THE VENUE

Villa Erba Cernobbio, Como / Italy

complex of Villa Erba includes a magnificent nineteenth century villa and a modern steel and glass construction which hosts the Conference Centre. Known chiefly as the residence of the film director Luchino Visconti, Villa Erba was conceived according to a mannerist-type inspiration, which gives it an immediately perceivable opulent nature. The villa extends over a square section, with wide stairways sloping down towards the lake from where to enjoy breathtaking views. Each room of the two-storey building is luxuriously decorated with multicoloured frescoes. The Conference Centre is a masterpiece of creative design by Mario Bellini. The steel and glass structure is respectful of the ancient park, whose beauty is reflected in steel and glass sheets, and blends perfectly with the romantic landscape of Lake Como. The large lakeside park, endowed with private moorings and its own helipad, forms an integral part of the Conference Centre environment and offers a chance to relax during the conference breaks and take a delightful walk among the impressive century-old trees in the botanic gardens. Villa Erba is five to ten minutes from downtown Como and just 30 to 45 minutes from Milan and Malpensa international airport.









Department of Structural Engineering Politecnico di Milano Piazza Leonardo da Vinci. 32 20133 Milano, Italy

IABMAS 2012 Organizing Secretariat

Incentives e Congressi Via Crocifissa di Rosa, 15 25128 Brescia, Italy Tel. +39.030.391026 Fax +39.030.383290

Email and Website

secretariat@iabmas2012.org http://www.iabmas2012.org





POLITECNICO DI MILANO

IABMAS 2012

6th International Conference on Bridge Maintenance, Safety and Management

Preliminary Announcement and Call for Papers



IABMAS 2012

The 6th International Conference on Bridge Maintenance, Safety and Management (IABMAS 2012) is organized on behalf of the February 28th, 2011 through the online submission system International Association for Bridge Maintenance And Safety (IABMAS) under the auspices of Politecnico di Milano, Milan, Italy. Fabio Biondini and Dan Frangopol will serve as Conference Chairs Full papers are due by November 18th, 2011. Final acceptance for IABMAS 2012. The Conference will be held in Cernobbio. Como, Italy, on July 8-12, 2012 (http://www.iabmas2012.org).

IABMAS

The Association encompasses all aspects of bridge maintenance, safety, and management. The objective of the Association is to promote international cooperation in the fields of bridge maintenance, safety, and management for the purpose of Conference website. enhancing the welfare of society (http://www.iabmas.org).

Aim of the Conference

The aim of IABMAS 2012 is to bring together all the very best work that has been done in the field of bridge maintenance, safety and management and related topics, to stimulate and promote research into this field, and to bridge the gap between theory and practice.

Delegates

The Conference will be of interest to researchers, representatives from all sections of bridge engineering, bridge engineers working Preliminary Abstract Acceptance with transportation departments, consultants, contractors and Deadline Full Paper Submission local authorities interested in all aspects of bridge maintenance, safety, and management.

Call for Papers

Authors are kindly invited to submit 300-word abstracts by available on the Conference website. Authors will be notified regarding the acceptance of their abstracts by March 31st, 2011. of full papers will be notified by December 31, 2011.

Call for Mini-Symposia and Special Sessions

Participants interested in organizing Mini-Symposia or Special Sessions as part of IABMAS 2012 are requested to submit a proposal to the Scientific Secretariat. Detailed information about the submission process will be made available on the

Language

The official language of the Conference will be English.

The Conference proceedings will be published by an international publisher and will be distributed at the Conference to registered participants.

Important Dates

Deadline Abstract Submission Final Paper Acceptance Deadline Early Bird Registration

February 28, 2011 March 31, 2011 November 18, 2011 December 31, 2011 February 29, 2012

Past IABMAS Conferences

IABMAS 2010, Philadelphia, PA, USA, July 11-15, 2010. IABMAS'08, Seoul, Korea, July 13-17, 2008. IABMAS'06, Porto, Portugal, July 16-19, 2006 IABMAS'04, Kyoto, Japan, October 18-22, 2004. IABMAS'02, Barcelona, Spain, July 14-17, 2002.

IABMAS 2010

Bruce Ellingwood, USA The 5th International Conference on Bridge Maintenance, Safety Ib Enevoldsen, Denmark and Management (IABMAS 2010) held in Philadelphia, PA, USA, Allen Estes, USA on July 11-15, 2010 (http://www.iabmas2010.org). Dan Frangopol Glauco Feltrin, Switzerland and Richard Sause served as Conference Chairs for IABMAS 2010. João Almeida Fernandes, Portugal

IABMAS 2010

Franco Bontempi, Italy

Geoff Boully, Australia

Fernando Branco, Portugal

Scientific Committee

Fabio Biondini, Italy (co-Chair) Andrzei Nowak, USA (co-Chair) Chung-Bang Yun, Korea (co-Chair) Shamim Pakzad, USA (Secretary) Chad Kusko, USA (Ex-Officio) A. Emin Atkan, USA Haluk Aktan, USA Sreenivas Alampalli, USA Alfredo H. S. Ang, USA Giuliano Augusti, Italy Konrad Berameister, Austria Jan Bien, Poland

James Browniohn, UK Eugen Bruehwiler, Switzerland Michael Bruneau, USA Christian Bucher, Austria Harald Budelmann, Germany Joan Casas, Spain Necati Catbas, USA Chin-Chen Chang, Hong Kong, P.R.C. Michael Chaies, USA Kuo-Chun Chang, Taiwan, R.O.C. Sung-Pil Chang, Korea Steven Chase, USA Airona Chen, China Moe Cheung, Hong Kong, P.R.C. Hyo-nam Cho, Korea Marios Chryssanthopoulos, UK

Young Soo Chung, Korea

Michael C.H. Hui, Hong Kong, P.R.C. Naeem Hussain, Hong Kong, P.R.C. Hani Nassif, USA

Marcello Ciampoli, Italy

Christian Cremona, France

Andrea Del Grosso, Italy

George Deodatis, USA

Lennart Elfgren, Sweden

Joaquim Figuerias, Portugal

John W. Fisher, USA

Dan M. Frangopol, USA

Ian M. Friedland, USA

Gongkang Fu, USA

Yozo Fujino, Japan

Yaojun Ge, China

Hitoshi Furuta, Japan

James H. Garrett, USA

Hamid Ghasemi, USA

Paul Grundy, Australia

Rade Haidin, Switzerland

Geir Horrigmoe, Norway

Daniele Inaudi, Switzerland

Michel Ghosn, USA

Michael Forde, UK

Karl Frank, USA

Joel Conte, USA

Ross Corotis USA

Paulo Cruz, Portugal

Sofia Diniz, Brazil

Sheila Duwadi, USA

Jens Sandager Jensen, Denmark Maarten-Jan Kallen The Netherlands Shamim Pakzad, USA Ahsan Kareem, USA Livia Pardi, Italy Maria Kaszynska, Poland Udo Peil, Germany Malcolm Kerley, USA Stephen Pessiki, USA Sang-Hyo Kim, Korea Victor Popa, Romania Sunakon Kim, Korea Mark Reno, USA Risto Kiviluoma, Finland James Ricles, USA F. Wayne Klaiber, USA Xin Ruan, China Leo Klatter. The Netherlands Salvatore Russo, Italy Jan-Mina Ko. Hona Kona, P.R.C. Mehdi Saiidi, USA Richard Sause, USA C. G. Koh, Singapore Hyun-Moo Koh, Korea Richard Shepard, USA Jung Sik Kong, Korea Ulrike Kuhlmann, Germany Dong-Ku Shin, Korea John Lane, UK Soobong Shin, Korea Jørn Lauridsen, Denmark Kincho Law, USA Jongsung Sim, Korea Hakeun Lee, Korea Jeeho Lee, Korea Luc Taerwe. Belaium Chin-Hsiung Loh, Taiwan, R.O.C. Man-Chung Tang, USA Jerome Lynch, USA Pier Giorgio Malerba, Italy Ayaz Malik, USA Paul Thompson, USA Lance Manuel, USA Pedro Vellasco. Brazil René Maguoi, Belgium Antonio Marì, Spain Barney Martin, USA Sami Masri, USA Thomas Messervey, Italy Zhishen Wu, Japan Ayaho Miyamoto, Japan Bojidar Yanev, USA Aftab Mufti, Canada Riccardo Zandonini, Italy

Jinping Ou, China Masanolu Shinozuka, USA Arunprakash M. Shirole, USA Maria-Kaarina Södergvist, Finland Mark Stewart, Australia Palle Thoft-Christensen, Denmark Tomoaki Utsunomiya, Japan Thomas Vogel, Switzerland Eiichi Watanabe, Japan You-Lin Xu, Hong Kong, P.R.C.

Yunfeng Zhang, USA

Sponsors of IABMAS 2010 ATLSS. Center for Advanced Technology for Large Structural Systems, USA PITA, Pennsylvania Infrastructure Technology Alliance, USA AASHTO American Association of State Highway and Transportation Officials, USA ACI, American Concrete Institute, USA AICAP. Associazione Italiana Calcestruzzo Armato e Precompresso, Italy AIOM, Associazione di Ingegneria Offshore e Marina, Italy ASCP, The Portuguese Group of IABMAS, Portugal CAU, Chuna-Ana University, Korea CERIC, Civil Engineering Research Information Center, Korea COWI A/S. Denmark CTE. Collegio dei Tecnici dell'Edilizia. Italy COSEIK, Computational Structural Engineering Institute of Korea Korea CMM, Portuguese Steelwork Association, Portugal CU. University of Colorado at Boulder, USA

D'APPOLONIA, Italy

Belaium

Engineering

Engineering, Portugal

Reliability

DGU, Dongauk University, Korea

FHWA, Federal Highway Administration, USA

JSCE, Japan Society of Civil Engineers, Japan

KU, Kansai University, Osaka, Japan

JSSC Japanese Society of Steel Construction, Japan

JSMS Japanese Society of Materials Science, Japan

ISISE. Institute for Sustainability and Innovation in Structural

ISTEC, Smart Infra-Structure Technology Center, KAIST, Korea

U.S. Department of Transportation, USA

Engrg., Japan ECCS, European Convention for Constructional Steelwork. TRB, Transportation Research Board, USA T.Y. Lin International, USA IALCCE. International Association for Life-Cycle Civil In the front cover: IASSAR, International Association for Structural Safety and

KBRC, Korea Bridge Design & Engineering Research Center, KCI, Korean Concrete Institute, Korea KEC, Korea Expressway Corporation, Korea KICT, Korea Institute of Construction Technology, Korea KISTEC, Korea Infrastructure Safety & Technology Corporation, Korea KSSC, Korean Society of Steel Construction, Korea KU-CER, Kyoto University, Dept. of Civil and Earth Resources MJU. Mongji University, Korea P.C. Rossin College of Engineering and Applied Science, Lehigh University, USA PCL Precast/Prestressed Concrete Institute USA POLIMI, Politecnico di Milano, Italy Tongji University, China UM. University of Minho, Portugal UniS, University of Surrey, UK UPC. Technical University of Catalonia, Spain Samsung C&T Corporation, Korea SNU. Seoul National University, Korea SEI. Structural Engineering Institute of ASCE, USA

View of the Europa Bridge in Parma, Italy

Owner: Authority for Urban Transformation, Parma, Italy Structural Design: Pier Giorgio Malerba, Paolo Galli and

Marco Di Domizio, Milan, Italy

Plants Design: Pool Engineering, Mareno di Piave, Treviso, Italy Environmental Planning: Ambiter S.r.l., Parma, Italy

Contractor: Impresa Pizzarotti & C. and Codelfa S.p.A., Italy Architectural Design: Vittorio Guasti Architettura S.r.l. Parma, Italy

Construction Engineering: Paolo Sorba A.lerre P&L Engineering, Parma, Italy