Technical Sessions

Sign-in: 1:00pm-1:30pm Lobby, Yingjie Overseas Exchange Center of Peking University

Session A: Opening Ceremony & Keynote Address
(1:30pm-4:30pm, Sunshine Hall, Yingjie Overseas Exchange Center of Peking University)
Chair: Prof. Wen-xin Li

General Chairman Address: Prof. Hong Mei
Opening Speech1: Prof. Song Gao （TBD）
Opening Speech2: Prof. Xin-gui Fang

Keynote Address1: Brian Barsky Professor, University of California, Berkeley, USA
Brian A. Barsky is on the faculty of the University of California, Berkeley where he is Professor of Computer Science and Vision Science, Affiliate Professor of Optometry, Member of the Joint Graduate Group in Bioengineering with the UCSF medical school, Member of the Berkeley Center for New Media, Member of Berkeley Institute of Design, and an Arts Research Center Affiliate. He holds degrees from McGill University, Cornell University, and the University of Utah. He is a Fellow of the American Academy of Optometry (F.A.A.O.).

Title: / Abstract (TBD)

Keynote Address2: Roger Dannenberg Professor, Carnegie Mellon University, USA
Roger B. Dannenberg is Professor of Computer Science, Art, and Music at Carnegie Mellon University. His pioneering work in computer accompaniment led to three patents and the SmartMusic system now used by over one hundred thousand music students. He also played a central role in the development of the Piano Tutor and Rock Prodigy, both interactive, multimedia music education systems, and Audacity, the open source audio editor used by millions. Dannenberg is also known for introducing functional programming concepts to describe real-time behavior in the computer music language Nyquist. Dannenberg is also a composer and trumpet player. His current musical project is creating a concert of 100 musicians performing across the Internet in spring 2014.

Title: Music Understanding and the Future of Music Performance

Abstract: Music understanding is the automatic recognition of pattern and structure in music. Music understanding problems include (1) matching and searching symbolic and audio music sequences, (2) parsing music to discover musical objects such as sections, notes, and beats, and (3) the interpretation and generation of expressive music performance. In spite of some impressive results, music understanding is only beginning to find a range of applications. I will describe how current research might impact music performance in the future through intelligent audio editors, computer support for popular music performance, and intelligent music displays.
# Session B1: Computer & Information Science

(8:30am-11:00am, Conference Room II, Yingjie Overseas Exchange Center of Peking University)

**Chair:** Prof. Tao Wang

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Advisor</th>
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<tbody>
<tr>
<td>8:30am to 8:40am</td>
<td>The Simulation Platform and Verification of Energy-efficient SSD</td>
<td>Yi-jin Guan</td>
<td>Guang-yu Sun</td>
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<tr>
<td>8:40am to 8:50am</td>
<td>Java Bytecode Clone Detection Based on Variable Operation Sequence Analysis</td>
<td>Zheng Lan</td>
<td>Ge Li</td>
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<tr>
<td>8:50am to 9:00am</td>
<td>The Detection and Deletion of The Abnormal Data in A Finger Vein Dataset</td>
<td>Liao Ni</td>
<td>Wenxin Li</td>
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<td>9:00am to 9:10am</td>
<td>Semantic Inversion in XML Keyword Search with General Conditional Random Fields</td>
<td>Shu-han Wang</td>
<td>Zhi-hong Deng</td>
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<tr>
<td>9:10am to 9:20am</td>
<td>Research on Highway Traffic Performance Index</td>
<td>Lu-chen Liu</td>
<td>Kun-qing Xie</td>
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<td>9:20am to 9:30am</td>
<td>Analysis and Practice on Key Technologies for Unmanned Vehicles</td>
<td>Xiu-han Hu</td>
<td>Hui-jing Zhao</td>
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<tr>
<td>9:30am to 9:40am</td>
<td>EHEALTH: A Reconfigurable Wireless Healthcare System for OSAS Monitoring</td>
<td>Xiao-guang Li</td>
<td>Tao Wang</td>
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<td>9:40am to 9:50am</td>
<td>HCMP: A Vision of Creative Computation in Music Performance</td>
<td>Yue Yan</td>
<td>Roger B. Dannenberg</td>
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<td>How Natural Scenes Might Shape Neural Machinery for Computing Shape from Texture?</td>
<td>Qiao-chu Li</td>
<td>Tai Sing Lee</td>
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<tr>
<td>10:00am to 10:30am</td>
<td>Coffer Break</td>
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# Session B2: Electronics & Microelectronics

**Chair:** Prof. Run-Sheng Wang

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<td>10:10am to 10:20am</td>
<td>AC Random Telegraph Noise in Multi-Gate MOSFETs</td>
<td>Mu-long Luo</td>
<td>Ru Huang</td>
</tr>
<tr>
<td>10:20am to 10:30am</td>
<td>Impedance Model of Nano-fluidics Crystal and Fabrication of Funnel-Shaped Nano-channels</td>
<td>Hongtan Du</td>
<td>Wei Wang</td>
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<td>The Design of Ad hoc Emergency Communication Networks based on Smartphones</td>
<td>Hang Zhang</td>
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<td>Super-continuum Generation in Tapered Photonic Crystal Fiber</td>
<td>Wei Zhang</td>
<td>Zhi-gang Zhang, Ai-ming Wang</td>
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<td>A pen-like input device for a LCD</td>
<td>Jian-bo Yang</td>
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Session C: Poster

4:30pm-5:30pm, Sunshine Hall, Yingjie Overseas Exchange Center of Peking University

Co-Chair: Prof. Yuan Wang & Prof. Hong-zhi Deng

1. The Design of Ad hoc Emergency Communication Networks based on Smartphones
   Hang Zhang
   Advisor: Ling-yang Song

2. Super-continuum Generation in Tapered Photonic Crystal Fiber
   Wei Zhang
   Advisor: Zhi-gang Zhang, Ai-ming Wang

3. A pen-like input device for a LCD
   Jian-bo Yang, Shi-bo Tao
   Advisor: Jiang Chen

4. Multi-Parameter Optical Fiber Sensing System Based On GAWBS Mechanism
   Yu-zhou Cheng
   Advisor: Zheng-bin Li

5. Android smartphones based Internet of Things system
   Hong-liang Zhang
   Advisor: Ling-yang Song

6. Design of depolarizer and all-depolarized interferometric fiber-optic gyroscope
   Meng Zhang
   Advisor: Zheng-bin Li

7. Photoluminescence Enhancement and Structure Characterization of ErxYb2-xSi2O7
   Xin-ke Yu
   Advisor: Zhi-pei Zhou

8. Spectrum flattening with a 4f pulse shaper
   Yi-fan Cui
   Advisor: Zhi-gang Zhang

9. All-normal-dispersion Femtosecond Laser at 920nm
   Xiang Gao
   Advisor: Zhi-gang Zhang

10. The Simulation Platform and Verification of Energy-efficient SSD
    Yi-jin Guan
    Advisor: Guang-yu Sun

11. Java Bytecode Clone Detection Based on Variable Operation Sequence Analysis
    Zheng Lan
    Advisor: Ge Li

12. The Detection and Deletion of The Abnormal Data in A Finger Vein Dataset
    Liao Ni
    Advisor: Wenxin Li

13. New Type Simulation Platform and Verification Prototype Design For High Efficiency Solid-state Drives (SSD)
    Di-qi Chen
    Advisor: Guang-yu Sun

14. Mining Strong Relations in Weibo and Its Application in Recommending System
    Qiang Fu
    Advisor: Ming Zhang

15. Sober-Drive: A Smartphone-assisted Drowsy Driving Detection System
    Lun-bo Xu
    Advisor: Wei Yan

16. Clone Detector based on JAVA byte code
    Zhen-yu Zhou
    Advisor: Ge Li

17. AC Random Telegraph Noise in Multi-Gate MOSFETs
    Mu-long Luo
    Advisor: Ru Huang

18. Impedance Model of Nano-fluidics Crystal and Fabrication of Funnel-Shaped Nano-channels
    Hongtan Du
    Advisor: Wei Wang

19. A research on MOS dosimeters based on MEMS techniques
    Yu-hao Yang
    Advisor: Jing-wen Zhang
20. Robust RRAM-based Synapses for Low Energy Neuromorphic System  
   Yin-jie Bi  
   Advisor: Jin-feng Kang

21. Vertical Nanogrid Fabrication Methods Based on Deep Reactive-Ion-Etching (DRIE)  
   Kai Zhang  
   Advisor: Wen-Gang Wu

22. Novel Circuit & System Based on RRAM  
   Yun Long  
   Advisor: Jin-feng Kang

23. Comprehensive Physical Model for Retention Failure in RRAM Devices  
   Gang Qiu  
   Advisor: Jin-feng Kang

24. Investigation on Reliability Testing  
   Yin-Xuan Lyu  
   Advisor: Yan-dong He

25. Experimental Study on Positive Bias Temperature Instability of Metal-Gate SOI nMOSFETs  
   Zhe Li  
   Advisor: Yan-dong He

26. Transitional Metal Oxide RRAM  
   Hao-pei Deng  
   Advisor: Yi-mao Cai

27. Basic Research of Low Temperature Patterned Bonding with New Polymer  
   Yue Sun  
   Advisor: Jing Chen

28. EHEALTH: A Reconfigurable Wireless Healthcare System for OSAS Monitoring  
   Xiao-guang Li  
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29. HCMPE: A Vision of Creative Computation in Music Performance  
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32. Research on Highway Traffic Performance Index  
   Lu-chen Liu  
   Advisor: Kun-qing Xie

33. Analysis And Practice on Key Technologies for Unmanned Vehicles  
   Xiu-han Hu  
   Advisor: Hui-jing Zhao

34. Estimating Spatial Relation of Hand And Face via RGB-D Data  
   Wen Cui  
   Advisor: Jin-shi Cui

35. Mining Interpersonal Relationships from Cellphone Network Data  
   Le-zhi Qu, Yu Zang  
   Advisor: Guo-jie Song

36. On the heterogeneity of user interaction in complex networks  
   Pei-yang Lyu  
   Advisor: Guo-jie Song

37. Human++ -Routing Between Normal People and Celebrities  
   Feng-an Li  
   Advisor: Hong-zhi Deng

38. Detecting And Tracing Moving Persons In Surveillance Video  
   Yu-Chen Ding  
   Advisor: Yun-hai Tong

Conference Dinner & Best Paper Award Ceremony  
6:00pm-8:00pm Shaoyuan Restaurant, Peking University