

**THE THIRD SHANGHAI INTERNATIONAL SYMPOSIUM
ON NONLINEAR SCIENCES AND APPLICATIONS**
Shanghai NSA'07, June 6-10, 2007, Shanghai – Hangzhou, China

**THE INTERNATIONAL WORKSHOP ON NONLINEAR
BRAIN DYNAMICS**
IWNBD'07, June 9-10, 2007, Hangzhou, China

<http://www.sss-nonlinear.org/webs/snsa.htm>



Second Announcement & Call for Papers

The Third Shanghai International Symposium on Nonlinear Sciences and Applications (*Shanghai NSA'07*) and the International Workshop on Nonlinear Brain Dynamics (*IWNBD'07*) will be jointly held in Shanghai and Hangzhou on June 6-10, 2007.

DATE & LOCATION:

Shanghai NSA'07 will be held at Guanghai Towers, Fudan University, Shanghai and Yefu Building, Zhejiang University, Hangzhou on June 6-10, 2007. *IWNBD'07* will be held at Yefu Building, Zhejiang University, Hangzhou during June 9-10, 2007.

All the participants will register at Fudan University, Shanghai (220 Handan Road, Shanghai) on June 6 - 8, 2007, and have two days' oral and poster presentations there during June 7-8. Participants can take conference buses to Hangzhou early in the morning on June 9, and have one day's oral presentations at Zhejiang University, Hangzhou. After one day's tour in Hangzhou (on June 10), participants can take conference buses back to Shanghai in the late evening of June 10. If anyone wants to leave earlier, no conference bus service is available. However, there is airport bus service to Shanghai Putong International Airport (PVG) at Hangzhou Xiaoshan International Airport.

SPONSORS & ORGANIZATIONS:

Shanghai NSA'07 is sponsored by the *Shanghai Society for Nonlinear Sciences*, co-sponsored by the *Shanghai Center for Nonlinear Sciences*, organized by the *Research Center for Nonlinear Sciences of Fudan University* and the *Shanghai Society of Biophysics*, and supported by the *National Science Foundation of China*, *Center for Chaos and Complex Networks of City University of Hong Kong*, and *Electronic Computing Technical Center of Shanghai Railway Administration*. *IWNBD'07* is sponsored by the *Shanghai Society for Nonlinear Sciences*, *Zhejiang University*, *Zhejiang University of Technology*, and the *Shanghai Society of Biophysics*.

Nonlinear science is one of the focusing research fields and most active scientific frontier in the new century, and *Shanghai NSA'07* is devoted to this important area of scientific research. The theme of the symposium is intended to be broad enough so as to cover most of the directions in nonlinear science, with the aim of promoting wide interactions among researchers from different academic disciplines who are interested in nonlinear science and related technologies. The symposium will provide both experts and new comers from different research backgrounds with an excellent opportunity to review the latest progress and development in the field of nonlinear science, and to exchange their experience, progress, and ideas. The symposium will consist of both oral and poster presentations in four days (*two days in Shanghai and two days in Hangzhou, including one-day tour of the beautiful resort city Hangzhou*).

A few renowned leading scientists in the field of nonlinear science will be giving keynote speeches in the symposium.

Mathematical and physical theories, physical and chemical experiments, engineering design, biological studies, and their various applications are included in the main program of the symposium. Topics include but are not limited to the following:

1. *Bifurcation & Chaos*

- 1.1 Synchronization and control of chaos
- 1.2 Chaotic neural network models
- 1.3 Bifurcation analysis and computation
- 1.4 Chaos theory in physical systems
- 1.5 *KAM* curves and chaotic scattering

2. *Fractals*

3. *Solitons*

4. *Finite- & Infinite-Dimensional Nonlinear Dynamic Systems*

5. *Nonlinear Time Series Analysis*

6. *Complexity & Complex Systems*

- 6.1 Complex dynamics in neural networks
- 6.2 Complex dynamics in traffic and granular flows
- 6.3 Complex dynamics in physical and chemical systems
- 6.4 Oscillations and complex dynamics in biological systems
- 6.5 Complex dynamical networks

- 6.6 Cellular automata and *CNN*

7. *Nonlinear Brain Dynamics*

- 7.1 Neurodynamics
- 7.2 Nonlinear analysis of *EEG* and *MEG*
- 7.3 Chaotic dynamics of nerve cells

8. *Applications*

- 8.1 Economics and finance
- 8.2 Computational Biology
- 8.3 Bio-medical engineering
- 8.4 Materials and mechanical sciences
- 8.5 Information science and technology
- 8.6 Various inverse problems
- 8.7 Free and moving boundary problems
- 8.8 Signal and image processing
- 8.9 Physical experiments and electronic engineering
- 8.10 Ecology and Evolution

9. *Other Related Nonlinear Sciences & Technologies*

INTERNATIONAL PROGRAM COMMITTEE

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Chaohao Gu, *Fudan University*, China

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J. T. Lo, *University of Maryland Baltimore County*, USA
H. Malchow, *University of Osnabrück*, Germany
S. Nara, *Okayama University*, Japan
A. Neumann, *Bar-Ilan University*, Israel
H. Oliveira, *Instituto Superior Técnico*, Portugal
W. Schneider, *Vienna University of Technology*, Austria
H. Seno, *Hiroshima University*, Japan
K. Shimohara, *ATR Human Information Science Labs.*, Japan
Y. Takeuchi, *Shizuoka University*, Japan
M. Tanaka, *Shinshu University*, Japan
S.-J. Tang, *Fudan University*, China
C. K. Tse, *Hong Kong Polytechnic University*, China
I. Tsuda, *Hokkaido University*, Japan
S. Vrobel, *The Institute for Fractal Research*, Germany
B.-H. Wang, *USTC*, China
X.-G. Wang, *National University of Singapore*, Singapore

G. Webb, *Vanderbilt University*, USA
L. Wen, *Peking University*, China
K. W. Wong, *City University of Hong Kong*, China
J.-H. Wu, *York University*, Canada
A.-A. Yakubu, *Howard University*, USA
H.-M. Yang, *Shanghai Railway Administration*, China
X.-H. Yu, *RMIT University*, Australia
W.-J. Zhang, *Shanghai Jiaotong University*, China
Z.-H. Zhang, *Fudan University*, China

NATIONAL ORGANIZING COMMITTEE (CHINA)

Chairman:

Jiong Ruan, *Fudan University*

Co-chairs:

F.-J. Gu, *Fudan University*

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Y.-D. Shi, *Fudan University*

Hangzhou Local Organizing Committee:

L.-P. Fang, *Zhejiang University of Technology*

G. Li, *Zhejiang University*

Q.-Y. Tong, *Zhejiang University*

D.-Y. Yang, *Zhejiang University of Technology*

INVITED SPEAKERS

Kazuyuki Aihara, *Tokyo University*, Japan

Guanrong Chen, *City University of Hong Kong*, China

Andreas Dress, *CAS-MPG PICB*, China

Albert Goldbeter, *Université Libre de Bruxelles*, Belgium

Eshel Ben-Jacob, *Tel Aviv University*, Israel

Ying-Cheng Lai, *Arizona State University*, USA

Bai-Lian Larry Li, *University of California, Riverside*, USA

Hans Liljenstrom, *SLU*, Sweden

Manuel G. Velarde, *Universidad Complutense*, Spain

MINI-SYMPOSIUMS IN SCHEME

MS-1

Neurodynamical Models for Information Processing (tentative)

Organizer: Hans Liljenstrom (*SLU*, Sweden)

E-mail: hans.liljenstrom@bi.slu.se

MS-2

Oscillations and Complex Dynamics in Biological Systems (tentative)

Organizer: Albert Goldbeter (*Université Libre de Bruxelles*, Belgium)

E-mail: agoldbet@ulb.ac.be

MS-3

Nonlinear Differential Equations and Applications in Physics and Engineering

Organizer: Zhaosheng Feng (*University of Texas-Pan American*, USA) E-mail: zsfeng@utpa.edu

David Y. Gao (*Virginia Tech. University*, USA)

MS-4

The Effect of the Anisotropy

Organizer: Agnes Buka (*Research Institute for Solid State Physics and Optics of the Hungarian Academy of Sciences, Hungary*)

E-mail: ab@szfki.hu Secretary: fuzieva@szfki.hu

MS-5

Nonlinear Waves and Mesoscale Neuroscience

Organizer: Andrew J. Szeri (UC Berkeley, USA)

E-mail: Andrew.Szeri@berkeley.edu <http://www.me.berkeley.edu/faculty/szeri/index.html>

MS-6

Entanglement and Phylogenetics - A Strange Coincidence of Methods Developed in very Different Contexts OR Network Alignment: What, Why, and How?

Organizer: Andreas Dress (*CAS-MPG PICB, China*)

E-mail: dress@sibs.ac.cn

MS-7

Mathematical Control Theory for Cell Signaling

Organizer: Weijiu Liu (*University of Central Arkansas, USA*)

Email: weijiul@uca.edu

MS-8

Soliton Ratchets and Applications

Organizer: Franz G. Mertens (*University of Bayreuth, Germany*)

E-mail: Franz.Mertens@uni-bayreuth.de

MS-9

Classical and Quantum Transport

Organizer: Giulio Casati (*Universita' degli Studi dell' Insubria, Italy*)

E-mail: giulio.casati@uninsubria.it

Further proposals of organizing mini-symposiums or special sessions are also welcome and encouraged, in which information about the organizers, topics, and estimated numbers of speakers should be indicated.

IMPORTANT DEADLINES

February 28, 2007 Detailed abstract submission; mini-symposium and special session proposals are due

March 31, 2007 Notification of acceptance/rejection

April 15, 2007 Advanced registration

INSTRUCTIONS FOR DETAILED ABSTRACT

- (1) Except for the invited talks, all the submitted abstracts should include the following sections: 1) Objective of the research; 2) Novelty of the work; 3) Methods and techniques; 4) Main results; 5) Conclusions. For the invited talks, abstracts are also needed in a way the author decides by her / himself.
- (2) Detailed abstracts should not be longer than two A4 pages, but should be detailed enough so that referees can judge if this work is interesting enough to be presented in the conference. It is strongly suggested that the abstract can be printed within one A4 page.
- (3) Detailed abstracts should be typed in Word or latex format file, Times New Roman font, single spaced, so that it could be easily edited to be published in an abstract book.

- (4) The title of the abstract should be typed in bold face letters (size 14) on the top, then the name of the authors, their affiliations, mailing addresses, and E-mail address should be followed in the next several lines. The text should be typed with Times New Roman font (size 10), 2.5 cm margin should be left both on the top and bottom, and 3 cm margin should be left both on the right and left.
- (5) The mailing address for every author should be noted clearly, so that the organizing committee can mail her / him invitation letter easily. At least one of the authors' e-mail addresses should be noted.
- (6) No more than 5 references should be listed at the end of the abstract.
- (7) Category code (such as "6.1 Complex dynamics in neural networks" etc.) or mini-symposium number of each abstract should be noted on the right top of the abstract. This is important for arranging your presentation in a proper session. Preferred form of presentation (oral or poster) should also be noted clearly, although it may be adjusted by the program committee at last.
- (8) All the Abstracts should be electronically sent to: snsa@fudan.edu.cn or uploaded at the conference website.

REGISTRATION

The registration fee is US\$480 for regular participants before the deadline (April 15, 2005), which includes a copy of abstract book, gift, reception, coffee break, daily meals, banquet, and one day tour at Hangzhou and the transportation between Shanghai and Hangzhou. The registration fee for students is US\$280 before the deadline, which includes a copy of abstract book, gift, reception, coffee break, daily meals, and the transportation between Shanghai and Hangzhou. A photocopy of student ID card should be presented when registers. Students are charged extra US\$120 for banquet and the tour. For all the payments after the deadline, an extra pay of US\$50 is needed.

Any accompanied family member should pay US\$180 for reception, daily meals, and transportation between Shanghai and Hangzhou before the deadline (US\$230 after the deadline) if they want to participate in these activities. Additional US\$120 for the banquet and the tour at Hangzhou is needed if they wish.

MEANS OF PAYMENT

All payment including registration, accommodation, and excursions should be made in US dollars or equivalent Euro or Japanese Yen (except for the participants from the mainland of China, an additional announcement will be given a little later) by one of the following means:

(I) BANK TRANSFER

Account Number: 1001221009008935253

Account Name: Shanghai Society of Biophysics

Bank: The Industrial and Commercial Bank of China, Shanghai Branch, Xu-Hui District Sub-branch, International Department, 022210-Huai-Hai-Zhong-Lu Division, Shanghai, CHINA

Attn: Prof. Shi Yong-De, Co-Chair of *Shanghai NSA'07*

Swift address of the bank: ICBKCNBJSHI

(II) BANK DRAFT OR CHECK

To: Prof. Shi Yong-De, Co-Chair of Shanghai NSA'07

Secretary General, the Shanghai Society of Biophysics

Department of Biophysics

Medical College, Fudan University

Yi-Xue-Yuan Road 138, Shanghai 200032, CHINA

Note: The above underlined words must be written on your draft or check. In case your bank charges you some money from the amount you send to us, we are sorry that you have to pay it at the registration back.

(III) CASH OR CREDIT CARD

Directly pay the fees at the Shanghai NSA registration desk, during registration time, June 6-9, 2007.

CANCELLATION & REFUND

Any cancellation must be notified to the secretariat and the Co-chairs of *Shanghai NSA'07* for a refund of the registration fee.

Received by March 31, 2007, 80% Refund

Received until April 30, 2007, 50% Refund

Received after May 1, 2007, No Refund

You are encouraged to register for the symposium as soon as possible. For advance registration, please complete the Registration Form and return it to the financial secretary with the appropriate fees at your earliest convenience but no later than April 30, 2007. Personal Check is only accepted before April 30, 2007.

RECEIPT OF REGISTRATION

Please contact the financial secretary by E-mail when you pay, and you will get information in time. A formal receipt will be distributed at the registration desk with the registration packets during the conference.

CERTIFICATE OF ATTENDANCE

If you require a Certificate of Attendance, please contact the Co-chairs of *Shanghai NSA'07*.

ACCOMMODATION

Shanghai

QinYun Building (Zheng Da Development and Management Center) is a guest house of Fudan University. It is located in the main campus of Fudan University, which is very near to the venue. The price for a Standard Room (double room or twin room) is USD50 per night (including breakfast). The conference will provide the participants with a special rate for rooms, discounted only for the conference. All the payment should be paid to the financial co-chair of *Shanghai NSA'07*. The hotel will not accept your payment directly with this discounted amount.

Hangzhou

Haven't decided finally yet, however, the price is about the same as in Shanghai. It will be announced shortly at the conference website.

More specific information about the accommodation in Shanghai and Hangzhou will be announced later.

VENUE

Guanghua Towers is the main building within the main campus of Fudan University, which is located at the northeast part of Shanghai city. **Yefu Building** is the main building within the main campus of Zhejiang University, which is not far from the famous west lake.

About the City of Shanghai & Hangzhou

Shanghai is the biggest city in China, and a harmonic mixture of the traditional and the modern, the east and the west. Shanghai has completely changed in the last decade. The great metropolis of SHANGHAI is currently undergoing one of the fastest economic expansions that the world has ever seen. While shops overflow and the skyline fills with skyscrapers, Shanghai now seems certain to recapture its position as East Asia's leading business city, a status it last held before World War II. Visiting and touring Shanghai are truly enjoyable for many.

Hangzhou, located on the lower reaches of the Qiantang River in southeast China, is a beautiful resort only 180 kilometers to Shanghai. Once applauded as "the most splendid and luxurious city in the world" by Marco Polo, the Italian traveler in the 13th century, Hangzhou is still one of China's most important tourist venues with its famous natural beauty and cultural heritages today. The West Lake is undoubtedly the most renowned feature of Hangzhou, noted for the scenic beauty that blends naturally with many famous historical and cultural sites. In this scenic area, Solitary Hill, the Mausoleum of General Yue Fei, the Six Harmonies Pagoda, and the Ling Yin Temple are probably the most frequently visited attractions. The "Ten West Lake Prospects" have been specially selected to give the visitor outstanding views of the lake, mountains and monuments. A number of national museums, such as the National Silk Museum and Tea Museum, can be found in Hangzhou and are representative of Chinese culture.

One of the most important parts of traveling is to taste the local delicacies. Hangzhou dishes are noted for their elaborate preparation, sophisticated cooking and refreshing taste. We will have our banquet in Louwailou Restaurant, which is the most well-known restaurant in Hangzhou. Many leaders from a variety of countries had meals there so that you can still find out their pictures in the menu. The shopping environment in Hangzhou is exciting and convenient. Silk products and green tea are most famous.

For inquiries or further information about *Shanghai NSA'07*, please contact:

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For more details, please visit the symposium website: <http://www.sss-nonlinear.org/webs/snsa.htm>

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