

12th Annual IEEE  
**HOT**  
INTERCONNECTS

IEEE  
COMPUTER  
SOCIETY

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TCM  
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Technical Committee on  
Microprocessors and  
Microcomputers

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## Welcome to Day 1 of the 12th Annual IEEE Hot Interconnects Symposium

### Opening Remarks

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## OPENING REMARKS

8:30 - 8:45 AM

AUG 25, 2004

### General Co-Chairs

*Bryan Lyles*  
*Anne Watters*

### Program Co-Chairs

*James Sterbenz*  
*Dimitrios Stiliadis*



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## Bugger the buffers: How we fell in love with them, and why we need a divorce

**Nick McKeown**

*Associate Professor of  
Electrical Engineering and Computer Science  
Department of Electrical Engineering  
Stanford University*



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**Session Chair**  
*Fabrizio Petrini*

**A Localized Congestion Control Mechanism for PCI Express Advanced Switching Fabrics**  
*V. Krishnan, D. Mayhew (Stargen)*

**Performance Evaluation of Infiniband with PCI Express**  
*J. Liu, A. Mamidala, A. Vishnu, D. Panda (Ohio State University)*

**Performance Evaluation of the Cray XI Distributed Shared Memory Architecture**  
*T. Dunigan, J. Vetter, P. Worley (Oakridge National Labs)*

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## SESSION 2

### Packet Classification and Lookup

1:30 - 3:00 PM

AUG 25, 2004

#### Session Chair

*Bryan Lyles*

#### Efficient Multi-Match Packet Classification and Lookup with TCAM

*F. Yu, R. Katz (U.C. Berkeley)*

#### IPv4 Lookup Table Analysis and Non-Random Generator for IPv6 Tables

*M. Wang, S. Deering, T. Hain, L. Dunn (Cisco Systems)*

#### Efficient Prefix Cache for Network Processors

*M. Akhbarizadeh, M. Nourania (University of Texas, Dallas)*

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## SESSION 3

### Routers and Switches

3:30 - 5:00 PM

AUG 25, 2004

#### Session Chair

*John Lockwood*

#### Configuring a Load Balanced-Switch in Hardware

*S. Akerapudi, S-T. Chuang, I. Keslassy, N. Mckeown (Stanford University)*

#### Designing Packet Buffers with Statistical Guarantees

*G. Shrimali, I Keslassy, N. Mckeown (Stanford University)*

#### Efficient Multicast on a Terabit Router

*P. Bhargava, S. Krishnan, R. Panigrahy (Cisco Systems)*

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## PANEL DISCUSSION Multiprocessor Interconnects

6:30 - 8:00 PM

AUG 25, 2004

### High Performance Interconnects for Parallel Computers

**MODERATOR**

*Fabrizio Petrini*

**PANELISTS**

*Jose' Moreira, IBM Research*

*Jarek Nieplocha, Pacific Northwest National Laboratory*

*Mark Seager, Lawrence Livermore National Laboratory*

*Srinidhi Varadarajan, Virginia Tech*

*Craig Stunkel, IBM*

*Greg Thorson, SGI*

*Paul Terry, Cray*

*TJ Watson*