KATINKA WOLTER

Schweitzerstr. 24 ⋄ 14169 Berlin

+49 · 30 · 7821833 ⋄ katinka.wolter@fu-berlin.de

PERSONAL INFORMATION

Date and place of birth: 27. April 1968, Nürtingen, Germany.
Marital status: married to Tobias Zepter, 5 children (three daughters, two sons).

Current employment:
Freie Universität Berlin
Adress: Institut für Informatik
Takustr. 9, 14195 Berlin.
Phone/Fax: +49.30.838.75146/475146
Professor for Dependable Systems (W2 temporary) at Freie Universität Berlin.
Objective: Challenging leadership position in model-based data analysis and system evaluation. This can include performance and dependability engineering of distributed systems using stochastic models and machine learning techniques; Analysis of networks and biological systems using Markov models, development of methods for redundancy in time.

EDUCATION

Habilitation: Venia legendi awarded   26th May 2008,
Facultas docendi awarded   11th February 2008.
The habilitation lecture took place on 18th January 2008, entitled *Quality of Service in Wireless Computer Networks*.
Titel of the written habilitation thesis is *Stochastic Models for Restart, Rejuvenation and Checkpointing*.
Supervisor: Prof. Dr. M. Malek. Reviewer: Prof. Dr.-Ing. B. Haverkort, Prof. Dr. M. Telek.

Ph.D. degree: Dr.rer.nat. in Computer Science at TU Berlin, Germany. August 27, 1999.
Thesis: *Performance and Dependability Modelling with Second order Fluid Stochastic Petri nets.* Supervisor: Prof. Dr.-Ing. G. Hommel. Reviewers: Prof. Dr.-Ing. A. Wolisz, Prof. Dr. K. S. Trivedi.

Diploma degree: Diploma degree in Computer Science/Statistics, September 1995. Thesis: *Nichtlineare Regressionsmodelle bei kategorial-ordinaler Zielvariable*. Supervisor: Prof. Dr. G. Tutz.

Studies in Computer Science at TU Berlin	October 1989 until September 1995.
Studies in Mathematics at FU Berlin	October 1987 until September 1989.

School: Abitur at Waldorfschule Bremen   June 1987

Languages: Fluent in German and English, moderate command of French.

ACADEMIC EMPLOYMENT

Professor (W2)   since October 2012
Freie Universität Berlin

Lecturer in Dependable Architectures   February - September 2012
University of Newcastle upon Tyne, Großbritannien

Guest professor   February 2011 - January 2012
Freie Universität Berlin

Senior Researcher (BAT Ib)   September 2009 - January 2011
DFG Grant for own position at Freie Universität Berlin

Assistant professor (C1)   April 2002 - June 2009
Humboldt-University Berlin

Researcher   Mai - August 2000
Hewlett-Packard Laboratories, Palo Alto, CA, USA

Research Assistant   July 1997 - March 2002
Technical University Berlin

GRANTS AND AWARDS

Best paper award   ICPE 2015
ACM International Conference on Performance Engineering (ICPE'15) for 'Reducing Task Completion Time in Mobile Offloading Systems through Online Adaptive Local Restart' (together with Qiushi Wang).

Best paper award   QEST 2004

1st International Conference on the Quantitative Evaluation of Systems (QEST) 2004 for 'Analysis and Algorithms for Restart' (together with A. van Moorsel).

Several travel grants   September 2002 until September 2006

External PostDoctoral member of the coordinated DFG funded program *Stochastic Modelling and quantitative Analysis of large systems in engineering.*

Several travel grants   September 1999 until April 2002

External PostDoctoral member of the coordinated DFG funded program *Communication based systems.*

PhD scholarship,   October 1995 - June 1997

Member of the coordinated PhD program "Communication based systems"

INTERNATIONAL RESEARCH VISITS AND VISITING LECTURESHIPS

Cochin University of Science and Technology (CUSAT)   November 2010- March 2011

Research stay as visiting professor at Cochin University of Science and Technology (CUSAT) in Kerala, India.

Laboratoire PRISM   2009 and 2011

Stay of two weeks in both years for collaboration with Leila Kloul and Jean-Michel Fourneau. Prof. Kloul spent October 2010 at Freie Universität Berlin.

Newcastle University   2007 and 2008

Several stays of one week each at North-East Regional e-Science Centre, University of Newcastle, UK. Collaboration with Aad van Moorsel and Nigel Thomas.

Hewlett-Packard Laboratories   2001 and 2003

Two weeks each at Hewlett-Packard Laboratories, Palo Alto, USA. Collaboration with Aad van Moorsel.

Tecnical University Budapest   June 1999

One week stay at Technical University Budapest, Hungary. Collaboration with Miklos Telek.

Duke University   December 1997

One week visit at Duke University, Durham, NC, USA. Collaboration with Prof. Dr. Kishor Trivedi.

Denver University   April 1996

Stay of one month at Denver University, CO, USA. Collaboration with Graham Horton.

FUNDING AS PRINCIPAL INVESTIGATOR AND PROJECTS

Funding

· **University funding**   July 2014: ca. Euro 30 000,-
Employment of one Research Associate to support initiating research projects.

· **DAAD**   February 2014: ca. Euro 8000,-
DAAD funding for a collaboration project with Jean-Michel Fourneau University of Versailles, France.

· **DFG**   July 2012: ca. Euro 6000,-
Support of a collaboration with Rena Bakhshi from Free University Amsterdam, Netherlands.

· **Alcatel-Lucent**   July 2012: 75 000,-
Funding from Alcatel-Lucent for resiliency evaluation of smart grid control traffic using simulation.

· **DAAD**   February 2011: ca. Euro 6000,-
Funding by DAAD of a collaboration with Leila Kloul and Jean-Michel Fourneau at University Versailles, France.

· **DFG**   October 2010: ca. Euro 8000,-
Funding from the German Research Council for the initiation and intensifying bilaterale work with Miklos Telek and Gabor Horvath at Technical University Budapest, Hungary.

· **Highstreet Technologies**   October 2010: Euro 15 000,-
Support from Highstreet Technologies GmbH for a simulation study of the precision time protocol.

· **DFG**   May 2009: ca. Euro 290 000,-
Funding from the German Research Council for the project "'Theory and Application of the Restart Method in distributed and competitive Environments"'.

· **DFG**   Juli 2007: ca. Euro 150 000,-
Funding from the German Research Council for the project "'Dependability in Service-Oriented Architectures"'.

· **DFG**   Juli 2003: ca. Euro 150.000,-
Funding from the German Research Council for the project "'Quality-of-Service Management in heterogeous Networks with variable Topology"'.

· **DFG**   Juni 2006: ca. Euro 170.000,-
Funding from the German Research Council for the project for the second phase of this project.

Research Projects

· **Gnets for Modelling Restart** Cooperation with Jean-Michel Fourneau and Leila Kloul, Versailles University, France, several reciprocal visits in the periods October 2010 - December 2012 and January 2014 - December 2015. Also funded by Center for

International Cooperation at FU Berlin as part of the Excellence Initiation and DAAD. From this cooperation followed several publications and the GRnet software tool.

· **Restart in Gossiping** cooperation Rena Bakhshi, Vrije Universiteit Amsterdam. Reciprocal visits 2012 - 2014. Funded by DFG. In this project the vast area of restarts in distributed systems using gossiping has been structured. A clear problem formulation and analysis methods have been identified such that several PhD projects could follow. One Master's student took part in the project who implemented a gossiping algorithm.

· **Evaluation of resiliency of Smart Grid control traffic using simulation** Cooperation with Bell Labs Berlin, Alcatel-Lucent, July 2012 - October 2013. We developed a simulation model using ns-2 which could be used to create variable topologies and variable size networks to study the resiliency of Smart Grid control traffic.

· **Efficient Simulation of Phase-Type Distributions** Cooperation with Technical University Budapest. Several reciprocal visits between October 2010 and October 2011, funded by the German Research Council (DFG). Several joint publications with Miklos Telek and Andras Horvath followed from the collaboration.

· **Theory and Application of Restart in distributed Environments under Competition** This project was funded over eight years from several sources. Several PhD and Master's students were working on aspects of this problem between September 2003 and August 2011. The considered systems were mostly service based systems, but also wired and wireless communication systems were considered. The work included development of fault-injection methods, fault-tolerance algorithms using restart and modelling as well as simulation techniques to evaluate the proposed solutions.

This work is still ongoing in the context of gossiping or epidemic algorithms for information dissemination and distribution fitting algorithms using phase-type distributions.

· **Evaluation of time synchronisation in cellular networks** For this project simulation models were created using ns-2. Studying those models allowed us to understand the precision time protocol (PTP) and to optimise its operation. The project was funded by Highstreet Technologies GmbH between March 2009 and July 2011.

· **AMBER:** EU-"'Coordination Action"' Assessment, Measurement and Benchmarking of Resilience (AMBER). I participated as Senior Research Associate at Newcastle University, UK between June and August 2009, and as project partner for Newcastle University between 2008 and 2009. The project created a research agenda for resilient systems.

The project was followed by a Dagstuhl Seminar in July 2010 and a book which appeared in 2012 with Springer-Verlag publishers.

· **Analysis of second order fluid stochastic Petri nets** Between July 1997 and March 2002 this project was funded by the German Research Council. It took place in the group of Prof. Dr. G. Hommel, who was the prinicipal investigator. In this project

the formalism of fluid Petri nets with variable flows has been investigated and solution methods were developed.

TEACHING

The following provides a compact list of courses I taught at Humboldt-University and Freie Universität Berlin:

- Lecture „Zuverlässige Systeme"with tutorial (4 SWS), WS 2012/13, WS 2013/14, WS 2014/15, WS 2015/16.

- Lecture „Zuverlässige Systeme", WS 2010/11 and SS 2011 with tutorial and project (6 SWS), as block in September and October 2010, and August 2011.

- Lecture „Logik und Diskrete Mathematik für Informatiker im 1. Semester", WS 2014/15.

- Software-Project Telematics (4SWS), SS 2011, until SS 2015 annually.

- Software-Project Mobile Communication (4SWS), WS 2011/12, WS 2012/13, WS 2014/15, SW 2015/16.

- Lecture „Technische Informatik II, Rechnerarchitektur", SS 2010 (2SWS VL), mandatory courses for Bachelor students (ca. 160 participants).

- Supervision of students at Seminar „Telematik"and Proseminar „Technische Informatik"WS 2009/10, SS 2010

- Seminar „Zuverlässigkeit und Leistungsfähigkeit in Service-Orientierten Architekturen (SOAs)", SS 2009 (2SWS SE)

- Halbkurs „Stochastische Modellierung und Simulation von Kommunikationssystemen", SS 2007, SS 2008 (4SWS VL + 2 SWS UE)

- Proseminar „Einführung in die stochastische Modellierung und Simulation", WS 2007/08 (2SWS)

- Seminar „Self-Star Properties in Complex Information Systems", SS 2006 (2 SWS)

- Lecture „Rechnerorganisation und Betriebssysteme im Nebenfach (ROBiN)"(2 SWS VL + 1 SWS PJ)
  Halbkurs „Zuverlässige Systeme"(2SWS), WS 2005/06

- Lecture „Rechnerorganisation und Betriebssysteme im Nebenfach (ROBiN)"(2 SWS VL + 1 SWS PJ), WS 2004/05

- Halbkurs „Modellierung und Simulation von Kommunikationssystemen"(4 SWS VL), SS 2004

- Advanced lecture „Modellierung von Kommunikationssystemen"(2 SWS VL + 2 SWS PJ)
  lecture „Rechnerorganisation und Betriebssysteme im Nebenfach (ROBiN)"(2 SWS + 1SWS PJ), WS 2003/04

- Seminar „Modellierung zuverlässiger Systeme"(2 SWS) lecture „Rechnerorganisation und Betriebssysteme im Nebenfach (ROBiN)"(2SWS + 1SWS PJ), WS 2002/03

PHD STUDENT SUPERVISION

Zhihao Shang, funded by China Scolarship Council (CSC) since September 2015. Topic: *Fault-Tolerance for Cloud Streaming Applications*.

Jens Einsiedler. Since August 2015. Topic: *Indoor Localisation using Optical Sensors*.

Tianhui Meng, funded by China Scolarship Council (CSC) since March 2013. Topic: *Modelling and Optimisation of Security Aspects for Distributed Computing*.

Qiushi Wang, funded by China Scolarship Council (CSC) September 2011 until August 2015. Topic: *Restart in Mobile Offloading*. Viva on November 20, 2015, mark *magna cum laude*.

Huaming Wu, funded by China Scolarship Council (CSC) September 2011 until August 2015. Topic: *Analysis of Offloading Decision Making in Mobile Cloud Computing*. Viva on November 23, 2015, mark *summa cum laude*.

Philipp Reinecke, research associate employed by DFG project *Steigerung der Leistung und Zuverlässigkeit in service-orientierten Architekturen für Internet-Dienste durch Restart* from December 2007 until November 2009, December 2009-2012 research associate emplyed by DFG project *Theorie und Anwendung des Restart-Verfahrens in verteilten, konkurrierenden Umgebungen*. Topic: Definition of fault models for service-oriented software systems. Development and evaluation of different redundancy methods in software systems to enhance performance and dependability of those systems. PhD dissertation *Efficient System Evaluation Using Stochastic Models*. The viva was on 19.10.2012, mark *summa cum laude*.

Johannes Zapotoczky, research associate funded by DFG project *Quality-of-Service Management in heterogenen Rechnernetzen mit teils variabler Topologie*, between November 2006 and November 2008. Topic: Development of management methods for wireless networks using the priorities in the IEEE 802.11e standard for optimal service quality.

Burak Simsek (2004 - 2006), research associate funded by DFG project *Quality-of-Service Management in heterogenen Rechnernetzen mit teils variabler Topologie*. Topic: simulation of the IEEE 802.11e standard to identify possible quality of service problems.

Guidance for Felix Salfner und Bratislav Milic, both PhD students of Prof. Mirek Malek. Felix Salfner has been working on early fault detection to improve software reliability using hidden semi-Markov models. Bratislav Milic has been working on model-based dependability improvement in sensor networks.

STUDENT SUPERVISION

Ongoing

- **Ahmet Issa**, Bachelor's thesis *Berechnung von syntaktischen Qualittskriterien fr groe Datenmengen in MongoDB, am Beispiel von Kundendaten*, deadline March 2016.
- **Alexander Kammeyer**, Bachelor's thesis, *Evaluierung aktueller, vektorisierender Compiler*, deadline March 2016.
- **Matteusz Sabbadach**, Master's thesis *Advanced signal processing for Indoor localisation*, deadline June 2016.
- Hanin Halawani, Master's thesis, *Improving Indoor Localisation by non-line-of-sight detection*, deadline May 2016.
- **Christian Bruns**, Master's thesis, *Heuristiken für optimales, adaptives mobile offloading*, deadline January 2016.
- **Jakob Pfender**, Master's thesis, *Design, Implementation, and Application of a Mobility-Oriented Testbed for Wireless Sensor Networks*, deadline December 2015.
- **David Bohn**, Bachelor's thesis, *Gossiping im IoTLab*, deadline December 2015.
- **Jens Fischer**, Master's thesis *Measuring and improving the scalability of Scalaris*, deadline February 2016.
- **Maximilian Richter**, Bachelor's thesis, *Entwicklung einer Sicherheitsarchitektur für eine latenzoptimierte Fabrikautomatisierung*, deadline May 2016.

Completed

- **Ingo Setzefand**, Bachelor's thesis *Vergleich von Werkzeugen zur Visualisierung von großen verteilten Systemen*, January 2016.
- **Fabian Reimeier**, Bachelor's thesis, *Image Stitching als Anwendung für Mobile Offloading*, September 2015.
- **Kai Kriedemann**, Bachelor's thesis , *Bestimmung von Kommunikationszeiten mit dem Simulator ONE*, March 2015.
- **Chris Pfahl**, Master's thesis: *Erweiterung der GNetworks für mehrere Warteschlangen*, March 2015.
- **Florian Mercks**, Bachelor's thesis, *Adaptive Strategien für mobiles offloading*, April 2015.
- **René Kloth**, Bachelor's thesis, *Entwurf und Implementierung eines Verwaltungssystem für Smartphones und Tablets*, March 2015.

- **Johannes Dahlke**, Master's thesis: *Analyse von Delay-Tolerant Networks mit dem MATSim Simulator*, February 2015.
- **Paul Kunze**, Bachelor's thesis, *Implementierung einer auf Java basierenden Administrierungs-Lösung zur Überwachung und Steuerung von Komponenten einer mittels IBM WebSphere MQ realisierten serviceorientierten Architektur*, November 2014.
- **Tomasz Jacewski**, Diploma thesis: *Implementierung und Bewertung eines zuverlässigen Gossiping-Protokolls*, October 2014.
- **Tilman Krauß**, Master's thesis, *Entwicklung eines grafischen Werkzeugs zur Anpassung von Markovschen Ankunftsprozessen an empirische Daten*, April 2014.
- **Marco Kunis**, Master's thesis: *Testen von zuverlässigen Streaming-Protokollen*, March 2014.
- **Matthias Dräger**, Master's thesis: *Entwurf und Implementierung einer graphischen Oberfläche für Warteschlangennetze mit Restart*, April 2014.
- **Jens Fischer**, Bachelor's thesis: *A Gossiping Framework for Scalaris*, February 2014.
- **Johannes Dillmann**, Bachelor's thesis: *Konsistentes Hinzufügen und Entfernen von Replikaten in XtreemFS*, October 2013.
- **Lukas Kairies**, Bachelor's thesis: *XtreemFS als Ersatz für HDFS im Apache Hadoop Framework*, October 2013.
- **Martin Dames**, Master's thesis: *Entwicklung eines Simulationsmoduls für katalytische Sensoren*, April 2013.
- **Lukas Ribisch**, Bachelor's thesis: *Verfahren zur Bandbreitenschätzung zur Vermeidung von bufferbloat*, April 2013.
- **Marti Griera**, Master's thesis: *Improving the reliability of an offloading engine for Android mobile devices and testing its performance with interactive applications*, October 2013.
- **Joan Ripoll**, Master's thesis: *Improving the performance and usability of an offloading engine for Android mobile devices with application to a chess game*, secondary supervisor -with Prof. Adam Wolisz, TU Berlin, October 2013.
- **Ricky Pogalz**, Bachelor's thesis: *Neuronale Netze im Bereich der Betrugserkennung*, April 2013.
- **Marie Hoffmann**, Master's thesis: *Approximate Algorithms for Distributed Systems*, April 2013.
- **Daniel Happ**, Master's thesis: *Fault Impact Models for Wireless Communication*, January 2013.
- **Yosif Harizanov**, Master's thesis: *Leistungsbewertung von WLAN Kommunikation bei verschiedenen Netzwerktopologien*, November 2012.
- **Victor Dorneanu**, Bachelor's thesis: *Technische Aspekte bei der Virtualisierung/Portierung einer Gebäudemanagment-Software*, September 2012.

- **Olaf Loga**, Master's thesis: *Analysis and evaluation of frameworks for developing platform independent mobile applications and implementation of a secure payment service for mobile devices*, April 2012.
- **Tilman Krauß**, Bachelor's thesis: *Entwurf und Implementierung eines Anpassungswerkzeugs für Phasentypverteilungen*, Dezember 2011.
- **Philipp Lämmel**, Bachelor's thesis: *Measurement of Computation Costs of Encryption Methods*, July 2011.
- **Alexandra Danilkina**, Diploma thesis: *Experimentelle und modellbasierte Evaluierung von Restart-Algorithmen in SOA-Szenarien mit unabhängigen Clients*, November 2011, Humboldt-Universität zu Berlin. Alexandra Danilkina was employed student with DFG-Project "'Theorie und Anwendung des Restart-Verfahrens in verteilten, konkurrierenden Umgebungen"'.
- **Matthias Dräger**, Bachelor's thesis: *Modellbasierte Fehlerinjektion mit NetEm*, April 2011, Freie Universität Berlin. Matthias Dräger was employed student with DFG Projekt "'Theorie und Anwendung des Restart-Verfahrens in verteilten, konkurrierenden Umgebungen"'.
- **Claudia Ernst**, Diploma thesis: *Bedingungen für Restart zur Minimierung zufälliger Antwortzeiten*, Humboldt-Universität Berlin, February 2011.
- **Ralf Müller-Zimmermann**, Bachelor's thesis: *Beschleunigung von tiefenbasiertem Rendern mittels GPU-Programmierung*, secondary reviewer, December 2010, Freie Universität Berlin.
- **Carolin Wohlgemuth**, Bachelor's thesis: *Entwurf und Implementierung eines bildbasierten Vokabeltrainers für die deutsche Sprache im Rahmen des* One Laptop Per Child-*Projekts*, Freie Universität Berlin, October 2010.
- **Fernanda Delbello**, Diploma thesis: *Erstellung und Bewertung einer prototypischen service-orientierten Architektur mit GENESIS*, Humboldt-Universität Berlin, July 2010.
- **Alexandra Danilkina**, Studienarbeit: *Empirischer Vergleich von Tools zur Approximation mit Phasentypverteilungen*, Humboldt-Universität zu Berlin, May 2010.
- **Sebastian Wittkowski**, Diploma thesis: *Messung der Antwortzeit des exemplarischen SOA-Systems Java Adventure Builder unter realitätsnahen Bedingungen.* Humboldt-University Berlin, April 2009.
- **Robert Hilbrich**, Diploma thesis: *Das Leistungspotential von DPWS für Service-orientiertes Ubiquitäres Computing*, June 2009. Studienarbeit: "'Nutzerbasierte Zugangskontrolle für IEEE 802.11 basierte Netzwerke mittels Open Source Software"', January 2008. Student employee with a project between April 2007 and February 2008.
- **Johannes Semmler**, Diploma thesis: *Dienstgüte-Management durch Monitoring in drahtlosen Netzen nach IEEE 802.11*, February 2009.

- **Willi Engel**, Master's thesis: *Development of a Compliance Test Suite for the SIG-TRAN SCTP and M3UA Protocols.* (In collaboration with Nokia Siemens Networks B.V.), November 2007.
- **Philipp Reinecke**, Diploma thesis: *Adaptivity Metric and Performance of Restart Strategies for Web Services Reliable Messaging*, November 2007. Award the Diploma award 2008 of GI Fachgruppe *Messung, Modellierung und Bewertung.*
- **Martin Neumann** (geb. Wiegand), Diploma thesis: *Entwurf und Implementierung eines Verfahrens zur Modellanimation für fluide, stochastische Petri-Netze*, November 2003.
- **Kristian Kasprowicz**, Diploma thesis: *Entwicklung von Werkzeugen für die Spezifikation und Simulation von Benutzerverhalten zur Messung des Systemverhaltens von E-Commerce Anwendungen unter Last.* (With Olaf Karatschai, Novedia AG), March 2002.
- **Adnan Öztürk**, Diploma thesis: *Entwicklung eines generischen Frameworks zur Spezifikation von Geschäftsabläufen im E-Commerce zum Zwecke der Kapazitätsplanung.* (With Olaf Karatschai, Novedia AG), September 2001.
- **Andrea Zisowsky**, Diploma thesis: *Entwurf und Implementierung eines Verfahrens für die transiente Analyse fluider stochastischer Petri-Netze.* (With Anton Arnold, Department of Mathematics), August 1998.

ACADEMIC ADMINISTRATION

Coordinator for international programs   since June 2013

Coordination of all international student mobility programs. (Erasmus, direct exchange and other programs) of the department Mathematics and Computer Science at FU Berlin. Organisation of an exchange program between FU Berlin and International Institute of Information Technology (IIITB), Bangalore, India, since 2012.

Department board (Fachbereichsrat)   since April 2013

Member of the department board at the department Mathematics and Computer Science of FU Berlin.

Institute board (Institutssrat)   since June 2015

Member of the institute board of the institute of Computer Science at FU Berlin.

Exam board (Prüfungsausschuss)   since April 2015

Member of the exam board and responsible for all internationally achieved credits.

Computational Science (Joint commission of the Master's Programme Computational Science)   since April 2015

Deputy member of the study board for the Master's program Computational Science.

Gender and Diversity board (Frauenförderkommission)   since April 2011
Member of the panel for gender and diversity funds at the department Mathematics
and Computer Science at FU Berlin.

On the following hiring panels:

- W1-Professorship *Internet Technologies*, 2016

- W3-Professorship *Theoretische Informatik*, 2015, chair

- W1-Professorship *Computational Meta-Genomics*, 2014

- W2-Professorship *Nordamerika Studien*, External member at John-F.-Kennedy
  Institut der FUB, 2013.

- W1-Professorship *Künstliche Intelligenz mit Schwerpunkt mobile Robotik*, 2013.

On PhD panels:

- Yuan Yang, Topic *Sample-based Probabilistic Estimation for Indoor Positioning
  and Tracking Under Ranging Uncertainty*, January 2015.

- Zhao Yubin, Topic *Adaptive Particle Filters for Wireless Indoor Target Tracking*,
  Oktober 2014.

- Peter Kruse, Topic *Enhanced Test Case Generation with the Classification Tree
  Method*, August 2014.

- Miao Wang, Topic *A Cognitive Navigation Approach for Autonomous Vehicles*,
  FUB 2012.

- Bratislav Milic, Topic *Distributed Biconnectivity Testing in Wireless Multihop Net-
  works*, HUB 2009.

- Felix Salfner, Topic *Event-based Failure Prediction*, HUB, 2008.

- Nikola Milanovic, Topic *Contract-based Web Service Composition*, HUB 2006.

- Günter Hoffmann, Topic *Failure Prediction in Complex Computer Systems: A
  Probabilistic Approach*, HUB, 2005.

PROFESSIONAL SERVICE

Future Activities

- General Chair of the ACM International Conference on Performance Engineering
  (ICPE) 2019 in Berlin.

- General Chair of the International Conference on Quantitative Evaluation of Systems (QEST), 2017 in Berlin. Organised together with CONCUR, General chair will be Uwe Nestmann, TU Berlin.

Current and Past Activities

- Co-General Chair of the *9th International Conference on Performance Evaluation Methodologies and Tools (Valuetools)*, Berlin, December 14-16, 2015.

- Co-Program Chair of the *26th IEEE International Symposium on Software Reliability Engineering*, Gaithersburg, MD, USA, 2015.

- Co-Program Chair of the *11th Performance Engineering Workshop (EPEW)* 2014 which was part of the conference week QEST, Safecomp, FMICS, EPEW in Florence, September 2014.

- Member of the organising committee of the Workshop on Software Aging and Rejuvenation, WoSAR'10, WoSAR'11, WoSAR'12, WoSAR'13 und WoSAR'14, November, 2010-2014, colocated with ISSRE'10 - ISSRE'14.

- Program-Chair of the 9th IEEE International Conference on Autonomic and Trusted Computing (ATC 2012), September 2012, Japan.

- Guest-Editor for one issue of Journal on Systems and Software 2016, Elsevier Publishers.

- Guest-Editor for one issue of Performance Evaluation 2015, Elsevier Publishers.

- Guest-Editor for one issue 2013 of International Journal of Adaptive, Resilient, and Autonomic Systems (IJARAS), IGI Global, Special Issue on Autonomic and Trusted Computing.

- Invited speaker at 10. Summer school on Formal Methods (SFM), Bertinoro (Italien), 21-26 June 2010. The topic was Quantitative Aspects of Programming Languages (QAPL). 3 hours lecture on *Performance and Security Tradeoff*.

- Organiser of a Dagstuhl-Workshops in July 2010. Topic: *Resilience Assessment of Software and Systems* gemeinsam mit Aad van Moorsel, Newcastle University, UK, Alberto Avritzer, Siemens Corporate Research, NJ, USA und Marco Vieira, University of Coimbra, Portugal. The work developed into a book which appeared with Springer Verlag in October 2012. Participation in Dagstuhl workshops in January 2014 and January 2015.

- Organiser of the 4th European Performance Evaluation Workshop (EPEW'07), September 2007 in Berlin. The best papers of the workshop appeared extended in a special issue in June 2009 in *Performance Evaluation* published by Elsevier.

- Guest-Editor of this Special Issue of *Performance Evaluation* Vol. 66/7, June 2009.

- Member of Gesellschaft für Informatik (GI) and the extended steering committee of the special interest group Measurement, Modelling and Evaluation (Messung, Modellierung und Bewertung) (joint interest group of GI and the Information-technical society ITG - GI-FG 3.2.1, ITG-FG 6.5.1). Member of IEEE, ACM and of Deutscher Hochschulverband.

Among others on the following programme committees:

- International Workshop on Computational Antifragility and Antifragile Engineering, ANTIFRAGILE, 2014, 2015, 2016.

- IEEE International Conference on Autonomic and Trusted Computing, ATC, 2013, 2014.

- 23rd IEEE International Conference on Advanced Information Networking and Applications (AINA 2009), Network Control and Performance Evaluation track, University of Bradford, UK, May 2009.

- ASMTA, Int. Conference on Analytical and Stochastic Modelling Techniques and Applications; 2008, 2009, 2010, 2012, 2013, 2014, 2015, 2016.

- European Dependable Computing Conference, EDCC, 2015, 2016.

- European Performance Evaluation Workshop (EPEW), 2005, 2006 (publications chair), 2007 (workshop chair), 2008, 2009, 2011, 2012, 2014 (co-chair), 2015.

- Annual Conference of the German Society for Operations Research (GOR), track "Quantitative Models for Performance and Dependability", September 2010, Universität der Bundeswehr, München, ebenso 2012.

- Workshop on Grid Performability at CCGrid, May 2005, Cardiff, UK.

- International Conference on Performance Engineering, ICPE, 2015, 2016.

- International Conference on Software Reliability, ISSRE, 2014, 2015 (PC-co-chair).

- 4th International Service Availability Symposium (ISAS 2007), Durham, New Hampshire, May 2007.

- MMB Messung, Modellierung und Bewertung von Rechensystemen; 2006, 2008, 2010, 2012, 2014, 2016.

- International Workshop on Model-based Software and Data Integration (MBSDI); 2008, 2009.

- International Workshop Practical Applications of Stochastic Modelling, (PASM); 2008, 2009, 2011, 2012, 2014, 2016.

- PDS'06, Performance and Dependability Symposium as part of DSN'06, Philadelphia, USA.

- International Workshop on the Quality of Service-Oriented Software Systems (QUA-SOSS); 2009, 2010.

- International Conference on Quantitative Evaluation of Systems (QEST); 2004, 2011.

- International ICST Conference on Simulation Tools and Techniques (SIMUTools), 2011, 2012 und 2013, 2014, 2015.

- SERENE, International Workshop on Software Engineering for Resilient Systems, 2015, 2016.

- SPEC International Performance Evaluation Workshop (SIPEW), Darmstadt (Germany), June 26-27, 2008.

- Workshop on Software Aging and Rejuvenation (WoSAR) 2010, 2011, 2012, 2013.

- First IEEE Workshop on Performance Evaluation of Communications in Distributed Systems and Web Based Service Architectures. Sousse, Tunisia, July 5 8, 2009.

- International Workshop on Recent Advances in the DependabIlity AssessmeNt of Complex systEms (RADIANCE), zusammen mit DSN, 2015.

Reviewing

Reviewing for several journals, international conferences, international funding agencies and book publishers.

Selected Research and Publishing Projects:

- EU 2015.

- German Research Council (Deutsche Forschungsgemeinschaft) 2013.

- NWO Physical Sciences, Dutch Research Council, 2012.

- Portuguese Public Funding Agency for R&D (FCT), 2013, 2015.

- Springer Verlag 2010.

Journals:

- Elsevier Journal of Systems and Software, 2004, 2009, 2010.

- Performance Evaluation, Elsevier Journal, 2000, 2002, 2004, 2005, 2011, 2013, 2014, 2015.

- Elsevier Journal on Simulation Modelling, Practice and Theory. July 2004.

- Elsevier Journal Information Sciences, 2014.

- Empirical Software Engineering, 2014.

- IEEE Transactions on Communications, 2014.

- IEEE Transactions on Software Engineering, 2011.

- IEEE Transactions on Reliability, 2014, 2015.

- International Journal of Communication Systems, 2009.

- International Journal of Systems Science, 2011, 2015.

- The Computer Journal, Oxford University Press, 2009, 2010.

- Computing, Springer Verlag, 2014.

- Wiley International Journal of Communication Systems, 2008, 2009.

- Computer Communications 2015.

PUBLICATIONS

The following list of publications follows the rules of good scientific practice and does not list publications under review. Information about pending work is available upon request.

H-Index: 15

Books

[1] Katinka Wolter. *Stochastic Models for Fault Tolerance - Restart, Rejuvenation and Checkpointing.* Springer Verlag, 2010.

[2] K. Wolter. *Performance and Dependability Modelling with Second Order Fluid Stochastic Petri Nets.* PhD thesis, Technische Universität Berlin, 1999. Published by Shaker Verlag Aachen, 1999 (ISBN 3-8265-6963-6).

Journal Papers

[3] Huaming Wu, Yi Sun, and Katinka Wolter. Analysis of the energy-response time tradeoff for delayed mobile cloud offloading. *ACM SIGMETRICS Performance Evaluation Review*, 43(2):33–35, 2015. Proc. Workshop on MAthematical performance Modeling and Analysis (MAMA).

[4] Gábor Horváth, Philipp Reinecke, Mikós Telek, and Katinka Wolter. Heuristic representation optimization for efficient generation of ph-distributed random variates. *Annals of Operations Research*, 1:1–23, October 2014.

[5] Huaming Wu, Qiushi Wang, and Katinka Wolter. Optimal cloud-path selection in mobile cloud offloading systems based on qos criteria. *International Journal of Grid and High Performance Computing (IJGHPC)*, 5(4):30–47, 2013.

[6] Alexandra Danilkina, Philipp Reinecke, and Katinka Wolter. SFERA: A Simulation Framework for the Performance Evaluation of Restart Algorithms in Service-Oriented Systems. *Electronic Notes in Theoretical Computer Science*, 291:3–14, 2013. Second Workshop on Quantitative Models for Performance and Dependability (QMPD 2012)(Extended version).

[7] Philipp Reinecke, Tilman Krau"s, and Katinka Wolter. Cluster-based fitting of phase-type distributions to empirical data. *Computers & Mathematics with Applications, Theory and Practice of Stochastic Modeling*, 64(12):38403851, December 2012.

[8] Katinka Wolter and Philipp Reinecke. Stochastic Models for Dependable Services. *Electronic Notes in Theoretical Computer Science*, 261:5–21, 2010. Proceedings of the Fourth International Workshop on the Practical Application of Stochastic Modelling (PASM 2009).

[9] Felix Salfner and Katinka Wolter. Analysis of service availability for time-triggered rejuvenation policies. *Journal of Systems and Software, Software Dependability*, 83(9):15791590, September 2010.

[10] Philipp Reinecke, Katinka Wolter, and Aad van Moorsel. Evaluating the Adaptivity of Computing Systems. *Performance Evaluation*, 67(8):676–693, August 2010.

[11] Burak Simsek, Katinka Wolter, and Hakan Coskun. Analysis of the QBSS Load Element of IEEE 802.11e for a priori Estimation of Service Quality. *Simulation: Systems, Science & Technology*, 7(1):42–56, January 2006.

[12] Aad P. A. van Moorsel and Katinka Wolter. Analysis of restart mechanisms in software systems. *IEEE Transactions on Software Engineering*, 32(8):547–558, August 2006.

[13] Aad P.A. van Moorsel and Katinka Wolter. Optimal restart times for moments of completion time. *IEE Proceedings Software*, 151(5):219– 223, October 2004.

[14] Katinka Wolter and Andrea Zisowsky. On Markov Reward Modelling with FSPNs. *Performance Evaluation*, 44:165–186, 2001.

[15] M. Chouikha, G. Decknatel, R. Drath, Georg Frey, Ch. Müller, C. Simon, J. Thieme, and K. Wolter. Petri Net-Based Descriptions for Discrete-Continuous Systems. *At-automatisierungstechnik*, 48(9), 2000.

Editorial

[16] András Horváth and Katinka Wolter, editors. *European Performance Engineering Workshop (EPEW)*, volume 8721. Springer, Florence, Italy, September 2014.

[17] Katinka Wolter, Alberto Avritzer, Marco Vieira, and Aad van Moorsel, editors. *Resilience Assessment and Evaluation of Computing Systems*. Springer, 2012.

[18] Katinka Wolter. Selected papers from the European Performance Engineering Workshop 2007. *Performance Evaluation*, 66(8), 2009.

[19] Katinka Wolter. *Formal Methods and Stochastic Models for Performance Evaluation (EPEW)*. Springer, 2007.

Book Chapters

[20] Katinka Wolter and Philipp Reinecke. *Formal Methods for Quantitative Aspects of Programming Languages*, volume 6154 of *LNCS*, chapter Performance and Security Tradeoff, pages 135–167. Springer, June 2010.

[21] Katinka Wolter. Self-Management of Systems Through Automatic Restart. In Ozalp Babaoglu, Mrk Jelasity, Alberto Montresor, Christof Fetzer, Stefano Leonardi, Aad van Moorsel, and Maarten van Steen, editors, *Self-star Properties in Complex Information Systems*, volume 3460 of *LNCS*, pages 189–203. Springer Berlin Heidelberg, Bertinoro, Italy, June 2005. In: SELF-STAR: International Workshop on Self-* Properties in Complex Information Systems,.

[22] K. Wolter, A. Zisowsky, and G. Hommel. *Modelling, Analysis, and Design of Hybrid Systems*, chapter Performance Models for a Hybrid Reactor System, pages 193–210. Number 279 in LNCS. Springer, 2002.

Peer-Reviewed Conference Papers

[23] Huaming Wu, William Knottenbelt, and Katinka Wolter. Analysis of the energy-response time tradeoff for mobile cloud offloading using combined metrics. In *Teletraffic Congress (ITC 27), 2015 27th International*, pages 134–142. IEEE, 2015.

[24] Tianhui Meng, Katinka Wolter, and Qiushi Wang. Security and performance tradeoff analysis of mobile offloading systems under timing attacks. In *Computer Performance Engineering*, pages 32–46. Springer International Publishing, 2015.

[25] Qiushi Wang and Katinka Wolter. Automated adaptive restart for accelerating task completion in cloud offloading systems. In *Autonomic Computing (ICAC), 2015 IEEE International Conference on*, pages 157–158. IEEE, 2015.

[26] Tianhui Meng, Qiushi Wang, and Katinka Wolter. Model-based quantitative security analysis of mobile offloading systems under timing attacks. In *Analytical and Stochastic Modelling Techniques and Applications (ASMTA)*, pages 143–157. Springer International Publishing, 2015.

[27] Jean-Michel Fourneau and Katinka Wolter. Mixed networks with multiple classes of customers and restart. In *Analytical and Stochastic Modelling Techniques and Applications (ASMTA)*, pages 73–86. Springer International Publishing, 2015.

[28] Qiushi Wang and Katinka Wolter. Reducing task completion time in mobile offloading systems through online adaptive local restart. In *Proc. International Conference on Performance Engineering (ICPE)*, Austin, Texas, USA, 2015. ACM Digital Library. Best paper award.

[29] Huaming Wu and Katinka Wolter. Dynamic transmission scheduling and link selection in mobile cloud computing. In *Analytical and Stochastic Modeling Techniques and Applications*. Springer, 2014.

[30] Huaming Wu and Katinka Wolter. Tradeoff analysis for mobile cloud offloading based on an additive energy-performance metric. In *Proc. Valuetools 2014*, Bratislava, Slovakia, December 2014. ACM Digital Library.

[31] Huaming Wu, Katinka Wolter, and Alessandro Grazioli. Cloudlet-based mobile offloading systems: a performance analysis. In *IFIP WG 7.3 Performance 2013 31 st International Symposium on Computer Performance, Modeling, Measurements and Evaluation 2013 Student Poster Abstracts September 24-26, Vienna, Austria*, 2013.

[32] Huaming Wu, Qiushi Wang, and Katinka Wolter. Mobile healthcare systems with multi-cloud offloading. In *Mobile Data Management (MDM), 2013 IEEE 14th International Conference on*, volume 2, pages 188–193. IEEE, 2013.

[33] Huaming Wu, Qiushi Wang, and Katinka Wolter. Tradeoff between performance improvement and energy saving in mobile cloud offloading systems. In *Communications Workshops (ICC), 2013 IEEE International Conference on*, pages 728–732. IEEE, 2013.

[34] Qiushi Wangi, Marti Griera Jorba, Joan Martinez Ripoll, and Katinka Wolter. Analysis of local re-execution in mobile offloading system. In *Software Reliability Engineering (ISSRE), 2013 IEEE 24th International Symposium on*, pages 31–40. IEEE, 2013.

[35] Qiushi Wang, Huaming Wu, and Katinka Wolter. Model-based performance analysis of local re-execution scheme in offloading system. In *Dependable Systems and Networks (DSN), 2013 43rd Annual IEEE/IFIP International Conference on*, pages 1–6. IEEE, 2013.

[36] Detlef Hartmann, Katinka Wolter, and Tilman Krau"s. ICT resilience simulations in small confined smart distribution grids. In *Proc. 35th International Telecommunications Energy Conference*. VDE publisher, 2013. accepted for publication.

[37] Daniel Happ, Philipp Reinecke, and Katinka Wolter. Fault-Impact Models Based on Delay and Packet Loss for IEEE 802.11g. In Kaustubh Joshi, Markus Siegle, Mariëlle Stoelinga, and PedroR. DArgenio, editors, *Quantitative Evaluation of Systems*, volume 8054 of *Lecture Notes in Computer Science*, pages 258–273. Springer Berlin Heidelberg, 2013.

[38] Jean-Michel Fourneau, Katinka Wolter, Philipp Reinecke, Tilman Krauß, and Alexandra Danilkina. Multiple class g-networks with restart. In *Proceedings of the 4th ACM/SPEC International Conference on Performance Engineering*, ICPE '13, pages 39–50, New York, NY, USA, April 2013. ACM, ACM.

[39] Huaming Wu, Qiushi Wang, and Katinka Wolter. Methods of cloud-path selection for offloading in mobile cloud computing systems. In *Proc. 4th International Conference on Cloud Computing Technology and Science (CloudCom)*, pages 443–448, Taipeh, Taiwan, December 2012. IEEE, IEEE.

[40] Katinka Wolter, Philipp Reinecke, Tilman Krauss, Daniel Happ, and Florian Eitel. Ph-distributed fault-models for mobile comunication. In *Proc. Winter Simulation Conference*, Berlin, Germany, December 2012.

[41] Philipp Reinecke, Tilman Krauss, and Katinka Wolter. Hyperstar: Phase-type fitting made easy. In *Quantitative Evaluation of Systems (QEST), 2012 Ninth International Conference on*, pages 201 –202, sept. 2012.

[42] Gábor Horváth, Philipp Reinecke, Miklós Telek, and Katinka Wolter. Efficient generation of ph-distributed random variates. In Khalid Al-Begain, Dieter Fiems,

and Jean-Marc Vincent, editors, *19th International Conference on Analytical and Stochastic Modeling Techniques and Applications (ASMTA)*, number 7314 in LNCS, pages 271–285. Springer, 2012.

[43] Bastian Blywis, Philipp Reinecke, Mesut Günes, and Katinka Wolter. Gossip routing, percolation, and restart in wireless multi-hop networks. In *IEEE Wireless Communications and Networking Conference*, 2012.

[44] Katinka Wolter, Philipp Reinecke, and Alfons Mittermaier. Model-based Evaluation and Improvement of PTP Syntonisation Accuracy in Packet-Switched Backhaul Networks for Mobile Applications. In Nigel Thomas, editor, *Computer Performance Engineering. Proceedings of the 8th European Performance Engineering Workshop, EPEW 2011*, number 6977 in LNCS, pages 219–234. Springer, October 2011.

[45] Philipp Reinecke and Katinka Wolter. On Stochastic Fault-Injection for IP-Packet Loss Emulation. In Nigel Thomas, editor, *Computer Performance Engineering. Proceedings of the 8th European Performance Engineering Workshop, EPEW 2011*, number 6977 in LNCS. Springer, October 2011.

[46] Philipp Reinecke, Alexandra Danilkina, and Katinka Wolter. Parallel Restart in Competitive Scenarios. In *QEST 2011*, 2011. Fast Abstract.

[47] P. Reinecke, M. Telek, and K. Wolter. Reducing the costs of generating aph-distributed random numbers. In B. Müller-Clostermann, K. Echtle, and E. Rathgeb, editors, *MMB & DFT 2010*, pages 274–286. Springer-Verlag Berlin Heidelberg, 2010.

[48] Johannes Semmler, Katinka Wolter, and Philipp Reinecke. On-line monitoring for model-based qos management in ieee 802.11 wireless networks. In *Proc. 17th Annual Meeting of the IEEE/ACM International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS '09)*, Imperial College London, UK, September 21-23 2009. IEEE.

[49] Philipp Reinecke, Sebastian Wittkowski, and Katinka Wolter. Response-time measurements using the sun java adventure builder. In *QUASOSS '09: Proceedings of the 1st International Workshop on Quality of Service-oriented Software Systems*, pages 11–18. ACM, 2009.

[50] Felix Salfner and Katinka Wolter. A Petri net Model for Service Availability in Redundant Computing Systems. In *Proc. Winter Simulation Conference (WSC)*, pages 819–826. IEEE, 2009.

[51] Johannes Zapotoczky and Katinka Wolter. Increasing performance of the 802.11e protocol through adaptive shifting of priorities. In *Proc. 14th GI/ITG Confer-*

ence on Measuring, Modelling and Evaluation of Computer and Communication Systems (MMB 08), pages 195–204, Dortmund, Germany, March 2008.

[52] Felix Salfner and Katinka Wolter. A Queuing Model for Service Availability of Systems with Rejuvenation. In *IEEE International Conference on Software Reliability Engineering (ISSRE) – Workshops*, pages 1–5. IEEE, 2008. Proc. Workshop on Software Aging and Rejuvenation.

[53] Felix Salfner and Katinka Wolter. Service Availability of Systems with Failure Prevention. In *Asia-Pacific Services Computing Conference, 2008. APSCC '08. IEEE*, pages 1219–1224, Dec 2008.

[54] Philipp Reinecke, Katinka Wolter, and Johannes Zapotoczky. Performance analysis of dynamic priority shifting. In Nigel Thomas and Carlos Juiz, editors, *Proc.5th European Performance Engineering Workshop (EPEW)*, number 5261 in LNCS, pages 181–196, Palma, Mallorca, Spain, September 2008. Springer.

[55] Philipp Reinecke and Katinka Wolter. Towards a multi-level fault-injection testbed for service-oriented architectures: Requirements for parameterisation. In *Proc. SRDS Workshop on Sharing Field Data and Experiment Measurements on Resilience of Distributed Computing Systems, AMBER*, Naples, Italy, 2008.

[56] Philipp Reinecke and Katinka Wolter. Adaptivity Metric and Performance for Restart Strategies in Web Services Reliable Messaging. In *Proceedings of the 7th International Workshop on Software and Performance*, WOSP '08, pages 201–212, New York, NY, USA, 2008. ACM.

[57] Philipp Reinecke and Katinka Wolter. Phase-type approximations for message transmission times in web services reliable messaging. In Samuel Kounev, Ian Gorton, and Kai Sachs, editors, *Performance Evaluation: Metrics, Models and Benchmarks (SIPEW)*, volume 5119 of *Lecture Notes in Computer Science*, pages 191–207. Springer Berlin Heidelberg, 2008.

[58] Burak Simsek and Katinka Wolter. Improving the Performance of IEEE 802.11e with an Advanced Scheduling Heuristic. In Andras Horvath and Miklos Telek, editors, *Proc.3rd European Performance Engineering Workshop*, number 4054 in LNCS, pages 181–195, Budapest, Hungary, June 2006. Springer.

[59] Burak Simsek, Katinka Wolter, and Hakan Coskun. Dynamic Decision Making for Candidate Access Point Selection. In Dominique Gati, Guy Pujolle, Ehab Al-Shaer, Ken Calvert, Simon Dobson, Guy Leduc, and Olli Martikainen, editors, *Autonomic Networking*, volume 4195 of *LNCS*, pages 50–63. Springer Berlin Heidelberg, 2006.

[60] Philipp Reinecke, Aad P. A. van Moorsel, and Katinka Wolter. The Fast and the Fair: A Fault-Injection-Driven Comparison of Restart Oracles for Reliable Web

22

Services. In *Proc.3rd International Conference on the Quantitative Evaluation of SysTems (QEST) 2006*, Riverside, CA, USA, September 2006. IEEE.

[61] Philipp Reinecke, Aad P. A. van Moorsel, and Katinka Wolter. Experimental Analysis of the Correlation of HTTP GET Invocations. In M. Telek and A. Horvath, editors, *Proc.3rd European Performance Engineering Workshop*, volume 4054 of *LNCS*. Springer, 2006.

[62] Philipp Reinecke, Aad van Moorsel, and Katinka Wolter. A Measurement Study of the Interplay between Application Level Restart and Transport Protocol. In *Proc. International Service Availability Symposium (ISAS)*, number 3335 in LNCS, Munich, Germany, May 2004. Springer.

[63] Aad van Moorsel and Katinka Wolter. Making Deadlines through Restart. In *Proc. 12th GI/ITG Conference on Measuring, Modelling and Evaluation of Computer and Communication Systems (MMB 04)*, pages 155–160, Dresden, Germany, September 2004. VDE.

[64] Aad van Moorsel and Katinka Wolter. Analysis and Algorithms for Restart. In *Proc. 1st International Conference on the Quantitative Evaluation of Systems (QEST)*, pages 195–204, Twente, The Netherlands, September 2004. Best paper award.

[65] K. Wolter and K. Kasprowicz. `WebAppLoader`: A simulation tool set for evaluating web application performance. In W. H. Sanders P. Kemper, editor, *Proc. Computer Performance Evaluation – Modelling Techniques and Tools*, volume LNCS 2794, pages 47–62, Urbana, IL, USA, Sept. 2003. Springer.

[66] Pankaj K. Garg, Kave Eshghi, Thomas Gschwind, Boudewijn Haverkort, and Katinka Wolter. Enabling Network Caching of Dynamic Web Objects. In Tony Field, Peter G. Harrison, Jeremy Bradley, and Uli Harder, editors, *Computer Performance Evaluation: Modelling Techniques and Tools (TOOLS)*, volume 2324 of *LNCS*, pages 329–338. Springer Berlin Heidelberg, 2002.

[67] K. Wolter and A. Zisowsky. On Markov Reward Modelling with FSPNs. In *Proc. Fourth International Computer Performance and Dependability Symposium - IPDS'00*, pages 3–12, Chicago, USA, March 27–30 2000. (accepted for a special issue of Performance Evaluation).

[68] K. Wolter. Modelling Hybrid Systems with Fluid Stochastic Petri Nets. In S. Engell, S. Kowalewski, and J. Zaytoon, editors, *Proc. The 4th Int. Conf. on Automation of Mixed Processes: Hybrid Dynamic Systems (Proc. 3ème Conf. Int. sur l'Automatisation des Processus Mixtes: Les Systèmes Dynamiques Hybrides*, pages 287–294, Dortmund, Germany, Sept. 18-19 2000.

[69] Katinka Wolter. Jump Transitions in Second Order FSPNs. In *Proc. 7th Int. Symp. on Modelling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS'99)*, pages 156–163, Washington DC, USA, October 1999. IEEE-CS Press.

[70] K. Wolter. Virtual Waiting time in Queues obtained from Second Order FSPNs. In *Proc. Third International Computer Performance and Dependability Symposium - IPDS'98*, page 273, Durham, NC, USA, Sept. 7–9 1998. IEEE-CS Press.

[71] K. Wolter. Probabilistic and Deterministic fluid flow in second order FSPNs. In J. Zaytoon, editor, *Proc. 3ème Conf. Int. sur l'Automatisation des Processus Mixtes*, Les Systèmes Dynamiques Hybrides (Hybrid Dynamical Systems), pages 324–329, Reims, France, March 1998.

[72] Aad P.A. van Moorsel and Katinka Wolter. Numerical Solution of Non-Homogeneous Markov Processes through Uniformization. In Richard Zobel, editor, *Proc. 12th European Simulation Multiconference (ESM)*, pages 710–717, Manchester, UK, June 1998. SCS.

[73] K. Wolter and G. Hommel. Hybrid Modelling with Second Order Fluid Stochastic Petri Nets. In *Proc. Workshop on Parallel and Distr. Real-Time Systems*, pages 239–243, Geneva, Switzerland, April 1–3 1997. IEEE-CS.

[74] K. Wolter. Second Order Fluid Stochastic Petri Nets: an Extension of GSPNs for Approximate and Continuous modelling. In *Proc. 1st World Congress on Systems Simulation (WCSS'97)*, pages 328–332, Singapore, Sept. 1–3 1997.

[75] K. Wolter and R. German. Second Order Non-Markovian Fluid Stochastic Petri Nets. In *Proc. Workshop on Perf. Modeling of Comp. and Comm. Systems (PM-CCS3)*, Bloomingdale, IL, USA, September 1996.

Workshop Papers

[76] Katinka Wolter, Philipp Reinecke, and Matthias Dräger. Grnet a tool for gnetworks with restart. In *Proc. Int. Conf. on Performance Engineering, Tools (ICPE Tool)*, Austin, Texas, USA, January 2015. ACM Digital Library.

[77] Philipp Reinecke, Miklós Telek, and Katinka Wolter. Micro and macro views of discrete-state markov models and their application to efficient simulation with phase-type distributions. In *SIGMETRICS*, pages 425–426, 2012.

[78] Philipp Reinecke and Katinka Wolter. A simulation study on the effectiveness of restart and rejuvenation to mitigate the effects of software ageing. In *WoSAR 2010*, 2010.

[79] Philipp Reinecke, Katinka Wolter, Levente Bodrog, and Miklos Telek. On the cost of generating ph-distributed random numbers. In *Proc. Nineth International Workshop on Performability of Computer and Communication Systems (PMCCS-9)*, Eger, Hungary, September 2009.

[80] Philipp Reinecke and Katinka Wolter. Last-minute paper submissions, forgotten passwords and greylisting - an interesting dilemma, and how to solve it. In *Proc. Nineth International Workshop on Performability of Computer and Communication Systems (PMCCS-9)*, Eger, Hungary, September 2009.

[81] Felix Salfner and Katinka Wolter. Replication vs. Failure Prevention – How to Boost Service Availability? In *19th International Symposium on Software Reliability Engineering, (ISSRE)*, pages 289–290, Seattle, US, Nov. 2008. IEEE. Fast abstract.

[82] Katinka Wolter and Philipp Reinecke. Restart in Competitive Environments. In *Proc. 24th UK Performance Engineering Workshop (UKPEW)*, pages 18 – 26, London, UK, July 2008.

[83] Aad van Moorsel, Kaitnka Wolter, and Philipp Reinecke. The Role of Data in Creating Next Generation Enterprise Systems. In *Proc. Workshop on Reliability Analysis of System Failure Data*, Cambridge, UK, March 2007.

[84] Philipp Reinecke and Katinka Wolter. On Adaptivity: Developing a Metric for an Elusive Concept. In *Proc. Eighth International Workshop on Performability of Computer and Communication Systems (PMCCS-8)*, pages 85 – 90, Edinburgh, UK, 2007.

[85] Aad P. A. van Moorsel and Katinka Wolter. A Short Investigation into an Underexplored Model for Retries. In *Proc. Seventh International Workshop on Performability of Computer and Communication Systems (PMCCS-7)*, Torino, Italy, September 2005.

[86] Burak Simsek, Katinka Wolter, and Hakan Coskun. Analysis of the QBSS Load Element Parameters of 802.11e for a priori Estimation of Service Quality. In *Proc. UK Performance Engineering Workshop (UKPEW 2005)*, Newcastle, UK,, July 2005. Selected for a special issue of *Simulation: Systems, Science & Technology*.

[87] Aad van Moorsel and Katinka Wolter. Optimal Restart Times for Moments of Completion Time. In *Proc. UK Performance Engineering Workshop (UKPEW 2004)*, Bradford, July 2004. Selected for a special issue of IEE Proceedings Software Journal.

[88] Aad van Moorsel and Katinka Wolter. Optimization of Failure Detection Retry Times. In *Proc. Performability Workshop (PMCCS)*, Monticello, IL, USA, September 2003.

[89] Aad van Moorsel and Katinka Wolter. Optimization of Failure Detection Retry Times. In *Proc. The International Conference on Dependable Systems and Networks (DSN) - Fast abstract*, San Francisco, CA, USA, June 2003.

[90] K. Wolter. A Performability Model for a Hybrid Reactor System. In K. Djemame and M. Kara, editors, *Proc. 17th annual UK Performance Engineering Workshop*, pages 13–22, Leeds, UK., July 18-19 2001.

[91] K. Wolter and A. Zisowsky. On Markov Reward Modelling with Second Order FSPNs. In J. T. Bradley and N. J. Davies, editors, *Proc. 15th annual UK Performance Engineering Workshop*, pages 167–177, Bristol, UK, July 22-23 1999. TR CSTR-99-007.

[92] Katinka Wolter and Reinhard German. Second Order Non-Markovian Fluid Stochastic Petri Nets. In *In Proc. Workshop on Performance Modeling of Computer and Communication Systems (PMCCS-3)*, Bloomingdale, IL, USA, Sept. 1996.

Technical Reports

[93] Philipp Reinecke, Katinka Wolter, and Miroslaw Malek. A Survey on Fault-Models for QoS Studies of Service-Oriented Systems. Technical Report B-2010-02, Freie Universität Berlin, February 2010.

[94] K. Wolter and A. van Moorsel. The Relationship between Quality of Service and Business Metrics: Monitoring, Notification and Optimization. Technical Report 96, Hewlett-Packard Laboratories, Software Technology Laboratory, April 2001.

[95] A. P. A. van Moorsel and K. Wolter. Numerical Solution of Non-Homogeneous Markov Processes through Uniformization. Technical Report Work Project Nos. 311405-5607, Lucent Technologies, Bell Laboratories, 1998.

[96] K. Wolter, G. Horton, and R. German. Non-Markovian Fluid Stochastic Petri Nets. Technical Report 96-13, TU Berlin, 1996.