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NOSSDAV 2003

13th International Workshop on
Network and Operating Systems
Support for Digital Audio and Video
June 1-3, 2003

Monterey, California
Co-located with [IWQoS](#)

Welcome to NOSSDAV - the workshop on Network and Operating Systems Support for Digital Audio and Video, for the year 2003. The 13th International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV) brings together researchers, developers and practitioners from academia and industry to present and discuss new ideas and future directions in networking and operating systems support for all forms of networked human interaction. From large immersive environments to portable wireless multimedia devices, NOSSDAV covers a broad spectrum of cutting edge multimedia research that strongly impacts infrastructure and the human experience.

For 12 years, NOSSDAV has proven to be an outstanding forum for researchers and developers involved in building innovative multimedia systems, networks, and applications. NOSSDAV is strategically positioned at the boundaries of applications and the operating system/network, bridging the gap between highly demanding applications and the infrastructure.

Important Dates

Submission Deadline (HARD): **February 14, 2003 (midnight PST)**

Acceptance Notification: March 31, 2003

Camera Ready Deadline: April 21, 2003

(Submit Camera Ready papers [here](#)... Find sample templates [here](#))

Hotel Cut off Date: May 10, 2003

Workshop: June 1-3, 2003

Keynote Speaker: [Mostafa H. Ammar](#)

Title: [Why Johnny Can't Multicast:
Lessons about the Evolution of the Internet](#)





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NOSSDAV 2003 Call for Papers

Printer-friendly call for papers: [[Text](#)] [[PDF](#)]

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To ensure a productive workshop environment, attendance will be limited to about 75 participants who are active in the field. A key aspect of the workshop is that it provides extensive discussion periods during which attendees can informally discuss their current work and future research directions. Traditionally, NOSSDAV has emphasized high quality experimental research based on prototype or real systems. NOSSDAV 2003 will continue this tradition.

Submissions

Submissions are sought in any area related to Network and Operating Systems Support for Digital Audio and Video. The topics of interest include, but are not limited to:

- ubiquitous multimedia services
- peer-to-peer multimedia services
- Internet telephony
- broadband streaming media content distribution
- 3D multimedia and (networked) immersive environments
- interactive network games
- wireless and ad-hoc network multimedia systems
- multimedia information appliances and consumer devices
- collaborative conferencing
- wireless multimedia
- access grids
- embedded multimedia devices (e.g., PVRs)
- multimedia security
- sensory interactive applications
- digital rights management

We solicit submissions of 5-page extended abstracts of technical papers, work-in-progress

reports, and position statements. Papers should identify new problems and explain why they are important, challenge conventional wisdom, advocate a specific solution, and/or report on actual experience with real systems. All submissions will be reviewed by the members of the program committee. Submissions will be selected on the basis of their originality, technical merit and topical relevance, as well as the likelihood that the ideas will lead to insightful technical discussions. Papers submitted to NOSSDAV must not have been published or submitted elsewhere. Please do not submit abbreviated versions of journal or conference papers.

Authors of accepted papers will be invited to present at the workshop and publish full-length versions of their papers in the workshop proceedings.

All submissions must be made through the web. We suggest that authors use the two-column ACM format for the submissions. Detailed paper submission guidelines will be available here in January.

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Workshop: June 1 - 3, 2003

NOSSDAV 2003 Organizing Committee

- Program Co-Chair: [Christos Papadopoulos](#), University of Southern California
- Program Co-Chair: [Kevin Almeroth](#), UC-Santa Barbara

Program Committee

| | |
|----------------------------------------|-------------------------------------------|
| Mostafa Ammar | Georgia Tech |
| Supratik Bhattacharyya | Sprint ATL |
| Zongming Fei | Univ of Kentucky |
| Wu-chi Feng | Oregon Graduate Institute |
| Leana Golubchick | USC |
| Charles Kalmanek | AT&T Labs |
| Robin Kravets | Univ of Illinois |
| Ketan Mayer-Patel | UNC |
| Sue Moon | Sprint ATL |
| Jason Nieh | Columbia |
| Venkata Padmanabhan | Microsoft Research |
| Sanjoy Paul | Bell Labs |
| Reza Rejaie | University of Oregon |
| Colin Perkins | ISI |
| Larry Rowe | UC-Berkeley |
| Henning Schulzrinne | Columbia University |
| Clay Shields | Georgetown University |
| Cormac Sreenan | University College Cork |
| David Yau | Purdue University |
| Daniel Zappala | University of Oregon |

Webmaster

[Adnan Mahmud](#), University of Southern California

[Hotel Information](#)

[Sight Seeing](#)

[Directions and Maps](#)



**[Doubletree
Monterey](#)**

**2 Portola Plaza,
Monterey, CA 93940**
Phone: **(831) 649-4511**
Fax: **(831) 649-4115**

Hotel Information

(Cut Off Date: May 10, 2003)

The [Monterey Doubletree](#) is located in the heart of downtown Monterey, just a few minutes' walk from the Monterey Aquarium and Fisherman's wharf in [downtown Monterey](#). It is around 60 miles south of San Jose, 120 miles south of San Francisco, and 340 miles north of Los Angeles.

There are regular shuttles to and from San Jose and San Francisco airports. Shuttles cost \$30 per person, one-way; the shuttles take 1.75 hours to San Jose airport, and 2.5 hours to San Francisco airport. More information about the shuttles can be found on the [Monterey Airbus web site](#).

The hotel has 380 guest rooms and suites, of which 355 are non-smoking rooms. There are 8 handicapped-accessible guest rooms, and all meeting rooms and public outlets are wheelchair accessible. There is a fitness center, a pool, and a jacuzzi. Room rates are \$149 for both single and double rooms. Hotel parking is \$12/day (self) or \$14/day (valet, for 24 hours). You can visit the [hotel website](#). All reservations must be made by calling the hotel. Please use the group name NOSSDAV when making your reservations.

Driving maps and directions from [San Francisco to Monterey](#) (pdf, 217 kB) and from [Monterey airport to Doubletree Hotel](#) (pdf, 335 kB). More maps and directions available in the [Direction and Maps](#) section.





NOSSDAV 2003 Paper Submission

NOSSDAV only reviews and publishes original work not currently under consideration elsewhere, as described below. Papers not meeting these criteria will be withdrawn from the conference without review as soon as the conflict comes to the attention of the program committee.

Papers must be submitted electronically in the manner and format detailed below. Authors for whom this presents a severe problem should contact one of the technical program committee co-chairs to discuss alternatives.

The submission deadline is Feb. 14, 2003 (midnight PST).

Papers must be formatted according to the [IEEE](#) or [ACM](#) standard double-column format. We suggest the use of 11pt font size.

LaTeX, Framemaker and Microsoft Word files cannot be accepted. **You must submit PDF or PostScript.**

Papers with more than 5 pages will not be reviewed.

To register and submit a paper, please go to the [electronic submissions page](#).

Submit Camera Ready papers [here](#). You will find [sample Camera Ready templates here](#).

Dual Submission Policy

It is in the interest of NOSSDAV and its attendees that material presented at NOSSDAV has not been published elsewhere. Also, reviewing the same material twice wastes scarce reviewer resources. Waiting for NOSSDAV reviews can significantly improve a potential journal submission and avoids that two different sets of reviewers make similar recommendations.

Given these motivations, the following policies hold:

- Once submitted to NOSSDAV, a paper cannot be submitted to another workshop, conference or journal until the NOSSDAV acceptance decision is known.
- A paper that is under consideration elsewhere, including a workshop or journal, cannot be submitted to NOSSDAV.
- If material has appeared or is likely to appear in a workshop, the paper should indicate so. This is only acceptable if the NOSSDAV paper provides substantial additional results compared to the earlier or pending publication or if the workshop produced no printed proceedings.

PROGRAM SCHEDULE

Sunday June 1:

5:00 PM Registration (there will be NO reception)

Monday June 2:

08:00 AM Registration
08:00-09:00 AM Breakfast
09:00-10:00 AM [Session 1 \(Keynote\)](#)
10:00-10:30 AM Break
10:30-12:30 PM [Session 2 \(Content Management\)](#)
12:30-2:00 PM Lunch
02:00-03:30 PM [Session 3 \(Video Adaptation\)](#)
03:30-04:00 PM Break
04:00-05:00 PM [Session 4 \(Conferencing\)](#)

Tuesday June 3:

08:00 AM Registration
08:00-09:00 AM Breakfast
09:00-10:00 AM [Session 5 \(User Perception in Audio\)](#)
10:00-10:30 AM Break
10:30-Noon [Session 6 \(QoS and Congestion Control\)](#)
Noon-01:30 PM Lunch
01:30-03:30 PM [Session 7 \(Peer to Peer Systems\)](#)

Full listing of all the [accepted papers](#).

NOSSDAV 2003 Registration Form

You may register by filling the registration form below and submitting it via email, regular mail or fax. An ASCII version of the form can be found [here](#).

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Ms. Kusum Shori Attn: NOSSDAV Registration Computer Science Department University of Southern California 941 W. 37th Place Los Angeles, CA 90089-0781 USA | Email: kusum@usc.edu Voice: +1 213-740-7286 FAX: +1 213 740-7512 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|

NOSSDAV 2002 REGISTRATION FORM

First Name: _____

Last Name: _____

Affiliation: _____

Email: _____

Street Address: _____

City: _____ State/Province: _____

Zip/Postal Code: _____ Country: _____

Telephone: _____ FAX: _____

ACM Member? Yes ___ ACM #: _____ No ___

Full-time Student? ___ Yes ___ No [Students must supply evidence of student status (e.g. student ID) at the conference]

DIETARY RESTRICTIONS: Vegetarian Other (specify): _____

PAYMENT INFORMATION:

| Registration Fees | On or Before May 10, 2003 | After May 10, 2003 |
|-------------------|---------------------------|--------------------|
| ACM Member | \$400 | \$450 |
| Non-ACM Member | \$450 | \$500 |
| Student | \$300 | \$350 |

Payment Method (check one): Check Money Order Credit Card

Check or money order must be made in US dollars, payable to: ACM NOSSDAV 2003.
For credit card transactions please fill out the information below:

Credit Card (check one): Visa MasterCard American Express

Credit card number: _____

Expiration Date: _____

Name on the credit card: _____

Total Charges Authorized (see chart above): _____

Signature: _____

Please note that any credit card information you fax or sent via physical mail will be entered on-line into a secure payment server for processing. Signing above also indicates your approval of this transmission.

For further information please contact the program chairs:

[Christos Papadopoulos](#) and [Kevin Almeroth](#)

Why Johnny Can't Multicast: Lessons about the Evolution of the Internet

[Mostafa H. Ammar](#)

College of Computing
Georgia Tech

Abstract:

The need to support multicast (or multipoint) communication in the Internet has been recognized for a long time. Significant effort has been expended over the last three decades by networking researchers and practitioners in designing and building multicast support capability within the Internet. In addition, several research efforts have demonstrated that highly scalable and desirable multimedia and information services can be deployed on top of a multicast-capable Internet infrastructure. Despite this, wide-spread availability and use of multicast communication is lacking in the Internet today. In this talk I will consider the history of multicast communication and services. This will be done in the context of an evolutionary model that explains the current state of multicast deployment. This exploration allows us to draw some lessons regarding the evolution of the Internet and how our approach to research and deployment can affect this evolution.

Bio:

Mostafa H. Ammar is a Professor with the College of Computing at Georgia Tech where he has been since 1985. His research interests are in the area of computer network architectures, protocols and services. He received the S.B. and S.M. degrees from the Massachusetts Institute of Technology in 1978 and 1980, respectively and the Ph.D. in Electrical Engineering from the University of Waterloo, Ontario, Canada in 1985. He was the co-recipient of the Best Paper Awards at the 7th WWW conference for the paper on the "Interactive Multimedia Jukebox" and the 2002 Parallel and Distributed Simulation (PADS) conference for the paper on "Updateable Network Simulation". He has served as the Editor-in-Chief of the IEEE/ACM Transactions on Networking since 1999. He is also a Fellow of the IEEE.

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The 13th International Workshop on Network and Operating Systems Support for Digital Audio and Video

(NOSSDAV 2003)

June 1-3, 2003 -- California, USA

CALL FOR PAPERS

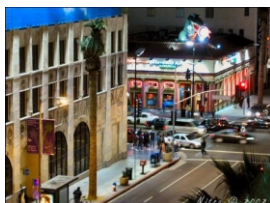
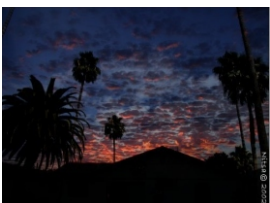
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- * access grids
- * embedded multimedia devices (e.g., PVRs)
- * multimedia security
- * sensory interactive applications
- * digital rights management

For more information please go to <http://www.nossdav.org/2003>.

The co-chairs,
Christos Papadopoulos, USC, <christos@isi.edu>
Kevin Almeroth, UCSB, <almeroth@cs.ucsb.edu>



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[Hotel Information](#)

[Sight Seeing](#)

[Directions and Maps](#)



Sightseeing Information

There is a significant variance in temperatures and weather patterns throughout Monterey County. The coastal areas are very mild, averaging 57 degrees year-round. In summer, fog is prevalent. The spring and fall ordinarily enjoy warm, clear days and cool evenings. Inland temperatures tend to be more extreme with more heat and sun in the summer months and the "rainy season" occurs between November and April. The warmest sunniest weather is in autumn. The visitors to Monterey County are advised to dress in layers, since the climate will vary within the county and from day to day. Light to medium weight clothes are appropriate year-round and sweaters, jackets and coats are advisable.

Historic Monterey is located at the southernmost curve of the beautiful Monterey Bay.

Walking the streets of Monterey on the Path of History is a journey back through time. Old adobes have been lovingly restored to recall the days when our city was capital of the Spanish territory of California, as have those historic buildings dating from Monterey's time as California's first state capital. The history of Monterey as a sea town is evident at Cannery Row, Fisherman's Wharf and the Monterey Bay Aquarium. The Maritime Museum houses a complete Visitors Information Center that's open every day. Photos and exhibits depict Monterey's seafaring heritage.

Mazda Raceway at Laguna Seca is home to five major racing events including the World Superbike Championships and the Honda Grand Prix. Top-name drivers and cyclists have maneuvered its twists and turns to the vocal accompaniment of excited spectators.

More information about Monterey can be found [here](#).

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[Sight Seeing](#)

[Directions and Maps](#)

Direction and Maps

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More [directions](#) to the Doubletree Hotel.

Mapquest map for Monterey area is available [here](#).

A good interactive map of the [Monterey County](#).

ACCEPTED PAPERS

Session 1: Keynote

Why Johnny Can't Multicast: Lessons about the Evolution of the Internet
- Mostafa H. Ammar

Session 2: Content Management

Design and Implementation of a Distributed Content Management System.
- Chuck Cranor, Rick Ethington, Amit Sehgal, David Shur, Cormac Sreenan, Kobus van der Merwe

MediSyn: A Synthetic Streaming Media Service Workload Generator.
- Wenting Tang, Yun Fu, Lucy Cherkasova, Amin Vahdat

Adaptive and Lazy Segmentation Based Proxy Caching for Streaming Media Delivery.
- Songqing Chen, Bo Shen, Susie Wee, Xiaodong Zhang

Dynamic Program Insertion in High Quality Video over IP.
- Taehyun Kim, Jack Brassil

Session 3: Video Adaptation

User-Perceived Quality-Aware Adaptive Delivery of MPEG-4 Content.
- Liam Murphy, Nicola Cranley, Philip Perry

Receiver Initiated Just-in-Time Tree Adaptation for Rich Media Distribution.
- Zhichen Xu, Chunqiang Tang, Sujata Banerjee, Sung-Ju Lee

Quality-Adaptive Media Streaming by Priority Drop.
- Charles Krasic, Jonathan Walpole, Wu-chi Feng

Session 4: Conferencing

A Protocol for Reliable Decentralized Conferencing.
- Jonathan Lennox, Henning Schulzrinne

Ubiquitous Computing Using SIP.
- Stylianos Sidiropoulos, Xiaotao Wu, Stefan Berger, Henning Schulzrinne

Session 5: User Perception in Audio

A Source and Channel Rate Adaptation Algorithm for AMR in VoIP Using the Emodel.
- Johnny Matta, Christine Pepin, Khosrow Lashkari, Ravi Jain

Loss Concealment for Multi-Channel Streaming Audio.
- Rishi Sinha, Christos Papadopoulos, Chris Kyriakakis

Session 6: QoS and Congestion Control

Analysis of rate-distortion functions and congestion control in scalable Internet video streaming.

- Min Dai, Dmitri Loguinov

A model for MPEG with Forward Error Correction and TCP-Friendly Bandwidth.

- Huahui Wu

Improving TCP Smoothness by Synchronized and Measurement-based Congestion Avoidance.

- Chi Zhang, Vassilis Tsaoussidis

Session 7: Peer to Peer Systems

A Reputation System for Peer-to-Peer Networks.

- Minaxi Gupta, Paul Judge, Mostafa Ammar

PALS: Peer to Peer Adaptive Layered Streaming.

- Reza Rejaie, Antonio Ortega

Layered Peer-to-Peer Streaming.

- Yi Cui, Klara Nahrstedt

Borg: a Hybrid Protocol for Scalable Application-level Multicast in Peer-to-Peer Networks.

- Rongmei Zhang, Y. Charlie Hu

To register, print and complete the form below and mail or FAX, to:

Ms. Kusum Shori

Email: kusum@usc.edu

Attn: NOSSDAV Registration

Voice: +1 213-740-7286

Computer Science Department

FAX: +1 213 740-7512

University of Southern California

941 W. 37th Place

Los Angeles, CA 90089-0781

USA

NOSSDAV 2002 REGISTRATION FORM

First Name: _____

Last Name: _____

Affiliation: _____

Email: _____

Street Address: _____

City: _____ State/Provence: _____

Zip/Postal Code: _____ Country: _____

Telephone: _____ FAX: _____

ACM Member? Yes___ ACM #: _____ No___

Full-time Student? ___ Yes ___ No [Students must supply evidence of student status (e.g. student ID) at the conference]

DIETARY RESTRICTIONS: Vegetarian Other (specify): _____

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