# THE Fourth SHANGHAI INTERNATIONAL SYMPOSIUM ON NONLINEAR SCIENCES AND APPLICATIONS

***Shanghai NSA'10，June 29- July 4, 2010, XuZhou – Shanghai, China***


## 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* and *the Shanghai Society of Biophysics*, and supported by *the National 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 theWorld 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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## IMPORTANT DEADLINES

**March 5, 2010** **Detailed abstract submission; mini-symposium and special session proposals are due**
**April 30, 2010** **Notification of acceptance/rejection**
**May 1, 2010** **Advanced registration**

## NOTICE

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.

Except for the plenary talks and invited talks, 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*.** A format of the abstract will be available on the symposium website.

A cover with ***the title*** of the paper, ***the name*** of the author(s), ***affiliation(s), mailing*** and ***email address*** should be submitted with the abstract. The category and its code (*for example, 7.1 Neurodynamics*) should also be noted in the cover of the abstract, which is important for us to arrange your presentation in a proper session.

## About the Cities of Xuzhou and Qufu

**Xuzhou, situated in the northwest of Jiangsu Province, is one of Chinese most well-known transportation hubs, in which China's two most important rail lines, Beijing-Shanghai that runs north-south direction, and Lianyungang-Urumqi that goes from east to west, meet here. With a history of 2,600 years, Xuzhou is a historical city with the critical strategic importance from military views. Xuzhou is well known for its heritage and the Han culture and there are an enormous number of historical or cultural relics left by the ancient dynasty everywhere in the city. Recent archaeological excavations have added more unbelievable cultural relics. The excavation in the Lion Mountain in 1995 has been entitled as one of the 100 most important archaeological excavation findings in the 20th Century of China.**

**Qufu is located in the northeast of the city of Xuzhou. It is the hometown of the great thinker, statesman and educator. It is listed in the first group of 24 national famous cities of historical and cultural relics designated by the State Council. Qufu is also the hometown of Shen Nong (God of agriculture) and Mencius. In the city, there are now over 300 historic relics under protection, among which six sites are of national level, eleven are of provincial level. The Confucian Temple, the Confucian Mansion and the Confucian Cemetery were ranked as one of the world cultural heritages.**

## 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*

## FEEDBACK FORM

**Please return your feedback in the following form by email to: *snsa@fudan.edu.cn***
**BEFORE February 1, 2010**

Name:
Title:
Affiliation:
Address:
Email:
Website:
Phone:
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I intend to participate in *Shanghai NSA'10*. [ ]

I intend to submit a paper. [ ]

I intend to organize a special session. [ ]

Suggestions and Comments:

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**Your feedback information is important and valuable to us!**

**Thank you very much for your attention and cooperation!**

**Looking forward to seeing you at *Shanghai NSA'10*!**