

International Conference on Sustainable Development of Critical Infrastructure (IC-SDCI)

重大建设工程可持续发展国际会议

Shanghai, China, 15-18 November 2012

2012年11月15-18日 中国上海

Objectives

主题

The International Conference on Sustainable Development of Critical Infrastructure (IC-SDCI) will be held at Shanghai Jiaotong University (SJTU), in Shanghai, China on 15-18 November 2012. Shanghai is in the midst of developing its infrastructure systems for the entire country; these include all types of infrastructure systems, from long span bridges, long tunnels, tall buildings, high-speed rails and super-highways, to transportation hub, nuclear power plants, and wind and solar energy systems.

重大建设工程可持续发展国际会议将于 2012 年 11 月 15-18 日在中国上海交通大学举办。上海作为整个中国建设工程快速发展的中间地带，建成了，包括从大跨度桥梁、长距离隧道、高层建筑、高速铁路到交通枢纽、核电站以及风力和太阳能发电设施等各种不同类型的基本建设系统。

The IC-SDCI will be a forum for international experts and participants to discuss and exchange information, experience, and knowledge on the design, construction, and operation of critical infrastructure systems in their respective countries. To reconcile accelerating the economic development with environmental protection is the core thought in the forum, which will emphasize both to build a new interactive mechanism on environmental protection between the nation and society and to develop the technologies necessary and pertinent for the development of all sustainable engineering systems including specialized topics on sustainability, safety, risk assessment and management, and life-cycle performance and cost.

IC-SDCI 将成为国际国内专家和与会者们交流信息和工程经验以及讨论各国重大建设工程的设计、施工和运营的论坛。促进经济发展与环境保护协调一致是本次会议的核心主题。会议不仅强调在国家和社会间建立一套新的环境保护互动机制，同时还强调开发的所有与可持续工程系统相关的必要技术。会议的主题包括：可持续性、安全性、风险评估和管理以及全生命周期性能和成本等。

Sponsor and Venue

主办单位和会议地点

The IC-SDCI will be sponsored by the Shanghai Jiao Tong University in the metropolitan city of Shanghai, and will be held on its campus. The conference facilities include a conference hall and adjoining rooms for parallel sessions. All rooms have modern projection facilities, including simultaneous translation.

IC-SDCI 由上海交通大学主办，会议地点设在上海交通大学校园。会议设施包括主会场的会议厅和分会场的会议室，均备有投影仪和同声传译。

Lodging and accommodations are available on campus, including a limited number of deluxe quality. Modern hotels are also available in the vicinity of the campus.

会议住宿安排在校园内，包括少量的豪华房间。校园附近也有现代化酒店设施。

Conference Programs

会议日程安排

The Conference is planned for 15-18 November 2012. The four days Conference will start with Registration on Thursday afternoon (14th November), the Opening Session on Friday (15th November) morning and adjourn with the Closing Session on Sunday (17th November) afternoon, On Monday (18th November) some technical tours around Shanghai will be arranged.

会议定于 2012 年 11 月 15-18 日期间举行。11 月 14 日注册，11 月 15 日会议开幕，11 月 17 日下午会议闭幕。11 月 18 日安排会后技术考察。

Technical Program –

技术安排

The technical program will start after the Opening Session on Friday (November 15th) with a Symposium devoted entirely to the topic of Sustainability, to be organized by the ASCE Committee on Sustainability.

11 月 15 日开幕式后是美国土木工程师学会（ASCE）可持续性学术委员会组织的有关可持续性的专题研讨会。

Starting on Saturday (November 16th), the technical program will consist of plenary and parallel sessions, with invited keynote lectures, contributed papers, and organized sessions (each with multiple papers). Workshops on specialized topics will be organized as part of the Conference. For example, the Council on Disaster Risk Management (CDRM) of ASCE has proposed a workshop on Risk Assessment and Management. And the International Association for Life-Cycle Civil Engineering (IALCCE) will organize special sessions on life-cycle engineering.

11 月 16 日开始，主体会议包括主会场特邀报告、主题报告和分组报告。本次会议还包括专题研讨，其中有 ASCE 的灾害风险管理委员会（CDRM）组织的风险评估和管理的专题研讨。另有国际全生命周期土木工程协会（IALCCE）组织的有关全生命周期工程分组专题讨论。

Social Programs–

活动安排

The social program will consist of a welcome reception (evening of 14th November), the Conference banquet (evening of 15th November), and a Farewell dinner (evening of 17th November). Technical tours will be organized on 18th November.

大会组委会在 11 月 14 日、15 日和 17 日晚分别安排了欢迎酒会、大会晚宴、告别晚宴，会后 11 月 18 日安排与会者参加技术考察。

Invitation and Call for Papers

分组报告征集和论文征稿

At this time, prospective participants are invited to organize sessions (of four or five papers) on one or more topics pertinent to the objectives of the Conference.

Individual participants and authors are invited also to submit abstracts of papers for presentation at the Conference and publication in the Conference Proceedings.

目前，大会组委会邀请从事土木基建工程的专家学者围绕会议主题组织分组报告（包括 4 至 5 篇论文），同时欢迎相关科技工作者向大会提交英文摘要。本次大会提交论文将统一刊登在会议论文集。

Conference Organization

组织机构

Honorary Chair – Prof. Jie Zhang ; President of Shanghai Jiao Tong University (SJTU)

荣誉主席- 张杰 教授（上海交通大学校长）

Conference Chair – Prof. Xila Liu; Professor of SJTU

会议主席- 刘西拉 教授（上海交通大学）

Conference co-Chair – Prof. A. H-S Ang; Research Professor, University of California

合作会议主席- 洪华生 教授（美国加州大学）

International Advisory and Scientific Committee

国际学术委员会

Prof. Hua Liu, Professor of SJTU, China

刘桦 教授，上海交通大学

Prof. Er Xiang Song, Tsinghua University, Beijing, China

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Prof. Dong Ping Fan, Tsinghua University, Beijing, China

方东平 教授，清华大学

Prof. Shi Lang Xu, Zhejiang University, China

徐世琅 教授，浙江大学

Prof. Jie Li; Tongji University, Shanghai, China

李杰 教授，同济大学

Prof. Chao Hui Chen, Chongqing University, Chongqing, China

陈朝晖 教授，重庆大学

Prof. Yun Gui Li, China Academy of Building Research, Beijing, China

李云贵 教授，中国建筑科学研究院

Prof. Shi-Shuenn Chen, President, Taiwan Tech, Taipei, China

陈希舜 教授，校长，國立台灣科技大學

Dr. Craig Farkos, Chair of COS (Committee on Sustainability) of ASCE, USA

Craig Farkos 博士，ASCE 可持续性学术委员会主席

Prof. Roberto Leon, President of SEI (Structural Engineering Institute) of ASCE, USA

Roberto Leon 教授，ASCE 结构工程分会主席

Prof. Erik Vanmarcke, Professor, Princeton University, USA

Erik Vanmarcke 教授，美国普林斯顿大学

Prof. Dan Frangopol, Professor, Lehigh University, USA

Dan Frangopol 教授，美国里海大学

Dr. Hasan Kamal, Kuwait Institute of Scientific Research, Kuwait

Hasan Kamal 博士，科威特科学研究院

Prof. Hitoshi Furuta, Professor, Kansai University, Japan

Hitoshi Furuta 教授，日本关西大学

Prof. Hyo-Nam Cho, Hanyang University, South Korea

Hyo-Nam Cho 教授，韩国汉阳大学

Prof. Sang-Hyo Kim, Yonsei University, South Korea

Sang-Hyo Kim 教授，韩国延世大学

Local Organizing Committee

组织委员会

Prof. Jian Ming Yang; Professor of SJTU

杨建民 教授，上海交通大学

Prof. Shui Long Shen; Professor of SJTU

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Prof. Shao Pei Lin, Professor of SJTU

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张璐璐 博士，上海交通大学

Dr. Fan Wu, Associate Professor of SJTU

吴凡 博士，上海交通大学

Miss Ying Shi, Shanghai Jiaotong University

石莹，上海交通大学

Miss Xiao Ning Zhao, Tsinghua University

赵晓宁，清华大学

Co-Sponsors

协办单位

The IC-SDCI is also co-sponsored by a number of Chinese and international organizations, including the following:

IC-SDCI 由以下国内和国际单位协办：

CAST (China Association of Science and Technology, Mr. Jianshen Zhang)

中国科学技术协会（国际部部长 张建生先生）

AAES (American Association of Engineering Societies)

美国工程师学会联合会

CCES (China Civil Engineering Society, Mr. Yan Zhang)

中国土木工程学会（秘书长 张雁先生）

ASCE (American Society of Civil Engineering)

美国土木工程学会

ACI (American Concrete Institute)

美国混凝土学会

CAE (Chinese Academy of Engineering, Dr. Jian Guan)

中国工程院（国际合作局一处处长 官键 博士）

NAE (National Academy of Engineering, *U.S. tentative*)

美国国家工程院，暂定

IASSAR (International Association for Structural Safety and Reliability)

国际结构安全度与可靠度协会

IABMAS (International Association for Bridge Maintenance and Safety)

国际桥梁维护及安全管理协会

IALCCE (International Association for Life-Cycle Civil Engineering)

国际全生命周期土木工程协会

IABSE (International Association for Bridge and Structural Engineering, *tentative*)

国际桥梁及结构工程协会

ICE (Institution of Civil Engineering, UK, *tentative*)

英国土木工程师学会，暂定

IStructE (Institution of Structural Engineers, UK, *tentative*)

英国结构工程师学会，暂定

WFEO (World Federation of Engineering Organizations, *tentative*)

世界工程组织联合会，暂定

ACECC (Asian Civil Engineering Coordinating Council, *tentative*)

亚洲土木工程联盟，暂定

Local co-Sponsors

上海地区协办单位

Shanghai Construction Group (SCG)

上海建工集团 (SCG)

Shanghai Xian Dai Architectural Design (Group) Co. Ltd.

上海现代建筑设计(集团)有限公司

Shanghai Municipal Engineering Design General Institute

上海市政设计研究总院

Shanghai Tunnel Engineering & Transit Design and Research Institute

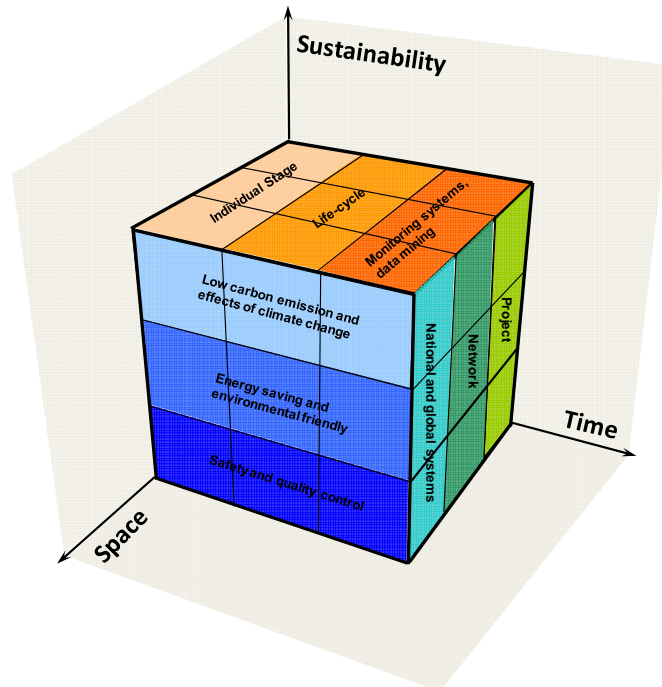
上海市隧道工程轨道交通设计研究院

Topics

议题

The topics to be covered in the Conference will be expressed as a three dimensional cube:

本会议的议题可在空间、时间和可持续性三维坐标系中各分为若干层面，可用下图中的立方体表示：



- Space domain: (1) Project Level: a. Mag-lev, high-speed rail, light rail, rapid transit; b. Long-span bridges (cable-stayed bridges, suspension bridges, etc); c. long-span tunnels, d. tall buildings, e. Power plants. (2) Network Level: a. Transportation system; b. Clean energy systems; c. Water resources systems; d. Communication and control systems; e. Power systems. (3) National and global systems.
- 空间层面：（1）项目级：a.磁悬浮、高速铁路、轻轨、快速交通；b.大跨度桥梁（斜拉桥、悬索桥等）；c.大跨度隧道；d.高层建筑；e.发电厂。（2）网络级：a.交通系统；b.清洁能源系统；c.水资源系统；d.通信和控制系统；e.电力系统。（3）国家和全球系统。
- Time domain: (1) Individual Stage Level: a. Design and purchasing stage; b. Construction stage (safety and quality control); c. Normal used stage (natural disasters and terror attacks); d. Aging stage (durability and maintenance). (2) Life-cycle Level: a. Risk assessment and reliability management; b. Life-cycle performance and cost. (3) Monitoring systems and data mining and processing of specific infrastructure system.
- 时间层面：（1）工程阶段：a.设计和采购阶段；b.施工阶段（安全与质量控制）；c.正常使用阶段（自然灾害和恐怖袭击）d.老化阶段（耐久性与维护）。（2）生命周期级别：a.风险评估与可靠度管理；b.生命周期的性能和成本。（3）监测系统和基建系统的数据挖掘和处理。
- Sustainability: (1) Safety and quality control. (2) Energy saving and environmental friendly Projects. (3) Low carbon emission and Effects of climate change.
- 可持续性层面：（1）安全和质量控制。（2）节能和环境友好型项目。（3）低碳排放和气候变化的影响。

In total there are 27 possible topics available, which will be finally determined by the number of collected papers.

共有 27 个可能的议题，最终议题将根据征集论文确定。

Language

语言

The official language of the Conference shall be English. All written papers to be published in the Conference Proceedings shall be in English.

会议官方语言为英语，所有发表在会议论文集上的论文均需采用英文撰写。

Translation

翻译

Simultaneous translation of all presentations from English to Chinese and vice versa will be provided.

所有大会报告将提供中英文同声传译。

Participants

与会者

The Conference is organized to facilitate exchange of information and knowledge among professional practitioners, academic researchers, government engineers, and operational managers of infrastructure systems.

本次会议旨在促进专业人士、学者、政府工程师和基建系统管理者之间的信息和知识交流。

The attendance at the Conference is anticipated to be around 300-500 from China and overseas countries.

预计国际国内与会人员共 300-500 人。

Technical tours

技术考察

Technical view will be arranged on Monday (18th November), which includes Hong Qiao Transportation Hub (the largest in the world), Qin Shan Nuclear Power Plant, Su Tong Cable-Stayed Bridge (the longest span in the world), and Lu Pu Arch Bridge(the longest span in the world), Tunnel of Chong Ming Island, Construction of Shanghai Center(the highest building in China), Hangzhou Wang Bridge(the longest bay bridge in the world), Mag-lev and high-speed rail, wind and solar energy systems. Every participant may have one choice.

11 月 18 日（星期一）将安排技术考察，具体包括：世界最大的交通枢纽-虹桥交通枢纽、秦山核电站、世界上跨度最长的斜拉桥-苏通大桥、世界上跨度最长的钢结构拱桥-卢浦大桥、崇明岛隧道、中国最高的建筑-上海中心大厦、世界上最长的跨海大桥-杭州湾大桥、磁悬浮和高速铁路、风力和太阳能系统。与会者可任选一项个人感兴趣的工程参观。