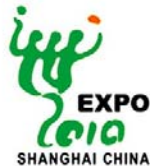


**THE Fourth SHANGHAI INTERNATIONAL SYMPOSIUM ON
NONLINEAR SCIENCES AND APPLICATIONS -- *Shanghai NSA'10***

June 29- July 4, 2010, XuZhou – Shanghai, China



<http://www.sss-nonlinear.org/webs/snsa10.htm>



Call for Papers

The Fourth Shanghai International Symposium on Nonlinear Sciences and Applications (*Shanghai NSA'10*) will be held in Xuzhou and Shanghai on June 29-July 4, 2010.

Shanghai NSA'10 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*, the *Centre for Computational Systems Biology of Fudan University*, the *Shanghai Society of Biophysics*, and the *Centre for Chaos and Complex Networks of the City University of Hong Kong*, and supported by the *National Natural Science Foundation of China*.

Nonlinear science is one of the focusing research fields and most active scientific frontier in this century, and *Shanghai NSA'10* 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 six days (*four days in Xuzhou and two days in Shanghai, including one-day tour of a traditional Chinese cultural site--the city of Qufu and one-day visit of the World Expo 2010, Shanghai, China*).

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
- 1.6 *Random dynamical systems and stochastic bifurcation*

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 systems 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. Scientific Computation in Nonlinear Sciences

10. Other Related Nonlinear Sciences & Technologies

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J.-B. Zhang, *Xuzhou Normal University*

IMPORTANT DEADLINES

March 15, 2010 Detailed abstract submission; mini-symposium and special session proposals are due

April 30, 2010 Notification of acceptance/rejection

May 1, 2010 Advanced registration

REGISTRATION FEES

The registration fee is US\$460 for regular participants, which includes a copy of abstract book, gifts, reception, coffee and tea break, daily meals, banquet, and one day tour at QuFu or Xuzhou and the transportation from Xuzhou to Shanghai. Additional fee for the one-day visit of the World Expo 2010 and the transportation at Shanghai is US\$60. The registration fee for students is US\$280, which includes a copy of abstract book, gift, reception, coffee break, daily meals, and the transportation from Xuzhou to Shanghai. A photocopy of student ID card should be presented at the registration desk. Students are charged extra US\$120 for the banquet and the tour of QuFu, and extra US\$60 for the one-day visit of the World Expo 2010 and the transportation at Shanghai.

Any accompanied family member should pay US\$280 for reception, daily meals and transportation from Xuzhou to Shanghai. If they want to participate in those above-mentioned activities, they are charged additional US\$150 for the banquet and the tour at Qufu or Xuzhou, and additional US\$60 for the one-day visit of the World Expo 2010 and the transportation at Shanghai.

ACCOMMODATION IN XUZHOU

Xuzhou Hanyun Hotel is a four-star guest house of Xuzhou Normal University, which is located in the main campus of Xuzhou Normal University and very near to the venue. 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 registration desk of Shanghai NSA'10. The hotel will not accept your payment directly with this discounted amount. The hotel reservation form as well as the registration form will be available at the website as soon as the registration starts.

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: (1) bank transfer, (2) bank draft or check, and (3) cash or credit card at the registration desk. More detailed information of the payment will be announced as soon as the registration starts.

For inquiries or further information about *Shanghai NSA '10*, please contact:

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For more details, please visit the symposium website:

<http://www.sss-nonlinear.org/webs/snsa10.htm>

Guidelines for Abstract Submitted to Shanghai NSA'10

Authors' Name

*Authors' Affiliation (Department, Institute), City, State Zip Code, Country
Email Address*

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

- (1) Detailed abstracts of papers should include the following sections: 1) Objective of the research; 2) Novelty of the work; 3) Methods and techniques; 4) Main results; 5) Conclusions. The plenary lecture and review abstract will be according to author's wishes.
- (2) Detailed abstracts should not be longer than two A4 pages.
- (3) Detailed abstracts should be typed in Word format, single spaced, so that it can be easily edited for printing in the abstract book.
- (4) Prepare your abstract in English according to the following structured format: Title, Author(s), Authors' affiliations, content text. The title of the abstract should be typed in bald face letters (size 14, Times New Roman font). The institute and mailing address for every author should be noted clearly. At least one of the authors' e-mail addresses should be noted clearly for us to contact easily. The authors name, institute and mailing address, and main text should be typed with Times New Roman font (size 12), 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. No more than 5 references, which are typed with Times New Roman font (size 10.5), should be listed at the end of the abstract.
- (5) Category code and main topic (*for example, 7.1 Neurodynamics*) of each abstract should be noted on the right top of your abstract page, and here you may apply for your abstract to be presented by oral or poster. We shall tell you the result by two weeks before the conference
- (6) All the abstracts should be submitted via the e-mail: snsa@fudan.edu.cn . If we receive your abstract, we shall quickly inform you by e-mail. If you get no reply, it will mean something has gone wrong. In which case you must contact us again.

REFERENCES

- [1] R.Eckhorn, *et. al.*, "Coherent oscillations: A mechanism of feature liking in visual cortex? Multiple electrode and correlation analysis in the cat," Biol. Cybern., Vol.69, pp.121-130, 1988.