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## Preface

The Fifth International Conference on Internet Computing for Engineering and Science (ICICSE|10) organized in Harbin Engineering University, Harbin, China, on November 1, 2010. ICICSE conference is an annual event. The past conferences were held on campus of Harbin Engineering University in the winter of Harbin (China). The previous conferences were very successful events. The goal of the conference is to promote campus-wide research, especially graduate students who love to pursue their academic career. The conference vision is to break traditional computer science towards to multidisciplinary domains through computational science and engineering.

Computational science is an important and urgent field with multi-disciplinary research. It focuses on algorithms development and implementations of computing for scientists and engineers. Its impact is already being felt in many science and engineering disciplines. Current research in computational science requires multi-disciplinary knowledge, not only in sciences and engineering but also in cutting-edge technologies of computing. Many science and engineering explorations rely on mature, efficient computational algorithms and implementations, practical and reliable numerical methods, and large-scale computation systems. The theme of this conference focuses on scientific computations and applications on Internet, enhancing cyberinfrastructure-based scientific and engineering collaborations. It provides a great opportunity for non-computer science professionals traveling from different fields to this conference. This conference offers academic researchers, developers, and practitioners an opportunity to discuss various aspects of computational science and engineering-related computational methods and problem solving techniques for science and engineering research.

This conference is not like other conference, we only want to make sure graduate students have chance to practice their research paper writing, and publication, as well as conference organization. Therefore, we can

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organize such conference on different campus to promote graduate research and education. The ICICSE10 received 60 submissions from many different organizations. After intensive reviews of each paper, we finally obtained many review results that accepted about 45 papers in terms of regular and short papers. The major concern is the paper qualities are not as good as we expected. Even some of accepted papers have quite poor quality, although their research topics are very interesting and well fit to the conference.



This conference is organized and sponsored by Harbin Engineering University, China, Scientific, Technology, Engineering, Mathematics, Education Society (STEMES), USA, and the University of Iowa, USA. It will be operated by the conference program committee.

Program Co-Chairs  
Dr. Jun Ni and Dr. Shaobin Huang

Oct. 25, 2010

# Conference program

## Technical Program

ICICSE'2010 Technical Program (Preliminary) – Presentation Session Nov. 1, 2010				
Time	Place	Content		
8:00AM	Conference Site	Registration		
8:30AM	Auditorium	Opening: Dr. Jun Ni Program Chair;		
8:50 AM -9:40 AM	Auditorium		<b>Keynote Talk:</b> Human Behavior Prediction <b>Yiming Zhou</b> , Senior member of IEEE, England	
9:40 AM -10:20 AM	Auditorium		<b>Keynote Talk:</b> Intelligent Computer-Aided Auditing in China: History and Future <b>Lv Tianyang</b> , Harbin Engineering University, China.	
<b>Coffee Break (Provided)</b>				
10:40AM -11:45AM (20 minute each)	<b>Section A: Algorithm and information Processing</b> (the Bohai Sea hall)  <b>Mahalanobis Distance Metric Based Laplacian Mapping for Image Recognition</b> Xingfu Zhang Paper01  <b>Cell Image Processing based on Distance Transform and Regional Growth</b> Jun Duan and Baiqing Long	<b>Section B: Internet and Distributed Computing</b> (the Yellow Sea hall)  <b>The Design and Application of Fault Tree Benchmark</b> Yuchang Mo, Quansheng Yang, Farong Zhong and Lejun Zhang Paper14  <b>A Method of Performance Analysis and Verification of Real-time System Based on Model Checking</b> Tao	<b>Section C: Methodologies in Networks</b> (the North Sea hall)  <b>Multi-mode Access Selection for Cognitive Networks based on Evidence Theory</b> Junyu Lin, Huiqiang Wang and Xu Lu Paper26  <b>Network Coding in Wireless Networks: A Brief Overview and Open</b>	<b>Section D: Network Security</b> (the North Sea hall)  <b>A Survivability Information System Based on Service Self-Organization</b> Lejun Zhang, Mo Li, Jian-pei Zhang, Jing Yang and Lin Gao Paper37  <b>Application Research on Network Coding in WSN</b> Lei Wang, Guoyin Zhang, Chunguang Ma and Xu Fan

	<p>Paper02</p> <p><b>Combined Grey Forecast Model with Particle Swarm Optimizer</b> Chunnan Zhou, Shaobin Huang and Tianyang Lv Paper03</p> <p><b>D-S Evidence Theory Fusion Method Based on Forecast Reliability</b> Jian-pei Zhang, Li Wang, Le-jun Zhang and Jing Yang Paper04</p> <p><b>Video Caption Detection Algorithm based on Multiple Instance Learning</b> Haibo Liu, Changjian Zhou, Jing Shen, Pingke Li and Shengping Zhang Paper05</p>	<p>Zhang, Shaobin Huang, Tianyang Lv and Hongtao Huang Paper15</p> <p><b>Improvement of Density Clustering Based k-Anonymity Method</b> Xinjun Qi and Mingkui Zong Paper16</p> <p><b>Design on Web Services Discovery Model</b> Guisheng Yin and Xiaohui Cui Paper17</p>	<p><b>Problems</b> Yunlong Zhao and Binyan Yao Paper27</p> <p><b>An Internetwork Evolution Model and Its Implementation Based on Service Entity</b> Tao Wang and Guisheng Yin Paper28</p> <p><b>WSNs Failure Node Detection Method Based on Arithmetic Coding</b> Dapeng Man, Qing Wang, Wu Yang, Wei Wang and Shichang Xuan Paper29</p>	<p>Paper38</p> <p><b>A Neural Network Based Approach for Reliability Analysis of Software-intensive Equipment</b> Changjie Ma, Guochang Gu, Jing Zhao and Ni Jun Paper39</p> <p><b>A Fault Detection Service for Cluster-based Ad Hoc Network</b> Xiang Li, Chaoguang Men, Zhenpeng Xu, Zhongzheng He Paper40</p>
12:00PM -1:30PM	<b>Lunch (Provided), Hong Kong Hotel</b>			
1:20PM -3:00PM (20 minute each)	<p><b>A Novel Memory and Disk Integrity Protection Scheme</b> Haifeng Ma, Nianmin Yao, Yong Han, Jing Zhao and Zhenguo Gao Paper06</p> <p><b>Locating Micrometer in a Digital Image Based on Projection Algorithm in Space Domain</b> Xiaohui Mao and Liying Zheng Paper07</p> <p><b>Effect-Oriented Function Analysis</b></p>	<p><b>Research of a Heuristic Initialization-Independent Spectral Clustering</b> Huiqing Wang, Junjie Chen, Shaobin Huang and Kai Guo Paper18</p> <p><b>A k-Closest-Pair Query Algorithm Based on Grid Partition of Hilbert Curve</b> Hongbo Xu, Qilong Han and Haiwei Pan Paper19</p>	<p><b>Research on Transfer-sycro-controlling Mechanism of iSCSI Virtualization Switch for Accelerating Execution Process of Read/Write Requests</b> Yong Han, Nianmin Yao and Haifeng Ma Paper30</p> <p><b>The Research on Dynamic Path Selection of Ring Authentication</b></p>	<p><b>Network Security Risk Assessment Based on Service Dependency Analysis</b> Zhidong Li, Wu Yang, Wei Wang and Dapeng Man Paper41</p> <p><b>A Dynamic Trust Measurement based on Characteristics of Evaluation Indexes</b> Yuxin Dong, Guisheng Yin and Xuyang Teng</p>

	<p><b>and Testing Method</b> Min Song, Guisheng Yin, Hongbin Wang and Jun Ni Paper08</p> <p><b>Photographic Map information Hiding Algorithm based on Wave band Fusion</b> Songzhu Xia. Changming Zhu and Jun Ni Paper09</p> <p><b>A Survey on Video Caption Extraction</b> Haibo Liu, Changjian Zhou and Jing Shen Paper10</p>	<p><b>Functional Coverage Driven Verification for TAU-MVBC</b> Aihong Yao, Jian Wu and Zhijun Zhang Paper20</p> <p><b>The Study of Capacity in MIMO Channels Based on Different Power Allocation</b> Ji-Yu Sun, Hong Xie and Dong-Ming Li Paper21</p> <p><b>Data Stream Clustering Algorithm Based on Active Grid Density</b> Jing Yang, Wenxin Zhu, Jianpei Zhang and Yue Yang Paper22</p>	<p><b>Structure based on Clustering</b> Yuxin Dong and Yunhong Hao Paper31</p> <p><b>Cognitive Networks and Its Layered Cognitive Architecture</b> Zhendong Wang, Huiqiang Wang, Guangsheng Feng, Bingyang Li and Xiaoming Chen Paper32</p> <p><b>Localization Scheme Based on Local-adjusted Data-Driven Statistical Error Model</b> Shaobin Cai, Zhengguo Gao, Yunlong Zhao and Jing Zhao Paper33</p> <p><b>A Frequency Domain Algorithm of UWB Channel Estimation Based on Recursive Least Squares</b> Lili Guo, Zhuo Yang and Zhiguo Sun Paper34</p>	<p>Paper42</p> <p><b>The Description and Fusion of Heterogeneous Information Using Random Set Theory in Condition Monitoring and Fault Diagnosis</b> Jianpei Zhang, Mo Li, Lejun Zhang and Jing Yang Paper43</p> <p><b>A Method to Determine the Saturation of Information Diffusion</b> Niannian Jia, Jiannan Yu and Ying Wang Paper44</p> <p><b>Hierarchical Self-destruction Method and Case study on Distributed system</b> Junyu Lin, Huiqiang Wang, Zhitao Qiu and Guangsheng Feng Paper45</p>
<p><b>3:00PM -3:20PM</b></p>	<p><b>Coffee Break (Provided)</b></p>			
<p><b>3:20PM -4:20PM (20 minute each)</b></p>	<p><b>A Null Value Estimation Method Based on Similarity Predictions in Rough Sets</b> Yang Jing, Jiang Ze, Jianpei Zhang and Lejun Zhang Paper11</p> <p><b>Research of the Indoor Shooting Simulation System</b></p>	<p><b>Research on Mining Positive and Negative Association Rules Based on Dual Confidence</b> Xiufeng Piao, Zhanlong Wang and Gang Liu Paper23</p> <p><b>A New Data Clustering</b></p>	<p><b>Research on the Radiation Field of Mono-radiation Wide-Band Leaky Coaxial Cable Using for 3G Mobile Communication</b> Guojian Yang and Zhuo Wang Paper 35</p> <p><b>Compact CPW-fed</b></p>	

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	<p><b>for Object Locating Algorithm</b>  Shigui Li and Tao Jiang  Paper12</p> <p><b>An Practical and Average Optimal String Matching Algorithm based on Lecroq</b>  Hongbo Fan, Nianmin Yao and Haifeng Ma  Paper13</p>	<p><b>Algorithm</b>  Yuan Cheng, Shaobin Huang, Tianyang Lv and Guofeng Liu  Paper 24</p> <p><b>Model for Submarine's Power Distribution System Based On Web Services</b>  Guisheng Yin and Chao Cui  Paper 25</p>	<p><b>Antenna for Ultra Wideband Applications</b>  Yu Bai, Yingsong Li, Xiaodong Yang and Chengyun Wu  Paper36</p>	
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## Invited Speaker

**Dr. Yiming Zhou**

**Senior member of IEEE**

**Topic Theme: Human Behavior Prediction**



Dr. Yiming Zhou is Chief Engineer of BOCO Info-Sec Technology Limited. He manages and builds R&D team, oversees full cycle of new/existing products. He holds an undergraduate degree from Xian Institute of Highway and graduate degrees from Beijing University of Aeronautics and Astronautics and the University of Bristol. He was a professor and Ph.D,MSc student supervisor of Beihang University.

Supervised 28 Ph.Ds and many MSc students from more than 10 countries alone. Most of them graduated on time. And published many papers which were indexed by SCI ,EI and ISTP. His professional focus has been AI, Data mining Fuzzy logic and so on.

**Dr. Lv Tianyang**

**Harbin Engineering University, China.**

**Topic Theme: Intelligent Computer-Aided Auditing in China: History and Future**



Dr. Lv received the Ph.D. in Computer Application Technology from Jilin University in 2007. In 2010, he received the 10th Science and Technology Award for Youth of Harbin. He has published over 50 papers, of which over 20 are indexed by SCI, EI. He has developed and applied the advanced intelligent analysis technology in auditing over 20

million attendees of Chinese social insurance.

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# Conference Organization

## General Chair:

Yong Shi, Graduate University of Chinese Academy of Sciences, Beijing, China  
Guisheng Yin, Harbin Engineering University, Harbin, China

## Program Chair:

Jun Ni, the University of Iowa, USA

Shaobin Huang, Harbin Engineering University, Harbin, China

## Local Program Chair:

Junyu Lin, Harbin Engineering University, Harbin, China

Changming Zhu, Harbin Engineering University, Harbin, China

Joe Demaria, STEMES, Iowa City, USA

## Advisory Chair:

Guochang Gu, Harbin Engineering University

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## **Program Committee Members and Reviewers**

Alex Vazhenin, University of Aizu, Japan

Anand Padmanabhan, University of Illinois, Urbana Champion, USA

Beniamino Di Martino, Second University of Naples, Italy

Choi-Hong Lai, University of Greenwich, UK

Da-xin Liu, Harbin Engineering University, China

Deepak Srivastava, NASA Ames Research Center USA

Ed Sedeil, Computational Technology Center, Louisiana State University, USA

Enrique Quintana-Orti, University of Jaime I, Spain

Ge Wang, Professor, Virginia Tech. USA

George A. Gravvanis, Democritus University of Thrace, Greece

Gudula Rünger, Chemnitz University of Technology, Germany

Guisheng Yin, Harbin Engineering University, China

Guochang Gu, Harbin Engineering University, China

Hamid R. Arabnia, University of Georgia, USA

Huiqiang Wang, Harbin Engineering University, China

Jack Dongarra, University of Tennessee, USA

Jerry Jenkin, CFD Research Corporation, USA

Joan Lu, the University of Huddersfield, UK

Joe Demaria, STEMES

Joe Zhang, University of Southern Mississippi, Hattiesburg, USA

Jun Duan, Inn Mongolia University of Science and Technology, China

Jun Ni, University of Iowa, USA

Laurence T. Yang, St. Francis Xavier University, Canada

Lily R. Liang, University of the District of Columbia

Longde Yin, University of Connecticut, USA

Luciano Tarricone, University of Lecce, Italy

Michael Ng, University of Hong Kong, China

Nadamoto Akiyo, NICT, Japan

Nianmin Yao, Harbin Engineering University, China

Rodrigo de Mello, University of Sao Paulo, Brazil

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Rubo Zhang, Harbin Engineering University, China  
Sabin Tabirca, University College Cork, Ireland  
Shaobin Cai, Harbin Engineering University, China  
Shaobin Huang, Harbin Engineering University  
Shaowen Wang, University of Illinois, Urbana Champion, USA  
Thomas Rauber, University of Bayreuth, Germany  
Watson Layne, Virginia Tech. USA  
Xiepeng Wei, the University of Iowa, USA  
Xing Cai, University of Oslo, Norway  
Zhengge Huang, Zhengjiang University, China  
Zhonghui Duan, University of Akron, USA

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## **Local and Other Information**

### **Banquet**

The banquet will take place on Monday, November 1 at 18:00 in Hong Kong hotel. We earnestly invite you to come and join us.

One bus that waits at the door of Qihang Activity Centre at 17:40 will take us to Hong Kong hotel for banquet, and return at 20:30.

### **Break**

Coffee and tea will be served at the specified site as the conference program illustrated.

### **Lunch**

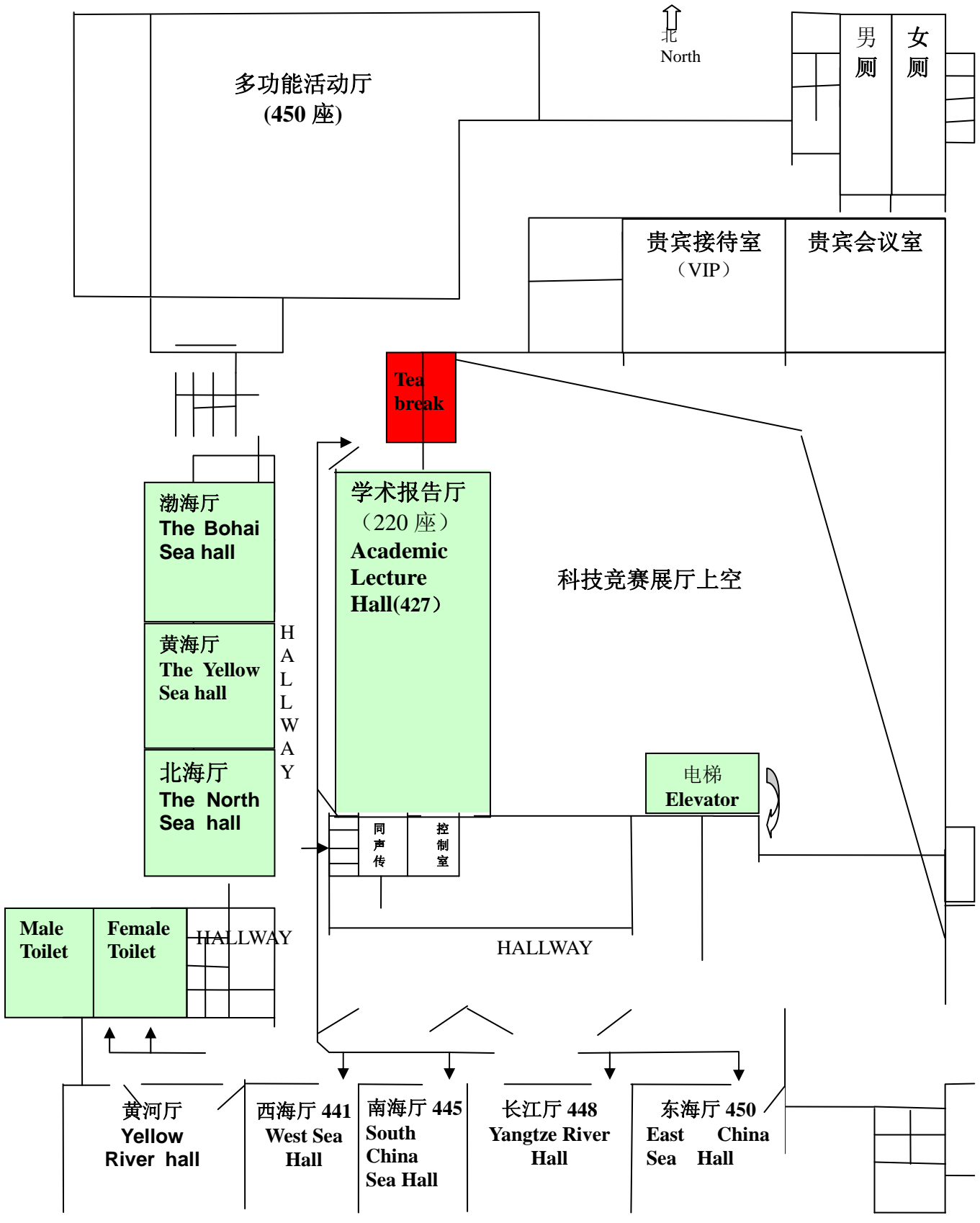
Lunch will be served in the Hong Kong hotel at 12:00 on Monday.

One bus that waits at the door of Qihang Activity Centre at 11:50 will take us to Hong Kong hotel for lunch, and return at 13:20.

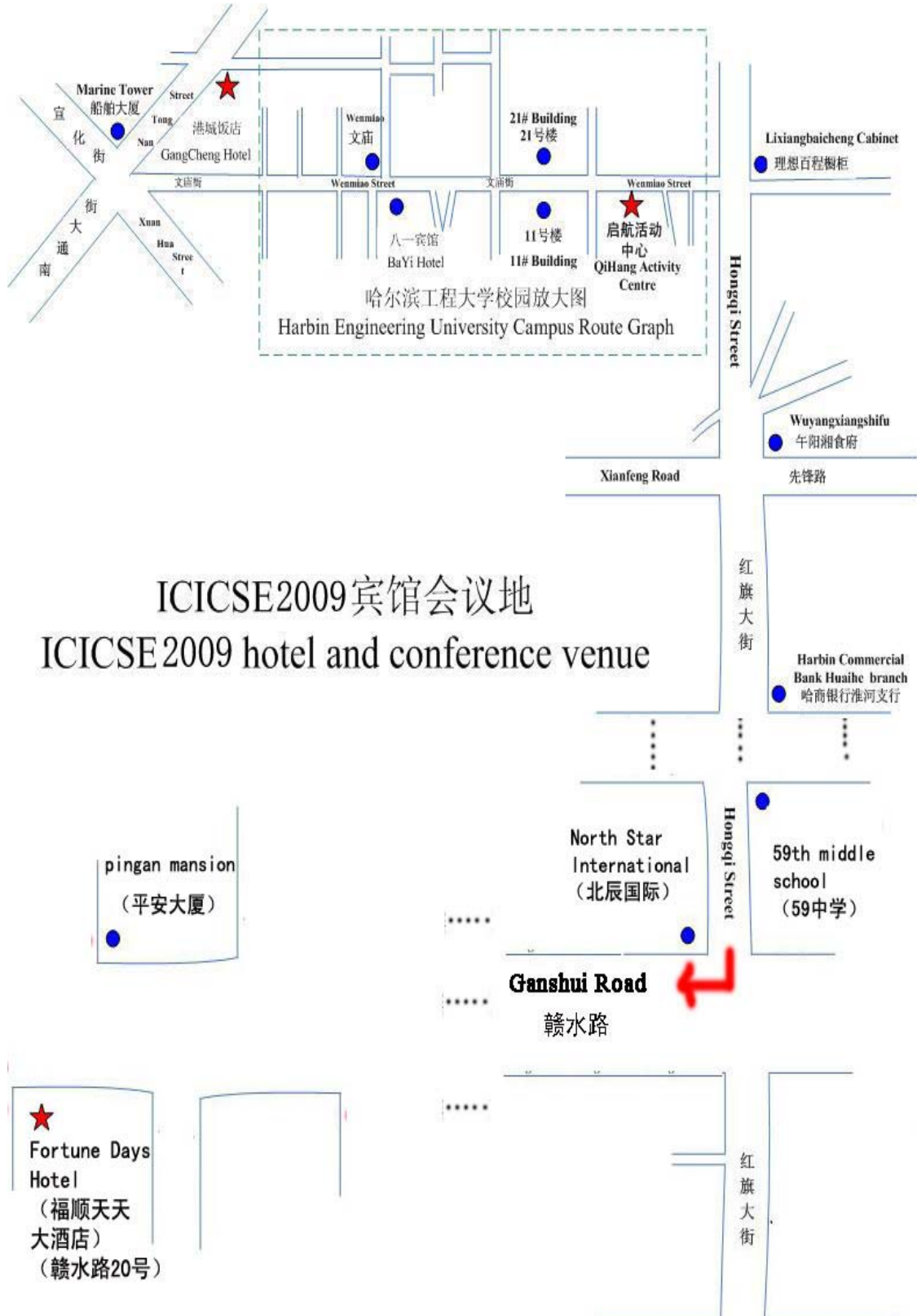
### **Registration**

The registration desk will be in the forth floor of Qihang Activity Centre on Nov.1, 2010

# Meeting Place Map



# Road Map



ICICSE2009宾馆会议地  
ICICSE2009 hotel and conference venue