

# HPSR2002

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## 1. Introduction

The Workshop on High-performance Switching and Routing was held from May 26 to 29, 2002 in Kobe, Japan. The workshop title was Merging Optical and IP Technology. The 8th international workshop on HPSR was successfully closed with a new record for the number of attendees.

This workshop is one of the largest and best established workshops in the area of high speed communications. This year is the eighth anniversary since 1995, and the 3rd workshop after its name was changed from ATM to High Performance Switching and Routing. The workshop has been alternating among North America, Europe, and Asia.

Name: HPSR2002

Sponsor: IEICE Communication Society

Technical Co-sponsor: IEEE Communication Society



Workshop Hotel (Portpia Hotel)

## 2. Statistics

Papers submitted	111
Papers accepted	59 (45 orals, 14 posters)
Interactive demo sessions	14
Number of attendees: total	204
* Full registration	= 194
* Interactive domo only ticket	= 5
* Tutorial only ticket	= 5

We have been delighted by the overwhelming response, especially since we were initially worried about the influence of the current economic downturn as well as the effects of the September 11<sup>th</sup> attack on the participation in international conferences. Despite all that, over 110 contributions were submitted for the Technical Sessions from 20 countries. After more than 300 individual reviews performed by the TPC members and other experts, 59 submissions were accepted for presentation at the conference. The 59 papers consist of 45 regular presentations and 14 poster presentations. In addition the program includes 4 half-day tutorials, 1 keynote speech, and 2 invited talks. As shown in Fig. 1, an almost equal number of contributions has been accepted from North America, Europe, and Asia. One notable trend in the program is, that, whereas until four years ago there were many performance evaluation papers, we now see more papers on optical networking and technologies such as IP and MPLS as shown in Fig. 2. However, as in the past, many high quality papers on performance evaluation and traffic control are also included in the program. Furthermore, we have grouped 14 papers that will stimulate face-to-face discussions into a special poster session and 14 interactive demo session. These poster and demo sessions have been provided with sufficient time so that your questions, comments and suggestions, can be

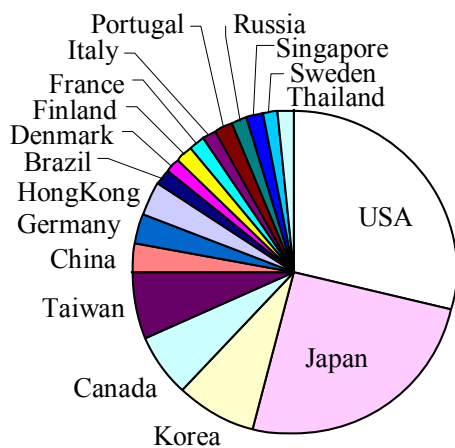


Fig. 1 Distribution of Accepted Papers by Country

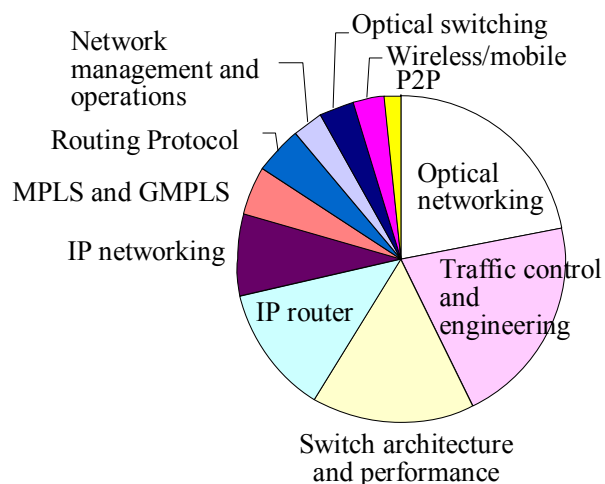


Fig. 2 Distribution of Accepted Papers by Subject

raised.

### 3. Program overview

- 26<sup>th</sup> Sunday
  - Tutorial 1: "Scheduling algorithms for input-queue IP routers" Marco Ajmone Marsan (Politecnico di Torino), Paolo Giaccone
  - Tutorial 2: "Peer-to-peer communications" Takashige Hoshiai (NTT)
  - Tutorial 3: "Mobile Internet and Next Generation Wireless Networks" Abbas Jamalipour (U. of Sydney)
  - Tutorial 4: "IP over WDM", Hussein T. Mouftah (Queen's Univ)
- 27<sup>th</sup> Monday
  - Opening, Chair: Prof. Kenichi Kitami, Tokyo University of Technology, Japan, Organizing Committee Chair
  - Welcome Remarks: Prof. Tomonori Aoyama, University of Tokyo, The General Chair of the HPSR2002
  - Program overview: Dr. Naoaki Yamanaka, NTT Network Innovation Laboratories, NTT Corporation, Technical Program Committee Co-Chair
  - Keynote, Building a Reliable and Scalable Internet: Applications, Equipment, and Technology Dr. Christopher Gunner, Senior Vice-President Research and Development, Avici Systems, USA
  - Hot Topics Session
    - Session 1A IP Routing and Traffic Control
    - Session 1B Switch Architecture/Scheduling I
    - Session 2A Optical Protection/ Routing
    - Session 2B IP Table Lookup
  - The ATM Forum
  - Reception(Portopia Hotel)



Keynote (Dr. Christopher Gunner)

- 28<sup>th</sup> Tuesday
  - Invited Speech I, Chair: Prof. Tatsuro Takahashi, Kyoto University, Japan
    - ✧ "Making Light Work of the Future IP Network" Dr. Ken-ichi Sato, Executive Manager, NTT Network Innovation Laboratories, NTT Corporation, Japan
  - Invited Speech II, Chair: Prof. Tatsuro Takahashi, Kyoto University, Japan
    - ✧ "Internet Routers and Optical Technology" Professor Nick McKeown, Stanford University, USA
  - Session 3A Optical Internet/GMPLS
  - Session 3B Switch Router Architecture
  - Panel Discussion "Next Generation Mobile Internet Technology"
  - Interactive Demo
    - ✧ Agilent Technologies, RouterTester 900/Distributed Network Analyzer VQT/Multi-rate 10 G Tester
    - ✧ Anritsu Corporation, IP Traffic Performance Test for



Interactive Demo Booth, Vitesse Corp.

- Video System/43.5 Gbps BERT System
- ✧ Association of Super-Advanced Electronics Technologies (ASET), Opto-electronics Packaging Technology for the last 1 m
- ✧ Erlang Technology, Erlang 40 Gb/s Full-duplex Multi-services Router Reference System
- ✧ Fujitsu Laboratories LTD., Acousto-Optic Tunable Filter (AOTF)
- ✧ Hitachi, Ltd., RHINET-3/SW: High Performance Optical Network Switch for Parallel Computing Environment
- ✧ Japan Aviation Electronics Industry, Limited, Small 4 Channel 2 x 2 MEMS Optical Switch
- ✧ NEC Networks, High Performance Demonstration in Optical-IP Merged Network
- ✧ NTT Access Network Service Systems Laboratories, NTT Corp., IEEE 802.11a-Compliant High-Speed Wireless LAN
- ✧ NTT Electronics Corporation, Reliable PLC Thermo-Optic Switches for Optical Network Systems
- ✧ NTT Network Service Systems Laboratories, NTT Corp., High-speed core router, Type-X
- ✧ OKI Electric Industry Co., Ltd., xDSL on Fiber system (Art Fiber system)
- ✧ Spirent/TOYO/NTT-AT, Performance evaluation of Layer 3 switch using SmartBits and evaluation of router's convergence using AX/4000
- ✧ VITESSE, PaceMaker™: OC-48 Traffic Management Engine Demo
- Poster Session

- 29<sup>th</sup> Wednesday
  - Session 4A Diffserv/IP QoS
  - Session 4B Optical Switch
  - Session 5A TCP/IP Flow Control
  - Session 5B Switch Architecture/Scheduling II
  - Closing
  - Technical Visit

This HPSR was the 8th such meeting, and topics moved from ATM performance to IP and photonics networks. The workshop is one of the largest and best established workshops in the communication area.

I'd like to thank all of you including the participants, paper authors, demo presenters, invited speakers, Key note speakers, and committee members, HPSR 2002 has been a great success.

\*Presentation materials Proceedings CD are available at <<http://www.ieice.org/hpsr2002/>>.