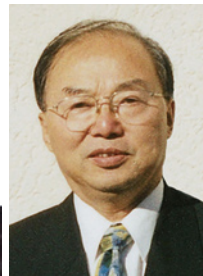Jiaguang Sun

Xu Chen

Zhiqiang Yin

Zheng Li

Jun Li

Zhisheng Niu

Feng Deng

The series of THU-USC Faculty Forum is made possible with support from Feng Deng, alumnus of both Tsinghua University and University of Southern California.

Yannis Yortsos

Cauligi Raghavendra
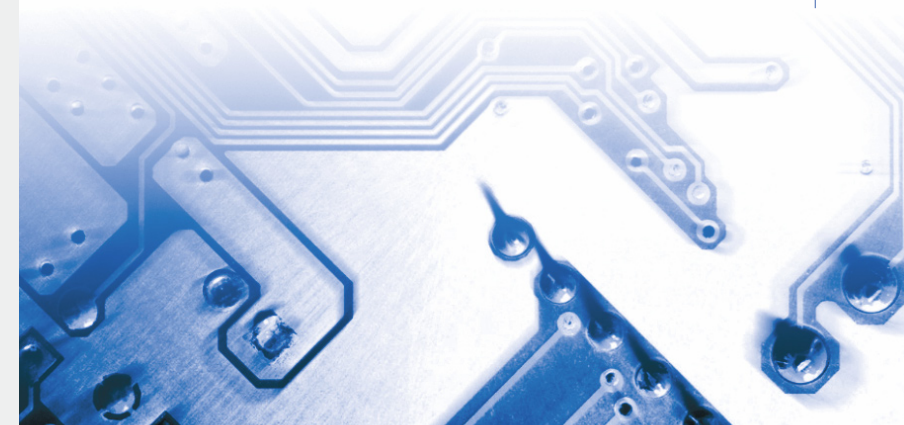
Iraj Ershaghi

Fred Aminzadeh

Joe Qin

Andrea Armani

Dates:
20-22 May, 2009
Venue:
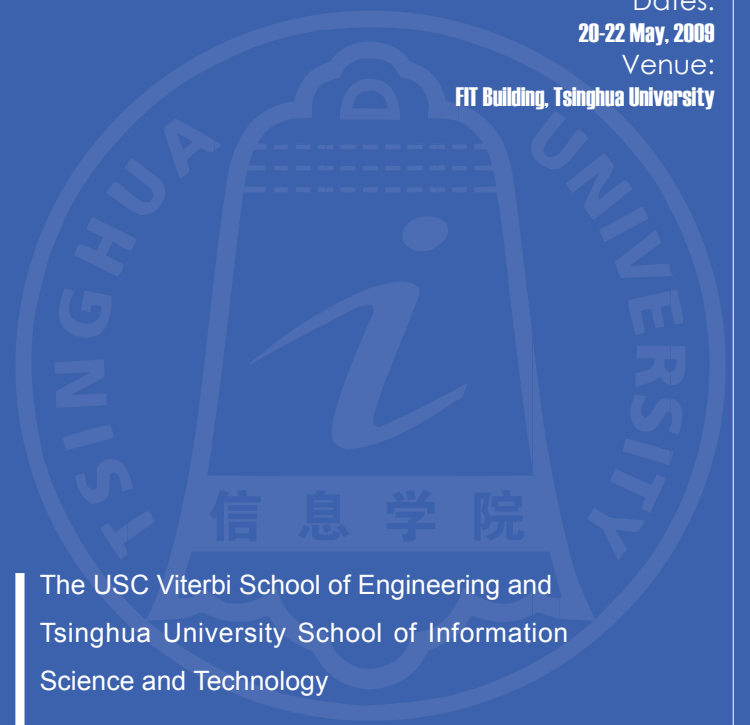FIT Building, Tsinghua University

Forum

3rd THU-USC Joint Faculty Forum on Green and Smart IT for a Sustainable Future

3rd THU-USC Joint Faculty Forum on
Green and Smart IT
for a Sustainable Future

The USC Viterbi School of Engineering and

Tsinghua University School of Information

Science and Technology

Wednesday, May 20, 2009

19:00-21:00 Welcome Dinner (QuanJude Roast Duck Restaurant, Tsinghua Science Park)

Thursday, May 21, 2009

Welcome Remarks and Introduction (Lecture Hall)
Chair: Prof. Zhisheng Niu (Vice Dean of SIST)

- 9:00 - 9:05: Welcome from Jun Li
- 9:05 - 9:10: Greetings from Cauligi Raghavendra
- 9:10 - 9:15: Greetings from Mr. Feng Deng
- 9:15 - 9:30: Introduction of faculty participants from USC and THU

Keynote Talks (Lecture Hall)
Chair: Prof. Zhisheng Niu (Vice Dean of SIST)

- 9:30-10:00: "Enhancing EHS, Maximizing Recovery Efficiency and Minimizing OPEX and CAPEX with IT Driven Intelligent Oilfield Operations"
  by Iraj Ershaghi, (Omar B. Milligan Professor and Director Petroleum Engineering Program and Executive Director of Center for Interactive Smart Oilfield Technologies, USC)

10:00-10:30 Coffee Break

Chair: Prof. Cauligi S. Raghavendra (Senior Associate Dean, VSoE, USC)

- 10:30-11:00: "Developments of Solar Thermal in China"
  by Zhiqiang Yin (Professor, THU)
- 11:00-11:30: "Multi-Disciplinary Technology Applications in the Energy Industry with a Focus on Geosciences, Artificial Intelligence and Pattern Recognition"
  by Fred Aminzadeh, (Research Professor, Center for Interactive Smart Oilfield Technologies, USC)

12:00-14:00 Lunch (Jia Suo Restaurant, THU)

14:00-17:30 Parallel Sessions

Track I: IT-Driven Energy and Sustainability (Room 1-315)
Chair: Prof. Si-Zhao Qin (VSoE, USC)

- 14:00-14:30: "GeoRealism: Expanding the human ability to comprehend a larger geo space", by Cyrus Shahabi (CSCI Dept., USC)
- 14:30-15:00: "Key Technologies for Solid State Lighting -- from Epitaxy to Lighting Fixture"
  by Yi Luo (EE Dept., THU)
- 15:00-15:30: "Sequestration of Carbon Dioxide in Geologic Formations: A Viable Option for Mitigating the Greenhouse Effect"
  by Don Zhang (CEE Dept., USC)

15:30-16:00: Coffee Break

- 16:00-16:30: "Green IT for Energy Efficient Buildings"
  by Ruixi Yuan (AU Dept., THU)
- 16:30-17:00: "Biologically-Inspired Smart Microfabricated Sensor and Actuator Networks"
  by Ellis Meng (BME Dept., USC)

- 7:00-17:30: "Massively Parallel Computing for Electronic Design Automation"
  by Yangdong Deng (IME, THU)

Track II: Green IT and Intelligent Software (Room 1-312)
Chair: Prof. Maosong Sun (CS Department, THU)

- 14:00-14:30: "Reducing Energy Cost and Carbon Footprint of Data Centers",
  by Massoud Pedram (EE Dept., USC)
- 14:30-15:00: "Case study for the Medical electronics and integrated circuits"
  by Zhihua Wang (IME, THU)
- 15:00-15:30: "Improving the Reliability of Data Center Servers Using 3D Stacked Monitoring",
  by Murali Annavaram (EE Dept., USC)

15:30-16:00: Coffee Break

- 16:00-16:30: "Energy-aware schedulers for HPC clusters"
  by Wenguang Chen (CS Dept., THU)
- 16:30-17:00: "Greening the Internet: Towards Design of Energy Efficient and High Throughput Routers"
  by Viktor Prasanna (EE Dept., USC)
- 17:00-17:30: "Deadlock-Free Fully Adaptive Routing in 2D Tori"
  by Dong Xiang (SS, THU)

Track III: Smart Power Grid and Urban Infrastructure (Room 1- 415)
Chair: Prof. Zuo Zhang (AU Dept., THU)

- 14:00-14:30: "Design of Smart Power Grid Systems: Issues and Opportunities"
  by Jay Kuo (EE Dept., USC)
- 14:30-15:00: "Research Activities and Technical Roadmap of Green Electric Grid in China"
  by Zongxiang Lu (Electrical Engineering Dept., THU)
- 15:00-15:30: "Model Predictive Control for Electricity Demand Reduction in Commercial Buildings"
  by Joe Qin (CHE/MASC, USC)

15:30-16:00: Coffee Break

- 16:00-16:30: "A Research Initiative: eRUCIE: e-Leaning Network on Risk-managed Underground Civil Infrastructure Engineering"
  by Xiaohui Cheng (Civil Engineering Dept., THU)
- 16:30-17:00: "Online Sensor Networks for Dynamic Control"
  by Andrea Armani (CHE/MASC, USC)
- "ITS in China: Our Viewpoints and Recent Research Progress"
  by Li Li (AU Dept., THU)

18:00-20:00 Banquet (Bai Jia Da Zhai Men Restaurant)

Friday, May 22, 2009

Signing Ceremony of "THU-USC Joint Institute on Smart and Green IT" (Lecture Hall)
Chair: Prof. Jun Li (Executive Vice Dean of SIST, THU)

Participants:
THU:
- Prof. Xu Chen (Vice President)
- Prof. Lisheng Luo (Director, International Office)

- Prof. Jiaguang Sun (Dean of the SIST and Director of the TNList.
- Prof. Jun Li (Executive Vice Dean of the SIST)
- Prof. Zhisheng Niu (Vice Dean of the SIST)
- Prof. Zuo Zhang (Chair of the Automation Department Council)
- Prof. Maosong Sun (Head of the CS Department)
- Prof. Zhihua Wang (Deputy Director of IME)
- Prof. Lin Zhang (Deputy Director of EE Department)

USC:
- Prof. Yannis Yortsos (Dean of VSoE)
  Prof. Cauligi S. Raghavendra (Senior Associate Dean of VSoE)

Mr. Feng Deng, Alumnus of both Tsinghua and USC
Invited government representatives

- 9:00 - 9:05 : Welcome by Prof. Xu Chen (Vice President of THU)
- 9:05 - 9:15 : Greetings by Prof. Yannis Yortos, Dean of VsoE, USC
- 9:15 - 9:20 : Greetings by Prof. Jiaguang Sun, Dean of SIST, USC
- 9:20 - 9:30 : Signing Ceremony and Group Photo

Keynote Talk (Lecture Hall):
Chair: Prof. Jun Li (Executive Vice Dean of SIST, THU)

- 9:30-10:00: "Green and Smart for a Sustainable Future"
  by Yannis Yortsos (Dean of VSoE, USC, Member of NAE)
- 10:00 -10:30: "Chinese Energy Challenges and Way Out"
  by Zheng Li (Deputy Director of Tsinghua Low-Carbon Lab, THU)

10:30-11:00: Coffee Break

11:00 – 12:30: Parallel Sessions

Track IV: Mobile Sensor Networks for Energy Efficiency (Room 1- 415)
Chair: Prof. Viktor Prasanna (EE Dept., VSoE, USC)

- 11:00-11:30: "Sensor Networks for energy-saving applications: physical-layer and cross-layer aspects"
  by Andy Molisch (EE Dept., USC)
- 11:30-12:00: "ASON: Metropolitan Area Sensing and Operation Network"
  by Lin Zhang (EE Dept., THU)
- 12:00-12:30: "City-Scale Sensor Networks"
  by Bhaskar Krishnamachari (EE Dept., USC)

Track V: Nanotechnology and Energy Conversion (Room 1-315)
Chair: Prof. Yi Luo (EE Dept., SIST, THU)

- 11:00-11:30: "Green Energy Conversion and Storage Based on Novel Nanomaterials"
  by Chongwu Zhou (EE Dept., USC)
- 11:30-12:00: "Passive and Active Performances of Slab Photonic Crystal Waveguides"
  by Yidong Huang (EE Dept., THU)
- 12:00-12:30: "Physical Properties of Semiconductor and Metallic Nanowires"
  by Jia Grace Lu (EE Dept., USC)

12:30-14:00: Lunch with Students (ZhiLanYuan Restaurant)

14:00-16:00: Lab Tours and Individual Discussions with corresponding professors

16:00-17:30: Wrap-up and group discussion on the joint institute (Room 1-315)