Dear Colleague,

I'm writing to invite you to attend the 3rd Virtual Machine Research & Technology Symposium (VM ’04), which will be held May 6–7, 2004, in San Jose, CA.

VM ’04 will continue to emphasize research and advanced engineering techniques applicable to the development of virtual machines, with an emphasis on experimental results. Building on the success of the two preceding Java™ Virtual Machine symposia, the 2004 VM Symposium has expanded its scope to encompass other types of virtual machines, such as Microsoft’s .NET initiative and low-level virtual machines.

The technical program of the symposium includes 14 papers that represent some of the best work in this area, on topics that include virtual machine architecture and performance, low-level virtualization, dynamic optimization, and virtual grids. The symposium will feature two Keynote Addresses, one by Mendel Rosenblum, Associate Professor of Computer Science, Stanford University, and one by Miguel de Icaza, Co-founder and CTO of Ximian. In addition, VM ’04 will feature Work-in-Progress Reports and several Birds-of-a-Feather sessions.

VM ’04 promises to be an exciting meeting, presenting the best of current research on virtual machines. I hope you will join us in San Jose. Please visit www.usenix.org/vm04/sj and register online today!

Sincerely,
Tarek S. Abdelrahman, University of Toronto
VM ’04 Program Chair

Hotel Information
Hotel Reservation Discount Deadline: April 16, 2004
Hyatt San Jose
Web site: http://hyattsanjose.hyatt.com
Rates: $109 single/double, $129 triple, $139 quad

Technical Session Registration Fees
Early Bird Rates (Register by April 19, 2004)
Member: $600
Nonmember: $710 *
Full-time Student Member: $260
Full-time Student Nonmember: $300 *
* Nonmember rates include a one-year USENIX membership.

Rates After April 19, 2004
Member: $750
Nonmember: $860 *
Full-time Student Member: $260
Full-time Student Nonmember: $300 *
* Nonmember rates include a one-year USENIX membership.

Register Online:
http://www.usenix.org/vm04/sj

Questions?
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Thanks to
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for support of student stipends
### WEDNESDAY, MAY 5

**6:00 p.m. – 8:00 p.m.** Welcome Reception

**8:45 a.m. – 10:30 a.m.**
**OPENING REMARKS, AWARDS, AND KEYNOTE**
Keynote Speaker: Mendel Rosenblum, Stanford University

**10:30 a.m. – 11:00 a.m. Break**

**11:00 a.m. – 12:30 p.m.**
**VIRTUAL MACHINE ARCHITECTURE**

**A Virtual Machine Generator for Heterogeneous Smart Spaces**
Doug Palmer, CSIRO ICT Centre

**MCl-Java: A Modified Java Virtual Machine Approach to Multiple Code Inheritance**
Maria Cutumisu, Calvin Chan, Paul Lu, and Duane Szafron, University of Alberta

**Semantic Remote Attestation—A Virtual Machine Directed Approach to Trusted Computing**
Vivek Haldar, Deepak Chandra, and Michael Franz, University of California, Irvine

**12:30 p.m. – 2:00 p.m. Lunch (on your own)**

**2:00 p.m. – 3:00 p.m.**
**VIRTUAL MACHINE PERFORMANCE**

**Towards Scalable Multiprocessor Virtual Machines**
Volkmar Uhlig, Joshua LeVasseur, Espen Skoglund, and Uwe Dannowski, Universität Karlsruhe

**Using Hardware Performance Monitors to Understand the Behavior of Java Applications**
Peter F. Sweeney, IBM Thomas J. Watson Research Center; Matthias Hauswirth, University of Colorado at Boulder; Brendon Cahoon and Perry Cheng, IBM Thomas J. Watson Research Center; Amer Diwan, University of Colorado at Boulder; David Grove and Michael Hind, IBM Thomas J. Watson Research Center

**3:00 p.m. – 3:30 p.m. Break**

**3:30 p.m. – 4:30 p.m.**
**VIRTUALIZATION**

**vBlades: Optimized Paravirtualization for the Itanium Processor Family**
Daniel J. Magenheimer and Thomas W. Christian, Hewlett Packard Laboratories

**Kernel Plugins: When a VM Is Too Much**
Ivan Ganev, Greg Eisenhauer, and Karsten Schwan, Georgia Institute of Technology

### THURSDAY, MAY 6 (CONTINUED)

**4:30 p.m. – 5:30 p.m.**
**CODE GENERATION**

**The Virtual Processor: Fast, Architecture-Neutral Dynamic Code Generation**
Ian Piumarta, University of Paris 6

**LIL: An Architecture-Neutral Language for Virtual-Machine Stubs**
Neal Glew, Intel Corporation; Spyridon Triantafyllis, Princeton University; Michal Cierniak, Microsoft Corporation; Marsha Eng, Brian Lewis, and James Stichnoth, Intel Corporation

**6:00 p.m. – 7:30 p.m.** Reception

**8:00 p.m. – 10:00 p.m.** Birds-of-a-Feather Sessions

### FRIDAY, MAY 7

**9:00 a.m. – 10:30 a.m.**
**KEYNOTE ADDRESS**
Speaker: Miguel de Icaza, Co-Founder and CTO, Ximian

**10:30 a.m. – 11:00 a.m. Break**

**11:00 a.m. – 12:30 p.m.**
**DYNAMIC TECHNIQUES**

**Detecting Data Races Using Dynamic Escape Analysis Based on Read Barrier**
Hiroyasu Nishiyama, HITACHI, Ltd.

**Towards Dynamic Interprocedural Analysis in JVMs**
Feng Qian and Laurie Hendren, McGill University

**Java Just-in-Time Compiler and Virtual Machine Improvements for Server and Middleware Applications**
Nikola Grcevski, Allan Kielstra, Kevin Stoodley, Mark Stoodley, and Vijay Sundaresan, IBM Canada Ltd.

**12:30 p.m. – 2:00 p.m.** Symposium Luncheon

**2:00 p.m. – 3:30 p.m.** Work-in-Progress Reports (WiPs)

**3:30 p.m. – 4:00 p.m.** Break

**4:00 p.m. – 5:00 p.m.**
**VIRTUAL GRIDS**

**Java, Peer-to-Peer, and Accountability: Building Blocks for Distributed Cycle Sharing**
Ali Raza Butt, Xing Fang, Y. Charlie Hu, and Samuel Midkiff, Purdue University

**Towards Virtual Networks for Virtual Machine Grid Computing**
Ananth I. Sundararaj and Peter A. Dinda, Northwestern University

**5:00 p.m.** Wrap-up and Town Hall Discussion

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http://www.usenix.org/vm04/sj