A JOINT CONFERENCE - TWO INTERLEAVED EVENTS

Your opportunity to attend a world class encounter and talk to the experts:

Joint IPDS 2K & "Performance Tools" 2K

IEEE 4th International Computer Performance and Dependability Symposium

&

11th International Conference on Modelling Techniques and Tools for Computer and Communication Systems Performance Evaluation

Schaumburg/Chicago, IL -- March 27-30, 2000

Sponsored by:

IEEE Computer Society Technical Committee on Fault-Tolerant Computing

Co-sponsored by:

IFIP Working Group 7.3 on Performance Evaluation

IFIP Working Group 10.4 on Dependable Computing andFault Tolerance

IFIP Working Group 6.3 on Performance of Communication Systems

In cooperation with:

IBM

Motorola

Texas A&M University

The College of William and Mary

The joint conferences will be hosted at Motorola University on the Motorola Campus in Schaumburg (Illinois), and will share tutorials, tool presentations, invited speakers, social events and some sessions. Participants will be allowed to attend sessions in both conferences. The two conferences have separate program committees (with some deliberate overlaps), and two proceedings will be published (for IPDS with IEEE CS Press and for TOOLS with Springer Verlag).

For more information, you can go to the following URLs:

http://tools2000.informatik.rwth-aachen.de/

or

http://ee.tamu.edu/IPDS

IPDS OBJECTIVES

With today's convergence of parallel computers and high-speed networks, the performance and dependability of computer systems and networks have become closely related. Designers and analysts must consider the relationships between the occurrence of errors/failures and their impact on performance, both in the computer systems themselves and in the interconnections between the system's components. This symposium brings together academic and industrial researchers in these two areas, with emphasis on integrating theory and practice. Relating analytical techniques to simulations, actual measurements, and experiments will be the broad theme of the symposium. Research and practice relating to hardware and software issues in parallel and distributed systems and networks will be emphasized. Relevant topics include but are not restricted to Analytical/Simulation/Measurement Techniques and Fault Injection for Performance/Dependability applied to:

- Software/Hardware Systems
- Real-Time Systems
- Communication Systems
- Distributed Systems
- Parallel and Clustered Systems
- Multiprocessing Systems

PERFORMANCE TOOLS OBJECTIVES

Performance and dependability evaluation have proven themselves as useful guides in the design of computer and communication systems (be they centralised, distributed, parallel or fault-tolerant). These evaluation techniques, however, will only become an integrated part of system design trajectories when full tool support for them is available. The aim of the "Performance Tools" conference series has been (and is) to further develop the theory and technology for tool-based performance and dependability evaluation of computer and communication systems. Important themes for the 11th issue of this successful conference series include (but are not restricted to):

- Software tools for system performance and dependability evaluation;
- Evaluation techniques (analytic, numeric and simulative) for system performance and dependability;
- Measurement-based tools and techniques for system performance and dependability;
- Performance and dependability evaluation techniques based on formal methods, such as process algebras, Petri nets and automata;
- Case studies showing the role of performance and dependability evaluation in the design of computer and communication systems;
- Application studies in the area of centralised and distributed computer systems, communication networks (incl. Internet), WWW, real-time, fault-tolerant and embedded systems.

TUTORIALS AND DEMONSTRATIONS

Half-day tutorials are planned for Thursday, March 30, 2000. The tutorials will address broad issues in the performance and dependability of computer and communication systems. Tools demonstration sessions will take place during the joint conference.

REGISTRATION INFORMATION

Please, send your registration forms (see below) and address any question to:

Dr. James Han or MaryAnn Tarczon
Motorola
1303 East Algonquin Road - IL01/Annex 2
Schaumburg, Illinois, 60196-1065
Email (contact MaryAnn Tarczon): ARES18X@email.mot.com
Tel: 847-538-4257 (James Han); 847-576-4351 (MaryAnn Tarczon)
Fax: 847-576-4656

HOTEL INFORMATION

Please, contact the hotel directly for reservations and mention the IPDS/Tools 2000 for the special rate of $99.00 per night. This rate is guaranteed until March 3, 2000. The hotel is located just outside the Motorola campus and is within walking distance from the Motorola University.

Embassy Suite Hotel
1939 North Meacham Road
Schaumburg, Illinois, 60173

Tel: 847-397-1313
Fax: 847-397-8907

TRANSPORTATION FROM/TO AIRPORT

The recommended limousine company which services the Embassy Suite Hotel is My Chauffeur limousine company (1-847- 671-3600). Rates are $17.00 ($7.00 for each additional passenger) from O'Hare airport to the hotel or the other way, and are subject to change. You can find all the needed info on "My Chauffeur" web site at http://www.mychauffeur.com/.

IPDS/TOOLS 2000

Day 1 – Monday, March 27, 2000

No.	Time	Activity	Location
1.	7:30- 9:00 AM	Registration	
2.	9:00- 9:30 AM	**Joint Session:** **Opening/Welcome**	Museum Auditorium
3.	9:30- 10:30AM	**Joint Session:** Invited Speaker ***"Performance Evaluation with Heavy Tailed Distributions: A Good News/Bad News Story"*** By: Mark Crovella	Museum Auditorium
4.	10:30- 11:00 AM	Break	
5.	11:00-Noon	**Joint Session:** **Software Tool Presentations I** Chairperson: A. van Moorsel	Museum Auditorium
5.1		**Tangram-II** By Edmundo de Souza e Silva	
5.2		**FiFiQueues: Fixed-Point Analysis of Finite-Buffer Queueing Networks** By Ramin Sadre and Boudewijn Haverkort	
5.3		**SETRAM Tool for Dimensioning the Air Interface to Support HSCSD and GPRS in a GSM Network** By Labib Shalak	
5.4		**Möbius: An Extensible Tool for Performance and Dependability Modeling** By David Daly, Daniel Deavours, Jay Doyle, Patrick Webster and William Sanders	
5.5		**SREPT** By Srinivasan Ramani and Kishor Trivedi	
5.6		**XProf-SDL** By Jenny Li and Robert Horgan	
5.7		**Simalytic Modeling: a Technique for Application Performance Analysis**	

		By Tim R. Norton	
5.8		**SHARPE 2000** By C. Hirel, R. Sahner, X. Zang and K. Trivedi	
6.	Noon- 1:00 PM	Lunch	Atrium
7.	1:00 – 3:00 PM	Split Session A: **IPDS Paper Presentations**	
		Markov Modeling and Applications Chairperson: Kishor Trivedi, Duke University	
7.1a		**On Markov Reward Modeling with FSPNs** By Katinka Wolter and Andrea Zisowsky	
7.2a		**Mission Time Analysis of Large Dependable Systems** By Sandor Racz and Miklos Telek	
		State Space Techniques Chairperson: Kishor Trivedi, Duke University	
7.3a		**Measure-Adaptive State-Space Construction** By W. Douglas Obal and William Sanders	
7.4a		**Sensitivity Analysis of Modular Dynamic Fault Trees** By Yong Ou and Joanne Bechta Dugan	
	1:00- 3:00 PM	Split Session B: **TOOLS Paper Presentations**	
		Queuing Network Models I Chairperson: R. Puigjaner	
7.1b		**Layered Modeling of Hardware and Software, with Application to a LAN Extension Router** By P. Maly, C. M. Woodside	
7.2b		**Object Allocation for Distributed Applications with Complex Workloads** By M. Litoiu and J. Rolia	
		Stochastic Petri Nets I Chairperson: G. Balbo	
7.3b		**Iterative Analysis of Markov Regenerative Models** By R. German	
7.4b		**Analysis and Evaluation of Non-Markovian Stochastic Petri Nets** By A. Horvath, A. Puliafito, M. Scarpa and M. Telek	
8	3:00- 3:30 PM	Break	
9	3:30-	**TOOLS Paper Presentations**	

	5:30 PM		
		Session: Simulation Chairperson: P. Buchholz	
9.1		**Implementation of Importance Splitting Techniques in SPNP** By B. Tuffin and K. S. Trivedi	
9.2		**FluidSim: A Tool To Simulate Fluid Models Of High-Speed Networks** By J. Incera, R. Marie, D. Ros, and G. Rubino	
		Session: Optimization In Mobile Networks Chairperson: R. Marie	
9.3		**Minimization Of The Impact of Subscriber Mobility On The Resources Of A GSM Network** By C. Bauer	
9.4		**Optimal Allocation Policies For Mobile Agents** By M. D. Hamilton and I. Mitrani	
		END OF DAY	

IPDS/TOOLS 2000

Day 2 – Tuesday, March 28, 2000

No.	Time	Activity	Location
10.	8:00-9:00 AM	Registration	Lobby
11.	9:00-10:00 AM	**Joint Session: Invited Speaker** **Dependable Spacecraft For Future Deep Space Explorations** By Leon Alkalai, Jet Propulsion Laboratories Chairperson: Rick Harper, IBM Research	Museum Auditorium
12.	10:00-10:30 AM	Break	
13.A	10:30-Noon	Split Session A: **IPDS Paper Presentations**	
		Session: **Systems and Protocols** Chairperson: Jeff Zinchuk, Draper Laboratory	
13.1a		**Reaching Efficient Fault-Tolerance For Cooperative Applications** By Peter Sobe	

13.2a		**On The Effectiveness Of A Message-Driven Confidence-Driven Protocol For Guarded Software Upgrading** By Ann Tai, Kam Tso, Leon Alkalai, Savio Chau and William Sanders	
13.3a		**Efficient Fault-Tolerant Protocols Based On A Novel Failure Classification** By Klaus Echtle and Asif Masum	
13.B	10:30-Noon	Split Session B: **Tools Paper Presentations**	
		Session: **Queuing Networks II** Chairperson: I. Mitrani	
13.1b		**A Set Of Tools For Traffic Modeling, Analysis and Experimentation** By R. M. M. Leao, E. de Souza e Silva and S. C. de Lucena	
13.2.b		**Queuing Analysis of Pools In Soft Real-Time Systems** By C. Juiz and R. Puigjaner	
13.3.b		**Xaba: Exact, Approximate, and Asymptotic Solvers For Multi-Class Closed Queuing Networks** By P. Cremonesi, E. Rosti and G. Serazzi	
14.	Noon-1:00 PM	Lunch	
15.	1:00- 2:00 PM	**Split Session A:** **IPDS Paper Presentations**	
		Session: **Formal Methods and Performance Evaluation** Chairperson: Gwan Choi, Texas A&M University	
15.1.a		**I/O Phase Characterization Of TPC-H Query Operations** By Meenakshi Kandaswamy and Robert Knighten	
15.2.a		**Dependability Assessment In Distributed Systems With Lightweight Fault Injectors In NFTAPE** By David Scott, Benjamin Floering, Zbigniew Kalbarczyk, and Ravi Iyer	
		Split Session B:	

		TOOLS Paper Presentations	
		Session: **Formal Methods and Performance Evaluation** Chairperson: J. -P. Katoen	
15.1.b		**Exploiting Modal Logic To Express Performance Measures** By G. Clark, S. Gilmore, J. Hillston, And M. Ribaudo	
15.2.b		**Derivation of Petri Net Performance Models From UML Specifications of Communications Software** By P. King and R. Pooley	
16.	2:00 – 3:00 PM	**Joint Session:** **Software Tool Presentations II** Chairperson: A. van Moorsel	Museum Auditorium
16.1		**MRMSolve** By Miklos Telek	
16.2		**STEADY** By P. J. B. King	
16.3		**TwoTowers** By Marco Bernardo	
16.4		**Monitoring VoIP Grade of Service At A PSTN-IP Network Gateway** By Adrian E. Conway	
16.5		**SPNP v.6** By Christophe Hirel, Bruno Tuffin and Kishor Trivedi	
16.6		**Pa2pf: Process Accounting To Peaking Factor** By William Ward and David Langan	
16.7		**Galileo** By Joanne Bechta Dugan and Kevin Sullivan	
16.8		**WebSPN** By Antonio Puliafito	
17.	3:00 – 3:30 PM	Break	
18.	3:30 – 5:00	**Joint Session A:** **Students**	Museum Auditorium
		Session A: **Tutorials** Chairperson: S. Garg	
18.1.a		**A Study of Preventive Maintenance In Windows-NT Systems** By Kalyan Vaidyanathan	

18.2.a		**Distributed Shared Memory Systems As Mobile Internet Portals** By Alexander Vrenios and Forouzan Golshani	
18.3.a		**Ongoing Research In Fault-Tolerant ATM Communication** By Tavaris Thomas	
		Session B: **Tool Demonstrations** Chairperson: A. van Moorsel	
18.b		**All Tool Demos will be held simultaneously in the Computer/Demo Room during this time.**	
19.	6:00 – 10:00 PM	**Dinner and Entertainment: Embassy Suites**	

IPDS/TOOLS 2000

Day 3 – Wednesday, March 29, 2000

No.	Time	Activity	Location
20	9:00 – 10:30 AM	**Split Session A:** **IPDS Paper Presentations**	
		Session: **Networking** Chairperson: Kevin Kwiat, Air Force Research Laboratory	
20.1.a		**The Impact of Backoof, EIFS, and Beacons On The Performance of IEEE 802.11 Wireless LANs** By Armin Heindl and Reinhard German	
20.2.a		**Correlational and Distributional Effects In Network Traffic Models** By Robert Geist and James Westall	
20.3.a		**Performance Index Based Network Reliability Analysis With Stratified** By Laszlo Jereb and Attila Kiss	
		Split Session B: **TOOLS Paper Presentations**	
		Split Session: **Measurement Tools and Application** Chairperson: C. M. Woodside	

20.1.b		**Scalability Of A Workstation Cluster Architecture For Video-on-Demand Applications** By P. H. Hughes and G. Brataas	
20.2.b		**Multi-layer Online-Monitoring For Hybrid DSM Systems On Top Of PC Clusters With A SmiLE** By W. Karl, M. Schulz, and J. Trinitis	
20.3.b		**Design and Implementation Of A Tool For Measuring The Performance Of Complex E-Commerce Site** By G.T. Paixao, W. Meira, Jr., V. A. F. Almeida, D. A. Menasce, and A. M. Pereira	
21	10:30 – 11:00	Break	
22	11:00 – Noon	**Split Sessions A:** IPDS Paper Presentations	
		Session: **Empirical Studies II** Chairperson: Gianfranco Ciardo, The College of William and Mary	
22.1.a		**Profiling The Performance Of TCP/IP On Windows NT** By Peter Xie, Mei-Ling Liu, Jim Harris, and Chris Scheiman	
22.2.a		**On Building Non-Intrusive Performance Instrumentation Blocks For CORBA-based Distributed Systems** By Baskar Sridharan, Balakrishnan Dasarathy, and Aditya Mathur	
22.	11:00 – Noon	**Split Session B:** **Tools Paper Presentations**	
		Session: **Stochastic Petri Nets II** Chairperson: M. Telek	
22.1.b		**Petri Net Modeling and Performability Evaluation With TimeNET 3.0** By A. Zimmerman, J. Freiheit, R. German, and G.	

		Hommel	
22.2.b		**Integrating Synchronization With Priority Into A Kronecker Representation** By S. Donatelli, and P. Kemper	
23.	Noon - 1:00 PM	Lunch	
24.	1:00 – 2:30 PM	**Split Session A:** **IPDS Paper Presentations**	
		Session: **Petri Nets, Queuing, Modeling, and Applications** Chairperson: Raymond Marie, University of Rennes	
24.1.a.		**Dependability Assessment of GUARDS Instances** By Jean Arlat, Tahar Jarboui, Karama Kanoun, and David Powell	
24.2.a		**Hybrid Analysis Of SGSPNs With Time-Dependent Transition Rates** By Peter Buchholz	
24.3.a		**On Queuing With Customer Impatience Until The End Of Service** By Ali Movaghar	
24.	1:00 – 2:30 PM	**Split Session B:** **TOOLS Paper Presentations**	
		Session: Queuing Network Models III Chairperson: C. Smith	
24.1.b		**Decomposition of General Tandem Queuing Networks With MMPP Input** By A. Heindl	
24.2.b		**Exact and Approximate Solutions For A Class Of Infinite Markovian Models** By M. Meo, E. de Souza e Silva, and M. Ajmone Marsan	
24.3.b		**Performance Evaluation Of A Distributed Enterprise Data Mining**	

		System By P. G. Harrison and C. M. Llado	
25.	2:30 – 3:00	**Joint Closing**	Museum Auditorium

IPDS/TOOLS 2000

Day 4 – Thursday, March 30, 2000 – Tutorials and Workshop

No.	Time	Activity	Location
28.	9:00 – 12:30 PM	**Session A:** **Tutorials** Chairperson: S. Garg	
28.1.a		**A Practical Approach To Capacity Modeling** By T. Norton	
28.2.a		**Parameter Uncertainties In Performance and Dependability Models** By J. Luthi	
		Session B: **Workshop**	
29.	12:30 – 1:30 PM	**Lunch**	
30.	1:30 – 5:00 PM	**Session A:** **Tutorials** Chairperson: S. Garg	
30.1.a		**Architecture Availability Certification Centered Around Modeling: A Gap In The System Development Process** By J. Jan and H. Levendel	
30.2.a.		**Analysis Of Large Markov Chains Based On Kronecker Algebra** By P. Buchholz	
		Session B: **Workshop**	

IEEE IPDS/TOOLS 2000 Registration Form

Registration Fees

		Early (by February 20, 2000)	Late / On-site (after February 20, 2000)
Conference only	IEEE member	$375	$450
	Non member	$470	$565
	Full time student	$75	$90
Conference+tutorial	IEEE member	$555	$670
	Non member	$750	$900
	Full time student	$375	$450
Tutorial only	IEEE member	$300	$360
	Non member	$400	$480
Extra banquet ticket		$50	
Extra proceedings		$30	

Total $_____

Registration Information

Name: _____ _____ __

Last/Family *First* *MI*

Name on Badge:_____

Affiliation: _____

Address: _____

_____

City: _____ State/Region: _____

Zip/Postal Code: _____ Country: _____

Phone: _____ Fax Number: _____

Email: _____ IEEE #: _____

Do you have any special needs? *(access, etc.)* _____

Make you banquet choice (March 28, 2000): Chicken Wellington, Roast Prime Rib of Beef, Vegetarian Plate, or Kosher _____

Credit card Company: VISA:__AMEX:__MASTERCARD:____DINER'S CLUB:____

Credit Card Number: _____

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Signature: _____

Please mail or fax this registration form and your payment (checks made payable to "IEEE IPDS/TOOLS 2000") to:

Contact Address

for mail registration:

IPDS/TOOLS 2000 Registration
C/O MaryAnn Tarczon
Motorola
1303 East Algonquin Road - IL01/Annex 2
Schaumburg, IL 60196-1065, USA

for phone or fax: Phone: +1 847 538 4257, Fax: +1 847 576 4656

for email registration: Email:ARES18X@email.mot.com

Instructions

1. Please print this form, fill in the information requested, and mail the completed form and payment to the contact address indicated. Please submit a separate form for each individual.

2. Program registration includes three lunches, banquet, reception, breaks, and proceedings. Student registration does not include the banquet.

3. Payments by check must be in US funds and drawn on a US bank, or by certified check or bank draft, drawn in US dollars. Checks must be made payable to: IEEE IPDS/TOOLS 2000

4. Requests for refunds (less $50 handling charges) must be received in writing before February 20, 2000. No shows, no refund. Substitutes permitted.

5. Receipt of registration forms will be acknowledged by email only if the forms and payment are received by the early registration deadline.