

# NOSSDAV 2005

**Skamania,  
Washington**

**June 13th-14th, 2005**

An ACM event sponsored by  
SIGMultimedia and in cooperation  
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Welcome to the NOSSDAV 2005 website. NOSSDAV 2005 will be held along the beautiful Columbia River Gorge in Skamania, Washington (about 30 miles east of Portland, Oregon) June 13th-14th, 2005.

In its 15th year, the International Workshop on Network and Operating Systems Support for Digital Audio and Video has a long and successful history of bringing together the top researchers, students, developers, and practitioners from academia and industry to discuss new ideas and future directions in multimedia applications, networking, operating systems, and other related areas of computing. Over the years, the scope of NOSSDAV has broadened to include networked games, sensor networks, multimedia interfaces, and peer-to-peer networking. For 2005, we will continue NOSSDAV's emphasis on emerging research areas and fostering extensive discussion of current and future research directions.

We are very excited to be continuing the NOSSDAV tradition and look forward to your participation. If you have any questions or comments, please feel free to contact the program co-chairs at the following email addresses:

- Ketan Mayer-Patel: kmp at email.unc.edu
- Wu-Chi Feng: wuchi at cse.ogi.edu

## Important Dates

- February 21, 2005  
Paper registration deadline (abstract and title only).
- February 28, 2005  
Paper submission deadline (full papers).

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For fifteen years, NOSSDAV has fostered cutting-edge state-of-the-art research in multimedia and newly emerging areas such as networked games and peer-to-peer streaming. The workshop environment encourages lively discussion among participants and invites strong feedback for work in progress. For 2005, NOSSDAV will take place in Skamania, Washington. Located along the beautiful Columbia River about 30 miles east of Portland, Oregon, Skamania offers a variety of outdoor activities including golf, river rafting, kayaking, hiking, and quaint riverfront towns steeped in Lewis-and-Clark-era history.

NOSSDAV invites submissions on all areas of multimedia computing and networking and strongly encourages work in progress in emerging areas. Papers grounded in high-quality experimental research based on prototype and real systems are highly valued. Additionally, papers proposing new directions for research or calling into question existing conventional wisdom are welcomed. Topics of interest include, but are not limited to:

- **Peer-to-peer streaming**
- **Networked games**
- **Wireless and mobile multimedia systems**
  - 3D multimedia and tele-immersion
  - Streaming 3D graphics and virtual worlds
  - Sensor networks and architectures
- In-network stream processing
- Application-level multicast
- Multimedia security
- Digital rights management
- Real-time operating system support for multimedia
- Multimedia middleware and frameworks

New for this year are three topic-specific sessions on **peer-to-peer streaming, networked games, and mobile media**. These sessions will include an invited paper from leading researchers and discussion panels. Papers in these three areas are strongly encouraged. A broad view will be taken in deciding what topics are within scope. Please feel free to contact the workshop co-chairs if you are unsure and wish to check if a particular paper or topic is within the workshop scope.

As always, student participation is strongly encouraged. To encourage a good mix

of seasoned researchers as well as students, we will be offering discounted registration for student members who attend with their faculty advisor.

Submissions (as well as the camera ready final versions of accepted papers) should be no longer than 6 pages. We expect these submissions to be the kernel of what will eventually lead to full-length papers at high-quality conferences or journals.

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## Program Co-Chairs:

Wu-Chi Feng

Ketan Mayer-Patel

Portland State University (USA)

University of North Carolina, Chapel Hill (USA)

## Program Committee:

Kevin Almeroth

Surendar Chandra

Wu-Chang Feng

Carsten Griwodz

Kevin Jeffay

Andreas Maute

Reza Rejaie

Henning Schulzrinne

Prashant Shenoy

Cormac Sreenan

Ooi Wei Tsang

Jon Walpole

Dongyan Xu

University of California, Santa Barbara (USA)

Notre Dame (USA)

Portland State University (USA)

University of Oslo (Norway)

University of North Carolina, Chapel Hill (USA)

Lancaster University (UK)

University of Oregon (USA)

Columbia University (USA)

University of Massachusetts, Amherst (USA)

University College Cork (Ireland)

National University of Singapore (Singapore)

Portland State University (USA)

Purdue University (USA)

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The workshop will be held in the [Dolce Skamania Lodge](#) in Skamania, Washington (30 miles east of Portland, Oregon). We have negotiated a special rate from the lodge and strongly encourage workshop participants to take advantage of it.

## Getting to Skamania

A number of shuttle companies and car services are available to arrange transportation from the Portland airport and the Lodge if you do not want to rent a car. Several are listed below:

- Columbia Crossroads, Inc.  
503-225-9995  
[www.columbia-crossroads.com](http://www.columbia-crossroads.com)
- Blue Star Shuttle  
503-249-1837 or 800-247-2272  
[bluestarbus.com](http://bluestarbus.com)
- My Chauffeur Transportation Co.  
503-969-4370  
[www.mychauffeur.ws](http://www.mychauffeur.ws)
- NW Express  
800-743-3739  
(Requires advance reservations)
- Cascade Executive Services, Inc.  
360-424-1337
- Raz Transportation  
(Large group transportation)  
888-684-3322
- Prestige Transportation Group  
Limousines, Lincoln Town Cars, Luxury Vans  
503-282-5009

## Accommodations

We have pre-negotiated rates for two different types of rooms at the Dolce Skamania Lodge.

Room Type	Price
Superior	\$159
Deluxe	\$189

For more information about the room types and to reserve a room, please contact Dolce Skamania Lodge Reservations at 1-800-221-7117. Mention the conference name in order to get the negotiated rates.

Please note that reservations need to be made by May 11.

## **Meals**

A luncheon and a dinner on Monday will be served as part of the program and is included with your registration.

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## Instructions for Accepted Authors

We are working with the Sheridan Printing Company in order to produce the workshop proceedings. Below is a link to the instructions provided by Sheridan for submitting camera ready versions of your paper. Please note that the due date for camera ready versions is April 22, 2005.

[Click here to go to the Sheridan's instructions for NOSSDAV authors.](#)

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**Monday, June 13**

**9:00 - 10:30**

**Network Gaming**

Supporting P2P Gaming When Players Have Heterogeneous Resources

Mitigating Information Exposure to Cheaters in Real-Time Strategy Games

A Traffic Model for the Xbox Game Halo 2

Game Traffic Analysis: An MMORPG Perspective

**10:45 - 11:45**

**Keynote: Harrick Vin**

Harrick Vin is a Professor in the Department of Computer Sciences at the University of Texas at Austin. He is the founding Director of the Distributed Multimedia Computing Laboratory and the co-Director of the Laboratory of Advanced Systems Research (LASR) at UT Austin. His research interests are in the areas of networks, operating systems, distributed systems, and multimedia systems.

He has co-authored more than 100 papers in leading journals and conferences. Harrick has been a recipient of several awards including the Faculty Fellow in Computer Sciences, Dean's Fellowship, National Science Foundation CAREER award, IBM Faculty Development Award, Fellow of the IBM Austin Center for Advanced Studies, AT&T Foundation Award, National Science Foundation Research Initiation Award, IBM Doctoral Fellowship, NCR Innovation Award, and San Diego Supercomputer Center Creative Computing Award.

He received his Ph.D. in Computer Science from the University of California at San Diego in 1993.

**13:15 - 14:30**

**Wireless**

ACE: An Active, Client-Directed Technique for Reducing WNIC Energy During Web Browsing

Weather Forecasting - Predicting Performance for Streaming



Video over Wireless LANs

Power-efficient Streaming for Mobile Terminals

14:45 - 16:15

Audio

Multi-Context Voice Communication In A SIP/SIMPLE-Based Shared Virtual Sound Room With Early Reflections

1-800-OVERLAYS: Using Overlay Networks to Improve VoIP Quality

A Formal Approach to Design Optimized Multimedia Service Overlay

Peer-to-Peer Internet Telephony using SIP

16:30 - 17:45

Content Analysis

A Novel Encryption Algorithm for High Resolution Video

Context-Aware Metadata Creation in a Heterogeneous Mobile Environment

RETAVIC: Using Meta-Data for Real-Time Video Encoding in Multimedia Servers

Tuesday, June 14

8:15 - 9:45

Peer-to-Peer

Using N-Tress for Scalable Event Ordering in Peer-to-Peer Games

Natural Selection in P2P Streaming: From the Cathedral to the Bazaar

MOPAR: A Mobile Peer-to-Peer Overlay Architecture for Interest Management of Massively Multiplayer Online Games

Mirinae: A Peer-to-Peer Overlay Network for Large-Scale Content-based Publish/Subscribe Systems

10:00 - 11:30

Streaming

Adjusting Forward Error Correction with Quality Scaling for Streaming MPEG

Retransmission in Distributed Media Streaming

Impact of FEC Overhead on Scalable Video Streaming

Real-Time Monitoring of Video Quality in IP Networks

13:00 - 14:15

Multimedia Sensing

Dissecting the Video Sensing Landscape

The Case for Multi-tier Camera Sensor Networks

A Bandwidth Management Framework for Wireless Camera Array

14:30-16:00

Operating Systems

Efficient Operating System Support for Group Unicast

KStreams: Kernel Support for Efficient Data Streaming in Proxy Servers

Meeting CPU Constraints by Delaying Playout of Multimedia Tasks: An Analytical Framework

Platform Overlays: Enabling In-Network Stream Processing in Large-scale Distributed Applications

16:15 - 5:45

Services

Interactive Media Server with Media Synchronized RAID Storage System

Facilitating Robust Multicast Group Management

Hierarchical Disk Sharing for Multimedia Systems and Servers

## Online Scheduling in Modular Multimedia Systems with Stream Reuse