

**THE 7th SHANGHAI INTERNATIONAL
SYMPOSIUM ON NONLINEAR SCIENCES AND
APPLICATIONS (Shanghai NSA 2016)**

July 13- July 19, 2016, CHINA

Final Program

<http://ccsb.fudan.edu.cn/snsa16/>

Shanghai NSA 2016

2016.7.13-19, China

Sponsored by

Research Center for Nonlinear Sciences of Fudan University
Shanghai Society for Nonlinear Sciences

Co-sponsored by

Shanghai Center for Nonlinear Sciences

Organized by

Institute of Science and Technology for Brain-Inspired Intelligence
Centre for Computational Systems Biology, Fudan University
School of Mathematical Science, Fudan University
Ji Shou University
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I. PROGRAM OUTLINE

TIME TABLE FOR LECTURES

Date	Morning	Noon	Afternoon	Evening
July 13	09:00-12:30 Registration		13:30-17:30 Registration	18:30-20:00 Welcome Reception (3 rd Floor Danyuan Restaurant)
July 14	8:15-8:30 Opening Ceremony 8:30-10:15 Plenary Talk I 10:15-10:40 Coffee Break & Photograph 10:40-12:25 Plenary Talk II	12:25-14:00 Lunch	14:00-15:45 Plenary Talk III 15:45-16:00 Coffee Break 16:00-17:30 S1 S2	18:00-20:00 Evening Meal
July 15	8:30-10:15 Plenary Talk IV 10:15-10:40 Coffee Break 10:40-12:25 Plenary Talk V	12:25-13:30 Lunch	14:00 Flight to Hunan, ZJJ Pick up at the Lobby at Fuxuan Hotel	
July 16	8:30-10:15 Plenary Talk VI 10:15-10:40 Coffee Break 10:40-12:30 S3 S4	12:40-13:30 Lunch	Social Activity	18:00-20:00 Evening Meal
July 17	Social Activity	12:15-13:20 Lunch	Social Activity	18:00-20:00 Evening Meal
July 18	Free Time	12:15-13:20 Lunch	13:30-16:00 Plenary Talk VII	18:00-20:00 Evening Meal
July 19	Social Activity	12:15-13:20 Lunch	Social Activity	Air to Shanghai

Map of Fudan



Route from Airport Bus Line 4 Stop to Fudan Fuxuan Hotel



Route from Metro Line 10 (Jiangwan Stadium Stop) to Fudan Fuxuan Hotel



II. TECHNICAL PROGRAM

July 14 Morning, July 14

(Conference Hall, 2nd floor, Zibingyuan, Handan campus, Fudan University)

Opening Ceremony

8:15 – 8:30 Welcoming Remarks

Plenary Talk I

8:30 – 10:15, July 14

Chairperson: Guoxiang Huang

8:30 – 9:20

Imaging Human Brain Function with Simultaneous EEG-fMRI

Mingzhou Ding (University of Florida, USA)

9:25– 10:15

Inferring Direct Associations in Networks by Part Mutual Information (PMI)

Luonan Chen (Shanghai Institutes for Biological Sciences, China)

10:15 – 10:40 Coffee Break & Photograph

Plenary Talk II

10:40 – 12:25, July 14

Chairperson: Ying-Cheng Lai

10:40– 11:30

Transformation of Markov Jump Processes and Applications in Genetic Study

Zhiming Ma (Chinese Academy of Sciences, China)

11:35 – 12:25

Transient Chaos

Celso Grebogi (Institute for Complex Systems and Mathematical Biology, King's College, University of Aberdeen, UK)

12:25 – 14:00 Lunch

Afternoon, July 14

Plenary Talk III

14:00 – 15:45, July 14

Chairperson: Ulrike Feudel

14:00– 14:50

Nonlinear Dynamics and Spatio-temporal Patterns: Learning from Living Things

Kazuyuki Aihara (Tokyo University, Japan)

14:55-15:45

Extracting Skin Cancer Diagnostic Information Form Images

Maciej J. Ogorzalek (Jagiellonian University, Poland)

15:45 – 16:00 Coffee Break

S-1

16:00– 18:00, July 14

Chairperson: Peng Ji

16:00-16:20

Uncovering Stability from Sync Basin in the Second-order Kuramoto Model

Peng Ji (Potsdam Institute for Climate Impact Research, Germany)

16:20-16:40

Impact of Awareness on Epidemic Spreading on Networks

Xinchu Fu (Shanghai University, China)

16:40:17:00

Coexistence of Strange Nonchaotic Attractors and a Special Mixed Attractor Caused by a New Intermittency in a Periodically Driven Vibro-impact System

Yuan Yue (Southwest Jiaotong University, China)

17:00-17:20

Collective Behavior of Self-propelled Particles System with Time Delay and Noise

Yongzheng Sun (China University of Mining and Technology, China)

S-2

16:00– 17:30, July 14

Poster Section (North 308, Zibingyuan, Fudan University)

18:00 – 20:00 Evening Meal (the 3rd floor of Danyuan Restaurant)

July 15

Morning, July 15

(Conference Hall, 2nd floor, Zibingyuan, Handan campus, Fudan University)

Plenary Talk IV

08:30– 10:15, July 15

Chairperson: Kazuyuki Aihara

8:30 – 9:20

Climate Networks and Extreme Events

Jürgen Kurths (Potsdam Institute for Climate Impact Research & Humboldt University, Berlin & King's College, University of Aberdeen, Scotland)

9:25 – 10:15

Self-induced Switchings between Multiple Space–time Patterns on Complex Networks of Excitable Units

Ulrike Feudel (Carl von Ossietzky Universität Oldenburg, Germany)

10:15 – 10:40 Coffee Break

Plenary Talk V

10:40 – 12:25, July 15

Chairperson: Mingzhou Ding

10:40-11:30

The Cell Cycle is a Limit Cycle

Albert Goldbeter (Université Libre de Bruxelles, Belgium)

11:35-12:25

Chimera States: Coherence-Incoherence Patterns in Complex Networks

Eckehard Schöll (Institut für Theoretische Physik)

12:25 – 13:30 Lunch

14:00 Flight to Hunan, ZJJ

July 16

Morning, July 16

(Conference Hall A, Hunan, ZJJ)

Plenary Talk VI

08:30 – 10:15, July 16

Chairperson: Celso Grebogi

8:30-9:20

Tipping Point in Networked Dynamical Systems: Control, Recovery, and Early Warnings

Ying-Cheng Lai (Arizona State University, USA University of Aberdeen, UK)

9:25-10:15

Conditioned Trajectories in Population Genetics

David Waxman (Fudan University, China)

10:15 – 10:40 Coffee Break

S-3 (Conference Hall A, Hunan, ZJJ)

10:40-12:40, July 16

Chairperson: Peng Ji

10:40-11:10

Bifurcations and Geometry in 1:1:-2 Resonant Hamiltonian Systems

Konstantinos Efstathiou (University of Groningen, Netherlands)

11:10-11:30

Optimal Choice of Tuple Length when Comparing Two Markov Sequences Using Alignment-free Statistics

Xin Bai (Fudan University, China)

11:30-11:50

Functional Mapping of Supplementary Motor Area in Glioma Patients via Resting-State Functional Connectivity with Contralesional Hemisphere

Yuankai Ha (Fudan University, China)

11:50-12:10

The Structural Connection of SMA Subregions

Hongtao Ruan (Fudan University, China)

12:10-12:30

Brain Decoding Using a Nonlinear Model

Fan Cheng (Fudan University, China)

S-4 (Conference Hall B, Hunan, ZJJ)

10:40-12:40, July 16

Chairperson: Lin Wan

10:40-11:00

Population Models with External Perturbations

Kunquan Lan (Ryerson University, Canada)

11:00-11:20

A Novel Adaptive Decorrelation Method to Estimate and Remove Spatial Crosstalk of DNA Sequencing Data

Lin Wan (Chinese Academy of Sciences, China)

11:20-11:40

Correlation of Different Correlations for Defining Functional Connection in fMRI Data Analysis

Yu Wang (Fudan University, China)

11:40-12:00

Identification of Primary Mediators in Dynamical Systems

Chenyang Tao (Fudan University, China)

12:00-12:20

Online Parameter Estimation with Particle Filter in State Space Models

Wenbo Sheng (Fudan University, China)

12:20-12:40

The P-value and Statistical Power of Brain-wise Association Study

Weikang Gong (Fudan University, China)

12:40 – 14:30 Lunch

Afternoon, July 18

(Conference Hall B, Hunan, ZJJ)

Plenary Talk VII

Chairperson: Guanrong Chen

13:30 -16:00, July 18

13:30-14:20

Basin Entropy: A New Tool to Explore Uncertainty in Dynamical Systems

Miguel A. F. Sanjuán (Universidad Rey Juan Carlos, Spain)

14:20-15:10

Caustics in Random Media: Universal Properties and Tsunami Propagation

Theo Geisel (Georg August University Göttingen, Germany)

15:10-16:00

Quantifying Your Brain and Searching Brain Disorders' roots

Jianfeng Feng (Fudan University, China)

18:00-19:30 Evening Meal

III. CONFERENCE INFORMATION

REGISTRATION

Could all participants please register at the earliest opportunity.

The registration desk will be open at the Lobby of Fudan Fuxuan Hotel, 400 Guoding Road, Shanghai, on July 13th from 09:00– 17:30. There will also be an opportunity to register in Conference Hall, 2nd floor, Zibingyuan, Handan campus, Fudan University, on July 14th from 08:00-17:30.

If you have completed advanced registration process, your conference materials await collection at the Conference Registration Desk.

REGISTRATION FEE

The registration fee is **700 US Dollars** for regular participants. The registered participant is offered with a copy of program-abstract book, gifts, reception, coffee/tea break, daily meals, banquet, transportation between Shanghai and Hunan, and five-days accommodation in Hunan.

The student is charged **US\$600** for a copy of program-abstract book, gifts, reception, coffee/tea break, daily meals, banquet, transportation, and four-day accommodation. The photocopy of a student ID card should be presented when she or he registers.

Each family member accompanied is charged **US\$700** for gifts, reception, daily meals, banquet, transportation, and five-days accommodation in Hunan.

PAYMENT

All payments, including registration fee, accommodation and excursions, should be made in Yuan, US dollars, Euros, Pounds, or Japanese Yen at the Registration Desk.

RECEIPT OF REGISTRATION

Please contact the financial secretary by E-mail when you pay. A formal receipt will be handed out at the Registration Desk with the registration packets during the conference.

CERTIFICATE OF ATTENDANCE

If you require a Certificate of Attendance, please contact staff at the registration desk.

ACCOMMODATION

Accommodation will be arranged at *Fuxuan Hotel and Lantian Hotel*. These are located near the main campus of Fudan University, which holds the conference venue. More information for the location of hotel, refer to the map presented in the program book.

VENUE

From July 14th to July 15th's morning, our conference will take place in the Zibingyuan, which is located in the Handan Campus of Fudan University, 220 Handan Road, Shanghai, China. From July 15th's afternoon to July 19th, our conference will transfer to ZJJ, Hunan, China.

TRANSPORTATION

HOW TO REACH THE VENUE

From Airport To Fudan University (Handan Campus):

Hongqiao Airport:

1. Taxi to Fudan University costs roughly RMB 110.
2. Take a Metro Line 10 to Jiangwan Stadium Stop (江湾体育场站), which costs RMB 7, and then walk (approximately 15 minutes to the University).

Pudong International Airport:

1. Taxi to Fudan University costs roughly RMB 180.
2. Shuttle Bus Line 4 (机场四线) to Wu Jiao Chang Stop (五角场), which costs RMB 20, and then walk (approximately 15 minutes to the University).

From Train Station To Fudan University (Handan Campus):

Shanghai Railway Station:

1. Get out from the South Exit of the Railway Station and then take a taxi to Fudan University, which costs roughly RMB 40.
2. Get out from the North Exit of the Railway Station and then take a No. 942 Bus to Fudan University Stop (复旦大学).

Shanghai South Railway Station:

Take a Metro Line 3 to Chifeng Road Stop (赤峰路) and then transfer to No. 139 or 854 or 942 or 991 Bus to Fudan University Stop (复旦大学).

Hongqiao Railway Station:

Take a Metro Line 10 to Jiangwan Stadium Stop (江湾体育场站), which costs RMB 7, and then walk (approximately 15 minutes to the University).

Please show the following poster to the taxi driver, if you arrive at Shanghai and intend to take a taxi at the airport or at the railway station to FuXuan Hotel.

Please take me to: FuXuan Hotel

Address: 400 Guoding Road, Shanghai, China

Contact: 86-21- 55589518

请把我送到:

复宣酒店

地址: 上海市国定路 400 号 (复旦大学邯郸校区对面, 新闻学院内)

联系电话: 86-21-55589518

CONTACTS

Wei Lin, Professor

Centre for Computational Systems Biology,

School of Mathematical Sciences,

Research Center for Nonlinear Sciences,

Institute of Science and Technology for Brain-Inspired Intelligence,

Fudan University, Shanghai 200433, China

Tel: +86-21-5566-5141

Haiqing Wang, Mr., Secretary

Centre for Computational Systems Biology,

Institute of Science and Technology for Brain-Inspired Intelligence,

Fudan University, Shanghai 200433, China

Tel: +86-21-5566-5546

E-mail: wanghaiqing@fudan.edu.cn

Yun Lv, Ms., Secretary

Centre for Computational Systems Biology,

Institute of Science and Technology for Brain-Inspired Intelligence,

Fudan University, Shanghai 200433, China

Tel: +86-21-5566-5546

E-mail: lvyun@fudan.edu.cn