Parametric Algorithms to Estimate the Optimal Software Rejuvenation Schedule, with T.Dohi and K.Goševa - Popstojanova, *Proceedings of the 2000 Pacific Rim International Symposium on Dependable Computing, PRDC 2000*, Los Angeles, December 2000.
148. Uncertainty Analysis in Reliability Modeling, with L. Yin and M. A. J. Smith *Proceedings of the Annual Reliability and Maintainability Symposium, RAMS 2001*, Philadelphia, PA, USA, January, 2001.
149. Importance Sampling for the Simulation of Stochastic Petri Nets and Fluid Stochastic Petri Nets, with B. Tuffin, *Proceedings of High Performance Computing*, Seattle, WA, USA, April, 2001.
150. Analysis and Implementation of Software Rejuvenation in Cluster Systems, with K. Vaidyanathan, R. E. Harper and S. W. Hunter, *Proceedings of the Joint Intl. Conf. on Measurement and Modeling of Computer Systems, ACM SIGMETRICS 2001/Performance 2001*, pp. 62-71, Cambridge, MA, June 2001.
151. SITAR: A Scalable Intrusion-Tolerant Architecture for Distributed Services, with F.Wang, F.Gong, C.Sargor, K.Goševa - Popstojanova, and F.Jou, *Proceedings of the 2nd Annual IEEE Systems, Man and Cybernetics Informations Assurance Workshop*, West Point, New York, June 2001.
152. Characterizing Intrusion Tolerant Systems Using a State Transition Model, with K.Goševa - Popstojanova, F.Wang, R.Wang, F.Gong, K.Vaidyanathan and B.Muthusamy, *Proceedings of DARPA Information Survivability Conference and Exposition II (DISCEX-II)*, Anaheim, California, June 2001.
153. A new handoff scheme for decreasing both dropping calls and blocking calls in CDMA System, with Xiaomin Ma, Y. Liu, Y. Ma and J.J. Han, *IEEE EURONCON'2001*, July 2001.
154. A soft handoff scheme for improving utilization efficiency of traffic channels, with Xiaomin Ma, Y. Liu, Y. Ma and J.J. Han, *IEEE Int. Conf. on CSCC*, Greece, July 2001.

155. Reliable Messaging Using the CORBA Notification Service, with S. Ramani and B. Dasarathy, *Proc. of Int. Symposium on Distributed Objects and Applications*, Rome, Italy, pp. 229-238, September 2001.
156. Performance Analysis of the CORBA Notification Service, with S. Ramani and B. Dasarathy, *Proc. of 20th IEEE Symposium on Reliable Distributed Systems*, New Orleans, pp. 227-236, October 2001.
157. Optimal Call Admission Control Policy for Wireless Communication Networks, with D.-Y. Chen and B. H. Soong, *Proceedings of the International Conference on Information, Communication and Signal processing, ICICS 2001*, Singapore, October 2001.
158. Analysis of Hypergeometric Distribution Software Reliability Model, with T. Dohi, N. Wakana and S. Osaki, *Proc. Int. Symp. on Soft. Rel. Engg., ISSRE2001*, pp. 166-175, Hong Kong, November 2001.
159. Comparison of Architecture-Based Software Reliability Models, with K. Goševa - Popstojanova and A. Mathur, *Proc. Int. Symp. on Soft. Rel. Engg., ISSRE2001*, pp. 22-31, Hong Kong, November 2001.
160. Analysis of Periodic Preventive Maintenance with General Component Failure Distribution, with D.-Y. Chen, *Proceedings of Pacific Rim International Symposium on Dependable Computing, PRDC 2001*, Seoul, Korea, December 2001.
161. Application of Semi-Markov Process and CTMC to Evaluation of UPS System Availability, with L. Yin and R. M. Fricks, *Proceedings of the Annual Reliability and Maintainability Symposium, RAMS 2002*, Seattle, WA, USA, January, 2002.
162. A Simple Characterization of Provably Efficient Prefetching Algorithms, with Wei Jin and Rakesh Barve, *Proc. International Symposium on Performance and Dependability (IPDS)*, June 2002, Washington, DC.
163. Modeling and Quantification of Security Attributes of Software Systems, with B. Madan, K. Goseva-Popstojanova and K. Vaidyanathan, *Proc. International Symposium on Performance and Dependability (IPDS)*, June 2002, Washington, DC.
164. Reliability and Availability Analysis for the JPL Remote Exploration and Experimentation System, with Dong Chen, Dharmaraja Selvamuthu, Dongyan Chen, Lei Li, Raphael R. Some and Allen P. Nikora, *Proc. International Conference on Dependable Systems and Networks (DSN)*, June 2002, Washington, DC.
165. Analytic Modeling of Handoffs in Wireless Cellular Networks, with Dharmaraja Selvamuthu and Xiaomin Ma, *Proc. First Symposium on Photonics, Networking and Computing (PNC 2002)*, March 2002, Durham, NC.
166. Performability Analysis of Wireless Cellular Networks, with X. Ma, keynote paper, *Proc. Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS2002*, July 2002, San Diego, CA.
167. Performance Analysis of Cellular Networks with Generally Distributed Handoff Interarrival Times, with Dharmaraja Selvamuthu and Dimitris Logothetis, *Proc. Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS2001*, July 2002, San Diego, CA.
168. An Approach to Estimation of Software Aging in a Web Server, with L. Li and K. Vaidyanathan, *Proc. International Symposium on Empirical Software Engineering, ISESE 2002*, Nara, Japan, Oct 2002.

169. Analysis of Inspection-Based Preventive Maintenance in Operational Software Systems, with K. Vaidyanathan and D. Selvamuthu, *Proc. of 21st IEEE Symposium on Reliable Distributed Systems, SRDS 2002*, Suita, Japan, Oct 2002.
170. Availability Models with Age-Dependent Checkpointing, with Tadashi Dohi and Naoto Kaio, *Proc. of 21st IEEE Symposium on Reliable Distributed Systems, SRDS 2002*, pp. 130-139, Suita, Japan, Oct 2002.
171. All-Terminal Reliability Analysis of the SRP-RING: The Effect of Enhanced Intelligent Protection Switching, with Ming Qian and D. Logothetis, *Proc. 11th International Conference on Computer Communications and Networks (IC3N)*, Florida, Oct 2002.
172. Modeling and Analysis of Software Rejuvenation in Cable Modem Termination Systems, with Y. Liu, Yue Ma, J. Han and Haim Levendel, *Proc. ISSRE*, Annapolis, MD, November 2002.
173. A Framework for Performability Modeling of Messaging Services in Distributed Systems, with S. Ramani and K. Goševa - Popstojanova, *Proc. of 8th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS)*, Greenbelt, Maryland, December 2-4 2002.
174. Closed Loop Design for Software Rejuvenation, with Y. Hong, D. Chen and L. Li, *Workshop on Self-Healing, Adaptive and self-MANaged Systems (SHAMAN)*, New York, June 2002.
175. Network Survivability Performance Evaluation: A Quantitative Approach with Applications in Wireless Ad-hoc Networks, with D.-Y. Chen and S. Garg, *Proc. MSWiM'02*, Atlanta, Georgia, Sept. 2002.
176. Optimal Webserver Session Timeout Settings for Web Users, with W. Xie, H. Sun and Y. Cao, *Proceedings of the 28th International Conference for the Resource Management and Performance Evaluation of Enterprise Computing Systems*, Reno, Nevada, pp. 799-807, December 2002.
177. Importance Analysis with Markov Chains, with R. M. Fricks, *Proceedings of the 2003 International Reliability and Maintainability Symposium - RAMS 2003*, Tampa, FL, USA, January 27-30, 2003.
178. Supporting VBR VoIP Traffic in IEEE 802.11 WLAN in PCF Mode, with Dongyan Chen, S. Garg and M. Kappes, *OPNETWORK'02*, Washington DC, August 2002.
179. Optimal Estimation of Training Interval for Channel Equalizations, with Dongyan Chen and Y. Hong, *International Conference on Communications (ICC)*, New York, April 2002.
180. Failure Mitigation for Quality of Service in Wireless Networks, with Dongyan Chen and Y. Hong, *International Conference on Decision and Control*, December 2002.
181. Modeling of Online Service Availability Perceived by Web Users, with W. Xie, Y. Cao and H. Sun, *IEEE International Conference on Communications (ICC)*, Anchorage, Alaska, May 11-15, 2003.
182. Optimal Webserver Timeout Settings for Webusers, with W. Xie, H. Sun and Y. Cao, *Proc. Computer Measurement Group Conference*, December 2002.
183. Dependability Enhancements for Wireless Local Area Networks with Redundancy Techniques, with Dongyan Chen, Sachin Garg and Chandra Kintala, *proceedings of The International Conference on Dependable Systems and Networks, Performance and Dependability Symposium (DSN/IPDS)*, June 2003.
184. Adaptive Software Rejuvenation: Degradation Models and Rejuvenation Schemes, with Y. Bao and X. Sun, *proceedings of The International Conference on Dependable Systems and Networks*, June 2003.

185. Maximizing Interval Reliability in Operational Software System with Rejuvenation, with H. Suzuki, T. Dohi and N. Kaio, *Proc. Int. Symp. on soft. Rel. Eng.*, pp. 479-490, Denver, November 2003.
186. Hierarchical Computation of Interval Availability and Related Metrics, with Dong Tang, *Proc. International Conference on Dependable Systems and Networks (DSN)*, Florence, Italy, June 2004.
187. Software Rejuvenation Policies for Cluster Systems under Varying Workload, with Wei Xie and Y. Hong, *Proceedings of Pacific Rim International Symposium on Dependable Computing, PRDC 2004*, Tahiti, 2004.
188. A General Framework for Network Survivability Quantification, with Y. Liu, *proceedings of the 12th GI/ITG Conference on Measuring, Modelling and Evaluation of Computer and Communication Systems (MMB) together with 3rd Polish-German Teletraffic Symposium (PGTS)*, Dresden, Germany, September 2004.
189. Survivability Analysis of Telephone Access Network, with Y. Liu and V. B. Mendiratta, *proceedings of the 15th IEEE Intl. Symposium on Software Reliability Engineering (ISSRE)*, November 2004.
190. Quantifying the Variance in Application Reliability, with S. Gokhale, *Proceedings of the 10th IEEE Pacific Rim International Symposium on Dependable Computing (PRDC)*, December 2004.
191. Modeling User-Perceived Service Availability, with Dazhi Wang, *proc. International Service Availability Symposium (ISAS)*, Berlin, pp. 107–122, April 2005.
192. Evaluating Performance Attributes of Layered Software Architecture, with V. Sharma and P. Jalote, *proc. International Symposium on Component-based Software Engineering (CBSE)*, pp. 66–81, 2005.
193. Architecture Based Analysis of Performance, Reliability and Security of Software Systems, with V. Sharma, *proc. Workshop on Software Performance*, Palma de Mallorca, Spain, pp. 217–227, 2005.
194. On a Method for Mending Time to Failure Distributions, with M. Grottke, *Proc. International Conference on Dependable Systems and Networks (DSN)*, pp. 560–569, 2005.
195. Performance Assurance via Software Rejuvenation: Monitoring, Statistics and Algorithms, with A. Avritzer, A. Bondi, M. Grottke and E. Weyuker, *Proc. International Conference on Dependable Systems and Networks (DSN)*, Philadelphia, 2006.
196. Defining Steady-State Service Level Agreeability using Semi-Markov Process, with Ranjith Vasireddy, in *Sup. Proceedings of the Proc. International Conference on Dependable Systems and Networks (DSN)*, Philadelphia, PA, USA, Jun 2006.
197. Modeling High Availability Systems, with R. Vasireddy, D. Trindade, S. Nathan and R. Castro, *Proc. Pacific Rim Dependability Conference, PRDC'2006*, Riverside, CA, December 2006.
198. A Best Practice Guide to Resource Forecasting for the Apache Webserver (best paper award), with G. Hoffman and M. Malek, *Proc. Pacific Rim Dependability Conference, PRDC'2006*, Riverside, CA, December 2006.
199. A Performance Engineering Tool for Tiered Software Systems, with V. Sharma and P. Jalote, *IEEE COMPSAC(1)*, 2006 pp. 63-70.
200. Reliability and Performance of Component Based Software Systems with Restarts, Retries, Reboots and Repairs, with V. Sharma, *IEEE Int. Symp. on Software Reliability Engineering*, November 2006.

201. Analytical Survivability Model for Fault Tolerant Cellular Networks Supporting Multiple Services, with V. Jindal and S. Dharmaraja, SPECTS, 2006.
202. Variational Bayesian Approach for Interval Estimation of NHPP-based Software Reliability Models, with H. Okamura, M. Grottke and T. Dohi, *Proc. International Conference on Dependable Systems and Networks (DSN)*, 2007, Edinburgh, UK.
203. Accurate and efficient stochastic reliability analysis of composite services using their compact Markov reward model representations, with Naoto Sato, *Proc. IEEE International Conference on Services Computing (SCC)*, Utah, July 2007.
204. Stochastic modeling of composite Web services for closed-form analysis of their performance and reliability bottlenecks, with Naoto Sato, *Proc. International Conference on Service Oriented Computing (ICSOC)*, pp. 107-118, Vienna, Austria, September 2007.
205. Availability Monitor for a Software Based System, with Marc Haberkorn, *Proc. 10th IEEE Int. High Assurance Systems Engineering Symposium, HASE07*, Dallas, TX, November 2007.
206. Survivability Quantification - Keynote, *Proc. Broadnets*, Durham, 2007.
207. Simulation versus analytic-numeric methods: illustrative examples, with Bruno Tuffin, Pawan Choudhary and C. Hirel, *Proc. VALUETOOLS*, 2007.
208. Achieving and Assuring High Availability, a keynote speech, *proc. 13th IEEE Workshop on Dependable Parallel, Distributed and Network-Centric Systems DPDNS '08; a part of IPDPS*, Miami, April 2008.
209. Ten Fallacies of Availability and Reliability Analysis, with M. Grottke, H. Sun and R. Fricks, *proc. International Service Availability Symposium (ISAS)*, Tokyo, May 2008.
210. Achieving and Assuring High Availability, a Tutorial, *proc. International Service Availability Symposium (ISAS)*, Tokyo, May 2008.
211. Survivability quantification of communication services, with Poul Heegaard, *Proc. IEEE International Symposium on Dependable Systems and Networks (DSN)*, pp. 462-471, Anchorage, Alaska, June 2008.
212. Survivability in Real-sized Networks Quantified by Analytical Delay Distributions, with Poul Heegaard, *Proc. The Third International Conference on Systems and Networks Communications (ICSNC)*, October, 2008, Sliema, Malta.
213. The fundamentals of software aging, with Michael Grottke and Rivalino Matias Jr., *1st International Workshop on Software Aging and Rejuvenation (WoSAR)*. Held in conjunction with the 19th International Symposium on Software Reliability Engineering (ISSRE), Seattle/Redmond, USA, November 2008.
214. Availability Modeling of SIP Protocol on IBM WebSphere, with D. Wang, J. Hunt, A. Rindos, W. E. Smith and Bart Vashaw, *Proc. IEEE Pacific Rim Dependability Conference*, Taipei, Taiwan, December 2008.
215. Analyzing the Hold Time Schemes to Limit the Routing Table Calculations in OSPF Protocol, with Mukul Goyal, et al., *Proc. AINA*, Bradford, Australia, May 2009.
216. A Stochastic Model for Beaconless IEEE 802.15.4 MAC Operation, with Mukul Goyal, Dawn Rohm and H. Hosseini *Proc. 2009 International Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS*, Istanbul, Turkey, July 2009 (best paper award).
217. Availability Modeling and Analysis of a Virtualized System, with Dong Seong Kim and Fumio Machida, *Proc. IEEE 15th Pacific Rim International Symposium on Dependable Computing (PRDC)*, Shanghai, China, November 2009.

218. SHARPE at the age of twenty two, with Robin Sahner, *ACM SIGMETRICS Performance Evaluation Review*, Volume 36 , Issue 4 (March 2009).
219. Dependability and Security Models, Keynote, with Dong Seong Kim and Arpan Roy, *DRCN Workshop*, Alexandria, VA, October 2009.
220. Resilience in Computer Systems and Networks, with Dong Seong Kim and Rahul Ghosh, *ICCAD*, San Jose, CA, November 2009.
221. An Empirical Investigation of Fault Types in Space Mission System Software, with M. Grottke and A. Nikora, *Proc. IEEE International Conference on Dependable Systems and Networks (DSN)*, June 2010.
222. Uncertainty Propagation in Analytic Availability Models, with Amita Devraj and Kesari Mishra, *Proc. IEEE Symposium on Reliable Distributed Systems (SRDS)*, New Delhi, India, October-November 2010.
223. Quantifying Resiliency of IaaS Cloud, with Rahul Ghosh, Francesco Longo and Vijay K. Naik, *Proc. Workshop on Resiliency Assessment of Complex Systems (RACOS) in conjunction with IEEE International Symposium on Reliable Distributed Systems (SRDS)*, New Delhi, October 2010.
224. Online Monitoring of Software System Reliability, with R. Pietrantuono and S. Russo, *EDCC*, pp. 209-218, 2010.
225. Computing the Number of Calls Dropped due to Failures, with Dazhi Wang and Jason Hunt, *IEEE Int. Symp. on Software Reliability Engineering*, November 2010.
226. Using Accelerated Life Tests to Estimate Time to Software Aging Failure, with Rivalino Matias, Jr. and Paulo Maciel, *IEEE Int. Symp. on Software Reliability Engineering*, November 2010.
227. End-to-End Performability Analysis for Infrastructure-as-a-Service Cloud: An Interacting Stochastic Models Approach, with Rahul Ghosh, Vijay Naik and Dong Seong Kim, *Proc. IEEE 16th Pacific Rim International Symposium on Dependable Computing (PRDC)*, Tokyo, Japan, December 2010.
228. A Scalable Availability Model for Infrastructure-as-a-Service Cloud, with Francesco Longo, Rahul Ghosh and Vijay Naik, *Proc. IEEE International Conference on Dependable Systems and Networks (DSN)*, June 2011.
229. Candy: Component-based Availability Modeling Framework for Cloud Service Management Using SysML, with F. Machida, E. ANDRADE and D. Kim, *Proc. 30th IEEE International Symposium on Reliable Distributed Systems (SRDS)*, pp. 209–218, 2011.
230. Modeling and Analyzing Server System with Rejuvenation through SysML and Stochastic Reward Nets, with E. Andrade, F. Machida and D. Kim, *Proc. 6th International Conference on Availability, Reliability and Security (ARES)*, pp. 161–168, Vienna, 2011.
231. Injecting memory leak to accelerate software failures, with Jing Zhao, Y. Jin and Rivalino Matias Jr., *IEEE Int. Symp. on Software Reliability Engineering*, Hiroshima, Japan, November-December 2011.
232. A hierarchical model to evaluate quality of experience of online services hosted by cloud computing, with Haiyang Qian and Deep Medhi, *Integrated Network Management*, 2011, pp. 105-112.
233. Uncertainty Propagation through Software Dependability Models, with Kesari Mishra, *IEEE International Symposium on Software Reliability Engineering (ISSRE)*, Hiroshima, Japan, November-December 2011.

234. A Comparative Evaluation of Software Rejuvenation Strategies, with J. Alonso, Rivalino Matias Jr., E. Vicente, A. M. Carvalho, *The 3rd International Workshop on Software Aging and Rejuvenation (WoSAR)* . Held in conjunction with The 22nd annual International Symposium on Software Reliability Engineering (ISSRE), Hiroshima, Japan, 2011.
235. Recovery from Failures due to Mandelbugs in IT Systems, with Rajesh Mansharamani, Dong Seong Kim , Michael Grottke and Manoj Nambiar, *Proc. IEEE 16th Pacific Rim International Symposium on Dependable Computing (PRDC)*, Pasadena, CA, December 2011.
236. Sensitivity Analysis of Availability of Redundancy in Computer Networks, with Rubens Matos, Almir Guimaraes, Kadna Camboim and Paulo Maciel, in: *The Fourth International Conference on Communication Theory, Reliability, and Quality of Service CTRQ*, 2011 - Budapest, Hungary.
237. Performance Evaluation for DSRC Vehicular Safety Communication: A Semi-Markov Process Approach, with X. Yin and X. Ma, in: *The Fourth International Conference on Communication Theory, Reliability, and Quality of Service (CTRQ)*, 2011 - Budapest, Hungary.
238. A review of the research on quantitative reliability Prediction and Assessment for electronic components, with Yang Zhao, Xiaoyan Yin, Rui Kang, *IEEE Prognostics and System Health Management Conference*, pp.1-7, May 2011.
239. A Robust Broadcast Scheme for VANET One-Hop Emergency Services, with Xiaoyan Yin, X. Ma, *IEEE Vehicular Technology Conference*, pp.1-5, Sept. 2011.
240. An Analytic Approach for Resiliency Quantification of Systems, with Rahul Ghosh and Dong Seong Kim, *Proc. International Conference on Mathematical Methods in Reliability (MMR)*, Beijing, June 2011.
241. Power-Performance Trade-offs in IaaS Cloud: A Scalable Analytic Approach, with Rahul Ghosh and Vijay K. Naik, *Proc. Workshop on Dependability of Clouds, Data Centers and Virtual Computing Environments (DCDV) in conjunction with IEEE International Conference on Dependable Systems and Networks (DSN)*, Hong Kong, June 2011.
242. Availability Modeling and Analysis for Data Backup and Restore Operations, with X. Yin, J. Alonso, F. Machida and E. Andrade, *Proc. of the 31st International Symposium on Reliable Distributed Systems (SRDS)*, pp. 141-150, Irvine, California, 2012.
243. Fast Optimization Algorithms for Designing Cellular Networks with Guard Channel, with K. Hari and T. Dohi, *Proc. of the 31st International Symposium on Reliable Distributed Systems (SRDS)*, pp. 249-254, Irvine, California, 2012.
244. The nature of the times to flight software failure during space missions, with Javier Alonso, Michael Grottke and Allen P. Nikora, *IEEE Int. Symp. on Software Reliability Engineering*, pp. 331-340, Dallas, Texas, November 2012.
245. Software rejuvenation - Do IT & Telco industries use it?, with J. Alonso, A. Bovenzi, J. Li, Y. Wang and S. Russo, ".*The 4rd International Workshop on Software Aging and Rejuvenation (WoSAR)* . Held in conjunction with The 23rd annual International Symposium on Software Reliability Engineering (ISSRE), pp. 299-304, Dallas, USA, 2012.
246. Semi-Markov Models for Performance Evaluation of Telecommunication Networks in the Presence of Failures, with Maurizio Guida, Maurizio Longo, Fabio Postiglione and Xiaoyan Yin, *PSAM11 and ESREL*, Helsinki, Finland, June 2012.
247. An Empirical Investigation of Fault Repairs and Mitigations in Space Mission System Software, with J. Alonso, M. Grottke, A. P. Nikora, *Proc. the 43rd annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)*, pp. 1-8, Budapest, Hungary, 2013.

248. Analysis of Bugs in Apache Virtual Computing Lab, with Flavio Frattini, Rahul Ghosh, Marcello Cinque and Andy Rindos, *Proc. Workshop on Dependability of Clouds, Data Centers and Virtual Computing Environments (DCDV) in conjunction with IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)*, pp. 1-6, Budapest, June 2013.
249. Performance of BSM Dissemination in Multi-channel DSRC, with X. Yin and X. Ma, *IEEE Vehicular Technology Conference*, pp. 1-7, Dresden, Germany, June 2013.
250. Performance of VANET Safety Message Broadcast at Rural Intersections, with X. Ma, X. Yin and M. H. Wilson, *The 9th IEEE International Wireless Communications and Mobile Computing Conference (IWCMC) Vehicular Communications Symposium*, pp. 1617-1622, Italy, July 2013.
251. Fault triggers in open-source software: An experience report, with D. Cotroneo, M. Grottke, R. Natella and R. Pietrantuono, *24th IEEE International Symposium on Software Reliability Engineering (ISSRE)*, pp. 178-187, Pasadena, California, November 2013.
252. Channel Fading Impact on Multihop DSRC Safety Communication, with X. Yin and X. Ma, *The 16th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM)*, pp. 443-446, Spain, November 2013.
253. A markov decision process approach for optimal data backup scheduling, with Xia R, Machida F, *Proceedings of the International Conference on Dependable Systems and Networks (DSN)*, pp. 660-665, 2014.
254. A systematic differential analysis for fast and robust detection of software aging, with Rivalino Matias Jr., Artur Andrzejak, Fumio Machida, Diego Elias, *Proceedings of the IEEE Symposium on Reliable Distributed Systems*, pp. 311-320, January 2014.
255. Message from the chairs, with Koziolok A, Pindoriya N, *3rd International Workshop on Software Engineering Challenges for the Smart Grid, SE4SG 2014*, 2014.
256. Software maintenance optimization based on stackelberg game methods, with Jing Zhao, Yan bin Wang, Gao Rong Ning, Cheng Hong Wang, K. Y. Cai, Zhen Yu Zhang, *Proceedings - IEEE 25th International Symposium on Software Reliability Engineering Workshops (ISSREW)*, pp. 426-430, 2014.
257. Computing defects per million in cloud caused by virtual machine failures with replication, with Subrota K. Mondal, Jogesh K. Muppala and Fumio Machida, *Pacific Rim International Symposium on Dependable Computing (PRDC)*, pp. 161-168, 2014.
258. Reproducibility of environment-dependent software failures: An experience report, with Davide G. Cavezza, Roberto Pietrantuono, Stefano Russo and Javier Alonso, *International Symposium on Software Reliability Engineering (ISSRE)*, pp. 267-276, 2014.
259. Defects per Million (DPM): A user-oriented perspective of telecommunication systems, with Subrota K. Mondal and Jogesh K. Muppala, *2014 IEEE Globecom Workshops, GC Wkshps 2014*, pp. 711-716, 2014.
260. Analytical Modeling of Reactive Autonomic Management Techniques in IaaS Clouds, with Dario Bruneo, Francesco Longo, Rahul Ghosh, Marco Scarpa, Antonio Puliafito, *2015 IEEE 8th International Conference on Cloud*, pp. 797-804, 2015.
261. Survivability as a generalization of recovery, with Poul E. Heegaard, Bjarne E. Helvik and Fumio Machida, *11th International Conference on the Design of Reliable Communication Networks (DRCN)*, pp.133-140, 2015.

262. SeReNe: On Establishing Secure and Resilient Networking Services for an SDN-based Multi-tenant Datacenter Environment, with ChunJen Chung, Tianyi Xing, Dijiang Huang, Deep Medhi, *Proceedings of the Workshop on Dependability Issues on SDN and NFV (DISN)*, pp. 4-11, 2015.
263. A Scalable Optimization Framework for Storage Backup Operations Using Markov Decision Processes, with Ruofan Xia and Fumio Machida, *Proc. IEEE 16th Pacific Rim International Symposium on Dependable Computing (PRDC)* pp. 169-178, 2015.
264. Emulating Environment-Dependent Software Faults, with Roberto Pietrantuono and Stefano Russo, *COUFLESS@ICSE*, pp. 34-40, 2015.
265. Workshop on Model Based Design for Cyber-Physical Systems (MB4CP), with Alberto Avritzer, Daniel Sadoc Menasch, Lucia Happe and Sahra Sedigh Sarvestani, *Proc. IEEE International Conference on Dependable Systems and Networks (DSN)*, pp. 565-566, 2015.
266. An SRN-Based Resiliency Quantification Approach, with Dario Bruneo, Francesco Longo, Marco Scarpa, Antonio Puliafito and Rahul Ghosh, *Petri Nets*, pp. 98-116, 2015.
267. Modeling of VANET for BSM Safety Messaging at Intersections with Non-homogeneous Node Distribution, with Xiaomin Ma and Gregory Burton, *Nets4Cars/Nets4Trains/Nets4Aircraft*, pp.149-162, 2016.
268. Model-based Survivability Analysis of a Virtualized System, with Xiaolin Chang, Z. Zhang and Xiaodan Li, *IEEE Conference on Local Computer Networks*, 2016.
269. Survivability Analysis of a Computer System under an Advanced Persistent Threat Attack, with Ricardo Rodriguez Xiaolin Chang and Xiaodan Li, *3rd International Workshop on Graphical Models for Security*, Lisbon, Portugal, June 2016.
270. Software Reliability Analysis of fNASA Space Flight Software, with Harish Sukhwani, Javier Alonso Lopez and Isaac McGinnis, *IEEE International Conference on Software Quality, Reliability, and Security (QRS)*, Vienna, Austria, Aug. 2016.

E. Patents

1. Methods and systems for determining an optimal training interval in a communications system, US 7,092,437 B2, filed on April 25, 2003; granted on August 15, 2006; with Dongyan Chen.
2. Methods and systems for improving utilization of traffic channels in a mobile communications network, US 7,099,672, filed on February 6, 2002; granted on August 29, 2006, with Xiaomin Ma and Yun Liu.
3. Method and apparatus for using pattern-recognition to trigger software rejuvenation, 7,100,079, filed on October 22, 2002; granted on August 29, 2006; with Kenny Gross.
4. Intrusion tolerant communication networks and associated methods, United States Patent 7350234, filed on June 11, 2002; granted on March 25, 2008; with Katerina Goseva-popstojanova, Feiyi Wang, Rong Wang, Fengmin Gong, Kalyan Vaidyanathan and Balamurugan Muthusamy.
5. RELIABILITY ESTIMATION METHODS FOR LARGE NETWORKED SYSTEMS, United States Patent 20090323539, filed on December 31, 2009; granted on November 2011; with Dazhi Wang, Tilak Sharma, A. V. Ramesh, D. Twigg, L. Nguyen and Y. Liu.