

MTNS  
2006

# Seventeenth International Symposium on Mathematical Theory of Networks and Systems

July 24-28, 2006

Kyoto International Conference Hall, Kyoto, Japan

<http://www-ics.acs.i.kyoto-u.ac.jp/mtns06/>

## Call for Participation



MTNS is a prime conference in the general area of mathematical systems and control theory. The symposium is interdisciplinary and attracts mathematicians, engineers and researchers working in any aspect of system theory. MTNS 2006 will be held at the Kyoto International Conference Hall in July 2006. The symposium program will include plenary lectures, special topic invited lectures, mini-symposia, mini-courses, special topic sessions and contributed papers. MTNS is usually organized every two years and traditionally covers areas involving a wide range of research directions in mathematical systems, networks and control hypothesis.



### Important Dates

Advance program .....	mid May, 2006
Deadline of final manuscript submission ...	May 22, 2006
Deadline of early registration .....	June 15, 2006
Deadline of standard registration .....	July 10, 2006
Conference dates .....	July 24-28, 2006

### Registration Fee

Early registration (on or before June 15, 2006)  
Regular: 45,000 JPY Student: 22,500 JPY  
Standard or on-site registration (after June 15, 2006)  
Regular: 55,000 JPY Student: 27,500 JPY  
The registration and hotel reservation page is now open on the conference web site.  
Please visit  
<http://www-ics.acs.i.kyoto-u.ac.jp/mtns2006/>

### Plenary Lectures

Heisuke Hironaka (Univ. of Creation; Art, Music & Social Work)  
"Mathematics and Mathematical Sciences: Past and Future"  
Martin Vetterli (EPFL and U.C. Berkeley)  
"From Fourier to wavelets and beyond: Representation, approximation and compression"  
Anders Rantzer (Lund Institute of Technology)  
"Linear quadratic theory for distributed control"  
Adam Arkin (University of California, Berkeley)  
"Signal processing in cellular regulatory networks: Physical models, formal abstractions and applications"  
Carsten Scherer (Delft University of Technology)  
"Time-varying uncertainties reconsidered"

### Semi-plenary Lectures

Vincent D. Blondel (Université catholique de Louvain)  
"Coordination and persistence of multi-agent systems"  
Munther A. Dahleh (MIT)  
"Problems in noise cancellation with limited-capacity channels"  
Kenji Fujimoto (Nagoya University)  
"Singular value analysis of nonlinear operators"  
Shinji Hara (University of Tokyo)  
"When is a linear system easy or difficult to control in practice?"  
Mustafa Khammash (University of California, Santa Barbara)  
"Modeling and systems analysis of gene regulatory networks"  
Iven Mareels (University of Melbourne)  
"Entropy - From thermodynamics to limitations in feedback"  
Vadim Olshevsky (University of Connecticut)  
"Efficient algorithms for structured matrices"  
Hitay Özbay (Bilkent University)  
"Robust control of infinite dimensional systems: Theory and applications"  
Giorgio Picci (University of Padova)  
"New results in subspace identification"  
Malcom Smith (Cambridge University)  
"Passive network synthesis revisited"  
Toshiyuki Tanaka (Kyoto University)  
"Replica method: A statistical mechanics approach to probability-based information processing"  
Roberto Tempo (Politecnico di Torino)  
"Randomization-based methods for systems and control"  
Paul van Dooren (Université catholique de Louvain)  
"Robustness measures for linear dynamical systems"

### Mini-courses

João Hespanha (UCSB), Andrew Teel (UCSB)  
"Modeling, analysis, and design of hybrid control systems"  
Pablo Parrilo (MIT), Sanjay Lall (Stanford Univ.)  
"Semidefinite programming relaxations and algebraic optimization in control"  
Paolo Rapisarda (Univ. Southampton), Jan Willems (K.U. Leuven)  
"Recent developments in behavioral system theory"

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## Invitation from the General Chair

The next MTNS in Kyoto is the second MTNS to be held in Asia, following the one in Kobe, Japan in 1991. Kyoto is one of the oldest and most historic cities in Japan, and had been the capital for about 1000 years until it was moved to Tokyo (literally the word means east Kyoto) in 1869. Reflecting its long history, Kyoto is full of monuments and those who visit Kyoto can fully appreciate the traditional cultural backgrounds of Japan---architecture, gardening, pottery, lacquer ware (commonly called 'japan'), textiles, dye works, just to name a few. But Kyoto is not just an old town. It is also a very modern city, and not far from the more industrialized cities of Osaka and Kobe; these three cities form a closely connected triangle in the Kansai area and form a center of the west side of Japan. The conference venue is the Kyoto International Conference Hall: a beautiful conference hall in the Northern area of Kyoto, providing an optimal combination of serenity and easy access from the center of the town. In short, Kyoto is full of charm for everyone visiting it, and MTNS 2006 will provide you with a unique experience both from scientific and cultural points of view. Proposals for minisymposia (invited sessions) and other special programs are welcome. Details will be posted on the conference web page. We look forward to seeing you all in Kyoto in July, 2006.

Yutaka Yamamoto, General Chair of MTNS 2006



photos by courtesy of the Kyoto Convention Bureau

## General Chair:

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## Co-Chairs:

Yoshito Ohta, Kyoto University  
Toshiharu Sugie, Kyoto University

## Organizing Committee:

T. Asai, Osaka Univ.	K. Hirata, NAIST
H. Fujioka, Kyoto Univ.	M. Nagahara, Kyoto Univ.
Y. Fujisaki, Kobe Univ.	K. Sugimoto, NAIST
T. Hagiwara, Kyoto Univ.	K. Takaba, Kyoto Univ.

## Steering Committee:

A. Bloch	P. Fuhrmann	C. Martin
J. Ball	D. Gilliam	Y. Ohta
V. Blondel	U. Helmke	G. Picci
C. Byrnes	W. Helton	A. Ran
R. Curtain	A. Isidori	A. Rantzer
B. De Moor	R. Kaashoek	J. Rosenthal
B. Datta	B. King	P. Van Dooren
H. Dym	A. Kurzhansky	Y. Yamamoto
P. Dewilde	A. Lindquist	

## Honorary Members:

C. Desoer	R. Newcomb
I. Gohberg	A. Zemanian