

IALCCE'08

First International Symposium on Life-Cycle Civil Engineering

Varenna, Lake Como, Italy
10-14 June, 2008

Symposium Program



**POLITECNICO
DI MILANO**



iaLcCe

**International Association for
Life-Cycle Civil Engineering**

Symposium Chairs

Fabio Biondini

Politecnico di Milano, Milan, Italy

Dan M. Frangopol

Lehigh University, Bethlehem, PA, USA

IALCCE'08

First International Symposium on Life-Cycle Civil Engineering

Symposium Program

Contents

Welcome Message	1
About IALCCE	2
Symposium Topics	3
Symposium Organization	4
Symposium Venue	8
Access to the Symposium Venue.....	9
Map of Villa Monastero – <i>Main Building</i>	10
Map of Villa Monastero – <i>Entrance Building</i>	11
Keynote Speakers	12
Symposium Program Overview	14
Concurrent Technical Sessions	15
Detailed Symposium Program	16
Welcome Reception	28
Boat Tour.....	28
Gala Dinner	29
Events in the Villa.....	30
Post-Symposium Tour	31
Accompanying Persons	32
Useful Information.....	33
Notes to Delegates.....	34

Welcome Message

On behalf of the International Association for Life-Cycle Civil Engineering (IALCCE), we are very glad to publish the Final Program of the First International Symposium on Life-Cycle Civil Engineering (IALCCE'08) to be held in Varenna, Lake Como, Italy, June 10-14, 2008.

The aim of IALCCE'08 is to bring together all the very best work that has been done in the field of life-cycle civil engineering and related topics, to stimulate and promote research into this field, and to bridge the gap between theory and practice. This Symposium is of interest to researchers, representatives from all sections of civil engineering, and engineers working with engineering companies, consultants, contractors, and local authorities interested in all aspects of life-cycle civil engineering.

The interest of the international civil engineering in IALCCE'08 has been confirmed by the significant response to the call for papers. In fact, more than 200 abstracts were received at the Symposium Secretariat, and about 70% of them have been selected for final publication as full papers and presentation at the Symposium. The Symposium Proceedings has been published by Taylor & Francis and consists of a book and a CD-ROM containing 150 papers, including eight keynote papers and 142 technical contributions from 28 countries.

We wish to express our sincere appreciation to all people who contributed to the organization of IALCCE'08, including organizations, institutions, and authorities that offered their sponsorship. A special acknowledgment is given to Politecnico di Milano, for organizing and co-sponsoring this Symposium along with IALCCE. Lastly, we express our warmest appreciation to the Symposium Secretariat, for the enormous amount of very dedicated and professional teamwork.

Therefore, it give us great pleasure as Symposium Chairs to warmly welcome all Speakers and Delegates to IALCCE'08. We really hope that this Symposium will be beneficial to all participants, and will be remembered as a fruitful, enjoyable, and rewarding experience for both scientific achievements and personal friendships.

Sincerely yours,



Fabio Biondini

Politecnico di Milano, Milan, ITALY



Dan M. Frangopol

Lehigh University, Bethlehem, PA, USA

About IALCCE

The International Association for Life-Cycle Civil Engineering (IALCCE) was founded in October 2006. Currently, IALCCE has over 130 members from more than 30 countries. This Association covers all aspects of life-cycle assessment, design, maintenance, rehabilitation and monitoring of civil engineering systems.



The mission of the Association is to become the premier international organization for the advancement of the state-of-the-art in the field of life-cycle civil engineering. The objective of the Association is to promote international cooperation in the field of life-cycle civil engineering for the purpose of enhancing the welfare of society.

In order to fulfill its mission and objective, the Association will organize congresses, conferences, symposia, workshops, seminars, and short courses on the related topics. The Association intends to cooperate with other organizations, including AASHTO, ACI, AISC, ASCE, CERRA, ESRA, fib, IABMAS, IABSE, IASSAR, ICE, IFIP, JCSS, PIARC, and RILEM, having interest in the field of activity of IALCCE.

Membership will include individual members and collective members. An individual member of the Association shall be a person who is involved in the areas of activity covered by the Association, possesses appropriate knowledge and who is willing to support the mission and objective of the Association. A collective member of the Association shall be an organization having technical or scientific interest in the Association, such as institutions, universities, qualified firms, and libraries.

To apply to become a member of IALCCE, please visit the IALCCE website at <http://www.ialcce.org>, choose the appropriate application form and send all the requested information to the IALCCE Secretariat.

Symposium Topics

The state of the art as well as on emerging concepts and innovative applications in the field of life-cycle civil engineering are considered at IALCCE'08. Specifically, the Symposium will focus on the following topics:

LIFE-CYCLE DAMAGING PROCESSES

- Aging of Structures
- Deterioration Modeling
 - Durable Materials
- Earthquake and Accidental Loadings
 - Fatigue and Damage
- Fire and High Temperatures
- Marine and Severe Environments
- Structure-Environment Interaction

LIFE-CYCLE MONITORING, MAINTENANCE, AND REHABILITATION

- Damage Identification
 - Field Testing
 - Health Monitoring
- Inspection and Evaluation
- Maintenance Strategies
- Rehabilitation Techniques
- Strengthening and Repair
- Structural Integrity

LIFE-CYCLE COST OF STRUCTURES AND INFRASTRUCTURES

- Decision Making Processes
- Human Factors in Life-Cycle Engineering
 - Life-Cycle Cost Models
 - Project Management
- Risk-Lifetime Analysis and Optimization
 - Whole Life Costing

LIFE-CYCLE ASSESSMENT AND DESIGN

- Design for Durability
- Failure Analysis and Risk Prevention
- Lifetime Structural Optimization
- Long-term Performance Analysis
 - Performance Based Design
 - Service Life Prediction
- Time-variant Reliability
- Uncertainty Modeling

LIFE-CYCLE PERFORMANCE OF SPECIAL STRUCTURES

- Bridges and Viaducts
- High-rise Buildings
- Hydraulic Structures
- Off-Shore Structures
 - Precast Systems
- Roof Systems and Hangars
- Runway and Highway Pavements
- Tunnels and Underground Structures

LIFE-CYCLE ORIENTED COMPUTATIONAL TOOLS

- Artificial Intelligence Methods
- Evolutionary Procedures
 - Heuristic Techniques
- Mathematical Optimization
 - Soft-Computing Methods
- Survival Models and Simulation

Symposium Organization

Symposium Chairs

Fabio Biondini *Politecnico di Milano, Milan, Italy*
Dan M. Frangopol *Lehigh University, Bethlehem, PA, USA*

International Steering Committee

Dan M. Frangopol (Chair) *Lehigh University, Bethlehem, PA, USA*
Alfredo H-S. Ang (Ex Officio) *University of California, Irvine, CA, USA*
Fabio Biondini (Ex Officio) *Politecnico di Milano, Milan, Italy*
Moe Cheung *Hong Kong University of Science and Technology, Hong Kong, P.R.C.*
Hyo-Nam Cho *Hanyang University, Ansan, Korea*
Luis Esteva *National University of Mexico, Mexico City, Mexico*
Hitoshi Furuta *Kansai University, Osaka, Japan*
Robert Melchers *University of Newcastle, Callaghan, NSW, Australia*
Udo Peil *Technical University of Braunschweig, Braunschweig, Germany*
Asko Sarja *Innokas Consulting Co, Espoo, Finland*

International Scientific Committee

Alfredo H-S. Ang (Chair) *University of California, Irvine, CA, USA*
Jaap Bakker *Ministry of Transport, Utrecht, The Netherlands*
Larry Bergman *University of Illinois at Urbana-Champaign, IL, USA*
Franco Bontempi *University of Rome "La Sapienza", Milan, Italy*
Christian Bucher *Technical University of Vienna, Vienna, Austria*
Harald Budelmann *Technical University of Braunschweig, Braunschweig, Germany*
Joan R. Casas *Technical University of Catalonia, Barcelona, Spain*
Marios K. Chryssanthopoulos *University of Surrey, Surrey, Guildford, UK*
Ross Corotis *University of Colorado, Boulder, CO, USA*
Paulo J. S. Cruz *University of Minho, Guimarães, Portugal*
Sofia Diniz *Federal University of Minas Gerais, Belo Horizonte, Brazil*
Bruce Ellingwood *Georgia Institute of Technology, Atlanta, GA, USA*
Allen Estes *California Polytechnic State University, San Luis Obispo, CA, USA*
Michel Ghosn *City College of New York, New York, NY, USA*
Leo Klatter *Ministry of Transport, Utrecht, The Netherlands*
Hyun-Moo Koh *Seoul National University, Seoul, Korea*
Jung Sik Kong *Korea University, Seoul, Korea*
Vladimir Kristek *Czech Technical University, Prague, Czech Republic*
Xila L. Liu *Shanghai Jiaotong University, Shanghai, China*
Pier Giorgio Malerba *Politecnico di Milano, Milan, Italy*
Antonio Mañá *Technical University of Catalonia, Barcelona, Spain*
Ayaho Miyamoto *Yamaguchi University, Yamaguchi, Japan*
Luis Neves *Univ. Nova de Lisboa, Monte de Caparica, Portugal*
Andrzej Nowak *University of Nebraska, Lincoln, NE, USA*
Mark Stewart *University of Newcastle, Callaghan, NSW, Australia*
Man-Chung Tang *T.Y. Lin International, San Francisco, CA, USA*
Wilson Tang *Hong Kong University of Science and Technology, Hong Kong, P.R.C.*
Palle Thoft-Christensen *Aalborg University, Aalborg, Denmark*
Eiichi Watanabe *Kyoto University, Kyoto, Japan*
John L. Wilson *Lehigh University, Bethlehem, PA, USA*

Local Advisory Committee

Pier Giorgio Malerba (Chair)	<i>Politecnico di Milano</i>
Franco Bontempi	<i>University of Rome "La Sapienza"</i>
Fabio Casciati	<i>University of Pavia</i>
Claudio Ceccoli	<i>University of Bologna</i>
Mario Como	<i>University of Rome "Tor Vergata"</i>
Edoardo Cosenza	<i>University of Naples "Federico II"</i>
Andrea Del Grosso	<i>University of Genoa</i>
Alessandro De Stefano	<i>Politecnico di Torino</i>
Luigino Dezi	<i>University of Ancona</i>
Pasquale Malangone	<i>Second University of Naples</i>
Giuseppe Mancini	<i>Politecnico di Torino</i>
Luigi Annibale Materazzi	<i>University of Perugia</i>
Claudio Modena	<i>University of Padua</i>
Alberto Parducci	<i>University of Perugia</i>
Emanuele F. Radogna	<i>University of Rome "La Sapienza"</i>
Paolo Spinelli	<i>University of Florence</i>
Giandomenico Toniolo	<i>Politecnico di Milano</i>

Local Organizing Committee

Fabio Biondini (Chair)	<i>Politecnico di Milano</i>
Luca Bertolini	<i>Politecnico di Milano</i>
Marcello Ciampoli	<i>University of Rome "La Sapienza"</i>
Maurizio Crispino	<i>Politecnico di Milano</i>
Elsa Garavaglia	<i>Politecnico di Milano</i>
Massimiliano Gioffrè	<i>University of Perugia</i>
Stefano Malavasi	<i>Politecnico di Milano</i>
Alessandra Marchiondelli	<i>Spea Ingegneria Europea, Milan</i>
Livia Pardi	<i>Autostrade per l'Italia, Rome</i>
Zila Rinaldi	<i>University of Rome "Tor Vergata"</i>

Awards Committee

Alfredo H-S. Ang (Chair)	<i>University of California, Irvine, CA, USA</i>
Fabio Biondini	<i>Politecnico di Milano, Milan, Italy</i>
Udo Peil	<i>Technical University of Braunschweig, Braunschweig, Germany</i>

Symposium Secretariat

Ms. Paola Limonta and Ms. Roberta Stucchi
Department of Structural Engineering, Politecnico di Milano
Piazza L. da Vinci, 32 – 20133 Milan, Italy

Symposium Website

<http://www.ialcce08.org>

Organizing Association



International Association for Life-Cycle Civil Engineering

Organizing Institutions



**POLITECNICO
DI MILANO**

POLIMI
Politecnico di Milano, Milan, Italy

Sponsoring Institutions/Organizations



ACI
American Concrete Institute



AICAP
Italian Association for Reinforced and Prestressed Concrete
Associazione Italiana Calcestruzzo Armato e Precompresso



AIOM
Italian Association of Offshore and Marine Engineering
Associazione di Ingegneria Offshore e Marina



ATLSS
Center for Advanced Technology for Large Structural Systems,
Lehigh University, Bethlehem, PA, USA



CTE
Italian Society of Building Engineers
Collegio dei Tecnici dell'Edilizia



IABMAS
International Association for Bridge Maintenance and Safety



SEI-ASCE
Structural Engineering Institute
American Society of Civil Engineers



SPEA
Spea Ingegneria Europea, Milan, Italy



TYLIN
T.Y. Lin International, San Francisco, CA, USA



UPC
Universitat Politecnica de Catalunya, Barcelona, Spain

Sponsoring Local Authorities



Regione Lombardia

Casa e Opere Pubbliche

Lombardy Regional Administration
Regione Lombardia



Province of Como
Provincia di Como



Provincia di Lecco

Province of Lecco
Provincia di Lecco

IALCCE Executive Board

Dan M. Frangopol (President)
Alfredo H-S. Ang (Honorary President)
Harald Budelmann (Vice-President)

Hyo-Nam Cho (Vice-President)
Hitoshi Furuta (Vice-President)
Fabio Biondini (General Secretary)
Jaap Bakker
Moe Cheung

Luis Esteva
Leo Klatter

Lehigh University, Bethlehem, PA, USA
University of California, Irvine, CA, USA
Technical University of Braunschweig,
Braunschweig, Germany
Hanyang University, Kyungki, Korea
Kansai University, Osaka, Japan
Politecnico di Milano, Milan, Italy
Ministry of Transport, Utrecht, The Netherlands
Hong Kong University of Science and Technology,
Hong Kong, P.R.C.
National University of Mexico, Mexico City, Mexico
Ministry of Transport, Utrecht, The Netherlands

IALCCE Secretariat

Prof. Fabio Biondini
Department of Structural Engineering, Politecnico di Milano
Piazza L. da Vinci, 32 – 20133 Milan, Italy

IALCCE Website

<http://www.ialcce.org>

Symposium Venue

The First International Symposium on Life-Cycle Civil Engineering (IALCCE'08) will be held at Villa Monastero, an ancient patrician abode located in Varenna, a picturesque medieval village in a central position on the east coast of Lake Como.



Villa Monastero is one of the most interesting examples of eclectic style residence on the Lake Como. Originally built to accommodate a cistercensian monastery, first quoted in a document dated 1208, the building has become a patrician residence without damaging the traces of its history. The continual transformation interventions from the end of XIX and the beginning of XX century have added functional and decorative elements by increasing the original beauty of this place. Directly located on the lake shore, the villa is surrounded by a beautiful botanical garden, also decorated with architectural elements like tortile columns and balustrades facing the lake. Since 1963 the villa is an *international cultural and scientific center*.



The Congress Center is harmoniously included in the villa by preserving the original rooms with their own furnishings. The principal conference room, enriched by precious marbles, is called *Fermi Room* in the honor of the famous Nobel Prize winner who held lessons in Villa Monastero itself. Smaller rooms, containing antique furniture, precious tapestries and unique books, offer wonderful lake views.

Access to the Symposium Venue

Varenna can be reached by car, or by train in about one hour from Milan Central Railway Station. This station can be reached by shuttle bus in about 30 to 60 minutes from the main international airports (Malpensa, Linate, Orio al Serio).

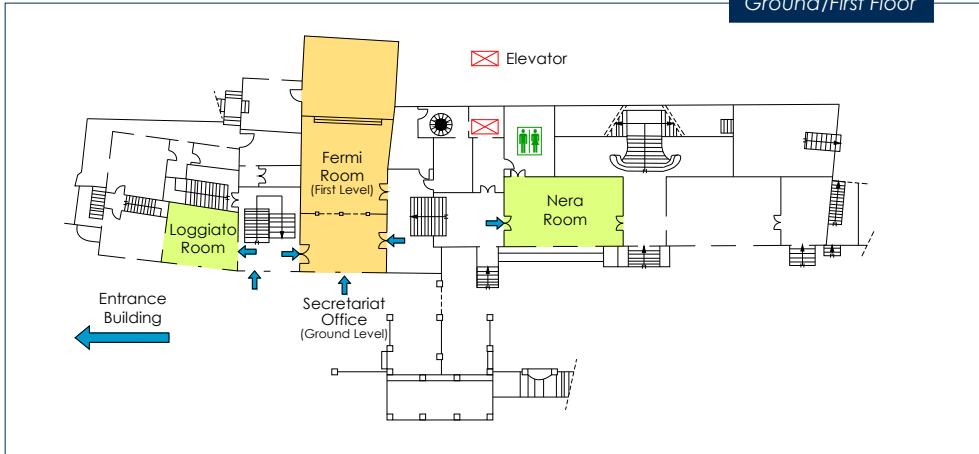


Most of the hotels in Varenna are located within a walking distance from the railway station. Taxi stand is in front of the station. A taxi cab can be reserved by calling one of the following numbers: +39-338-4441084 / +39-338-8554687 / +39-340-2568692

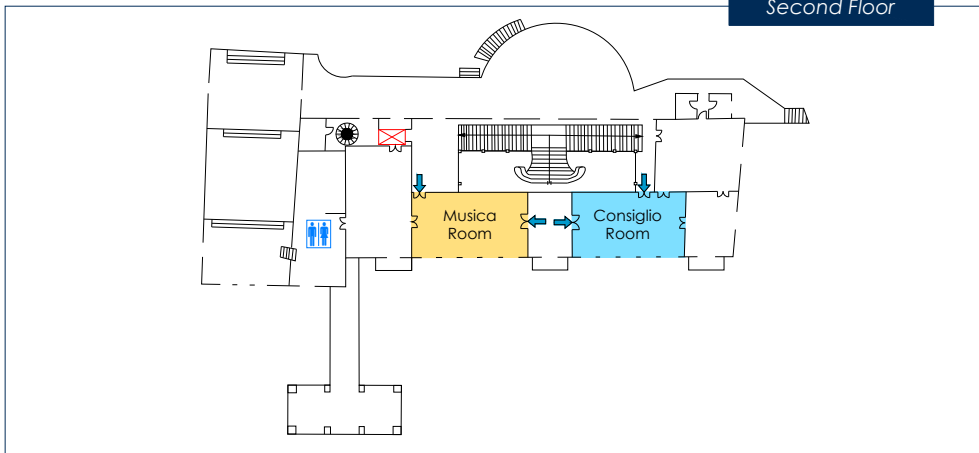


Map of Villa Monastero – Main Building

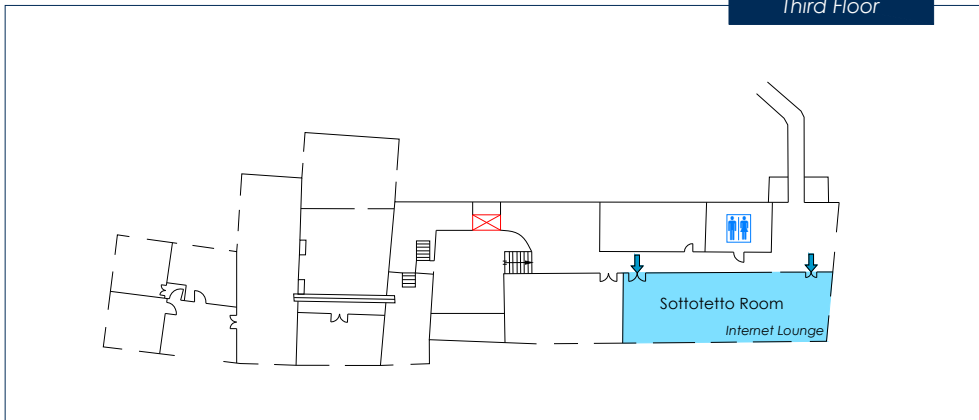
Ground/First Floor



Second Floor

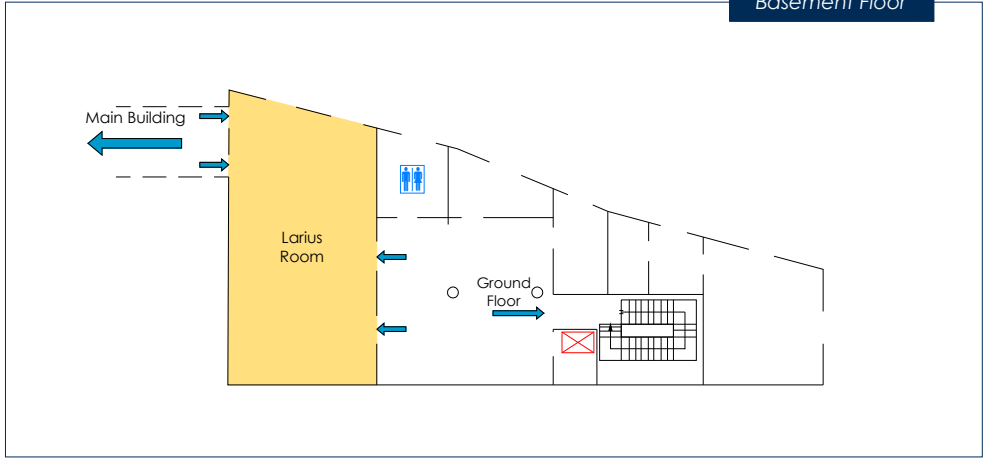


Third Floor

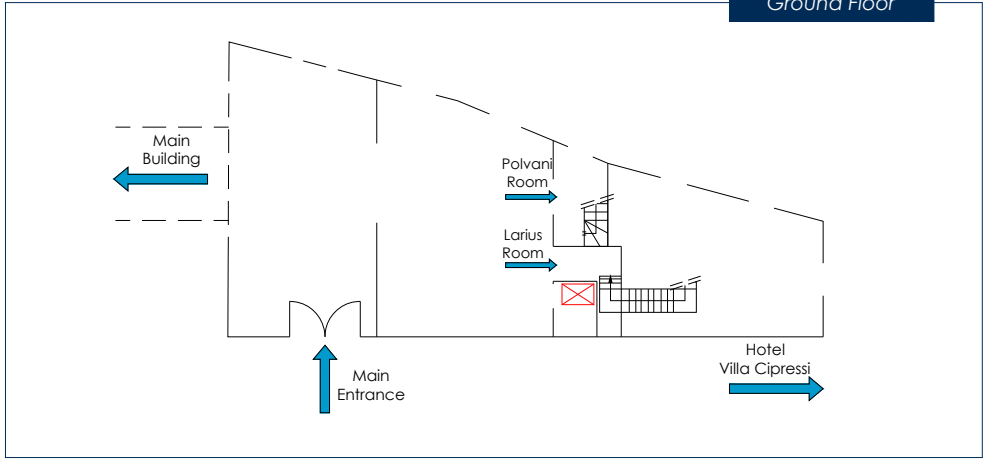


Map of Villa Monastero – Entrance Building

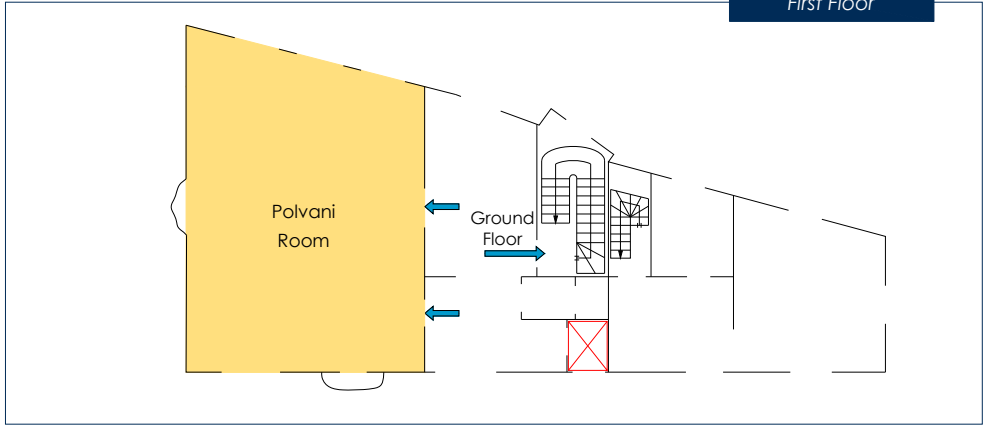
Basement Floor



Ground Floor



First Floor



Keynote Speakers



Alfredo H-S. Ang

University of California, Irvine, CA, USA



Franco Bontempi

University of Rome "La Sapienza", Rome, Italy



Hyo-Nam Cho

Hanyang University, Ansan, Kyungki, Korea



Luis Esteva

National University of Mexico, Mexico City, Mexico



Hitoshi Furuta
Kansai University, Takatsuki, Japan



Pier Giorgio Malerba
Politecnico di Milano, Milan, Italy



Torgeir Moan
Norwegian University of Science and Technology, Trondheim, Norway



Mark P. Sarkisian
Partner of Skidmore, Owings & Merrill LLP, San Francisco, CA, USA

Symposium Program Overview

	Tuesday, June 10	Wednesday, June 11	Thursday, June 12	Friday, June 13	Saturday, June 14
8:00-9:00		Registration	Registration	Registration	
9:00-9:40		Opening Ceremony	Keynote Lectures	Keynote Lectures	Post-Symposium Tour
9:40-11:00		Keynote Lectures			
11:00-11:30		Coffee Break	Coffee Break	Coffee Break	
11:30-13:00		Concurrent Sessions	Concurrent Sessions	Concurrent Sessions	
13:00-15:00		Lunch Break	Lunch Break	Lunch Break	
15:00-16:30		Concurrent Sessions	Concurrent Sessions	Concurrent Sessions	
16:30-17:30			General Assembly	Closing Ceremony	
17:30-18:00	Registration	Guided Tour of the Villa	Guided Tour of the Villa		
18:00-18:30					
18:30-19:00		Jazz Concert	Boat Tour and Gala Dinner		
19:00-19:30	Welcome Reception				
19:30-21:00					
21:00-23:30					

Concurrent Technical Sessions

Wednesday, June 11

	Fermi Room	Musica Room	Polvani Room	Larius Room
11:30-13:00	Life-Cycle Assessment and Design I	Life-Cycle Damage Processes I	Life-Cycle Monitoring, Maintenance, and Rehabilitation I	Life-Cycle Cost of Structures and Infrastructures I
15:00-16:30	Life-Cycle Assessment and Design I	Life-Cycle Damage Processes II	Life-Cycle Monitoring, Maintenance, and Rehabilitation II	Life-Cycle Cost of Structures and Infrastructures II

Thursday, June 12

	Fermi Room	Musica Room	Polvani Room	Larius Room
11:30-13:00	Life-Cycle Monitoring, Maintenance, and Rehabilitation III	Life-Cycle Damage Processes III	Life-Cycle Assessment and Design III	Life-Cycle Oriented Computational Tools I
15:00-16:30	Life-Cycle Monitoring, Maintenance, and Rehabilitation IV	Life-Cycle Damage Processes IV	Life-Cycle Assessment and Design IV	Life-Cycle Oriented Computational Tools II

Friday, June 13

	Fermi Room	Musica Room	Polvani Room	Larius Room
11:30-13:00	Life-Cycle Assessment and Design V	Life-Cycle Performance of Special Structures I	Life-Cycle Cost of Structures and Infrastructures III	Life-Cycle Monitoring, Maintenance, and Rehabilitation V
15:00-16:30	Life-Cycle Assessment and Design VI	Life-Cycle Performance of Special Structures II	Life-Cycle Cost of Structures and Infrastructures IV	Life-Cycle Monitoring, Maintenance, and Rehabilitation VI

Detailed Symposium Program

Tuesday, June 10, 2008

15:00-19:00 Registration – Villa Monastero (Secretariat Office)

19:00-21:00 Welcome Reception – Hotel Villa Cipressi

Wednesday Morning (WM), June 11, 2008

9:00-9:40 Opening Ceremony – Fermi Room (*)

Welcome Message

Fabio Biondini & Dan M. Frangopol

Opening Remarks

Guest Speakers

9:40-11:00 Keynote Lectures – Fermi Room (*)

Chairs: L. Esteva & P.G. Malerba

Life-cycle considerations in risk-informed decisions for design of civil infrastructures

Alfredo H-S. Ang, University of California, Irvine, CA, USA

Increasing a building's life-cycle in regions of high seismic risk

Mark P. Sarkisian, Skidmore, Owings & Merrill LLP, San Francisco, CA, USA

(*) Video-conference with Loggiato Room, Nera Room, and Musica Room.

11:00-11:30 Coffee Break

11:30-13:00 Concurrent Session WM1 – Fermi Room

Life-Cycle Assessment and Design I

Chairs: A. R. Marí & V. Kristek

Inspection and evaluation of existing structures: a task for brave engineers

J. León, H. Corres-Peiretti & F. Prieto

Evaluation of the response of concrete structures along their service life by nonlinear evolutive analysis methods

A. R. Marí & J. M. Bairán

Life-cycle performance of bridge decks in aggressive environments

F. Biondini, D. M. Frangopol & P.G. Malerba

Investigating the effects of corrosion on 45-year-old prestressed concrete bridge beams

T. Papé & R. E. Melchers

Analytical modelling of FRP strengthened steel beams

C. Pellegrino, E. Maiorana & C. Modena

Serviceability as a significant factor of the bridge life-cycle

V. Kristek & L. Vrablik

11:30-13:00 Concurrent Session WM2 – Musica Room

Life-Cycle Damage Processes I

Chairs: L. Bertolini & O.E. GjØrv

Mechanical behavior of clay bricks and restoration mortars subject to thermal actions

P. Antonaci & P. Bocca

Concrete composition and service life of reinforced concrete structures exposed to chloride bearing environments

L. Bertolini, F. Lollini & E. Redaelli

In-situ chemical analysis for life cycle health management

M. Ghandehari

Increasing durability of recycled cement bound materials: laboratory investigation on the effects of bituminous emulsions

G. Da Rios, E. Toraldo & E. Mariani

The effects of mineral additions on chloride penetration into concrete under the frost action

B. Li & L. Tang

Development of a damage-recovery relationship based on variable re-curing of fire-damaged high-strength mortar

M. Henry, T.H. Ahn, Y. Kato & T. Kishi

11:30-13:00 Concurrent Session WM3 – Polvani Room

Life–Cycle Monitoring, Maintenance, and Rehabilitation I

Chairs: T. Onoufriou & T. Trombetti

A risk ranking strategy for network level bridge management

S. Sathanathan, M.I. Rafiq & T. Onoufriou

Bridge management system techniques application to Italian highways network

A. D'Andrea, D. Oggioni & E. Spallarossa

Prediction and quantification models of bridge condition in Korea

K.-J. Lee, S.-H. Park, C.-H. Park, K.-H. Park & J. S. Kong

Development of a software-tool for the life-cycle management of bridges

M. Kluth, A. Borrmann, E. Rank, T. Mayer & P. Schiessl

Strengthening reinforced concrete T connections by steel straps

M.N.S. Hadi

11:30-13:00 Concurrent Session WM4 – Larius Room

Life–Cycle Cost of Structures and Infrastructures I

Chairs: J. Bakker & S. N. Amirkhanian

A new efficient methodology for large scale outsourcing of maintenance

J. Bakker, P. Boersma & J. Volwerk

Life cycle cost evaluation of the as-built cover layer in reinforced concrete bridge decks

C.L. Barnes & J.-F. Trottier

Recycling C&DW: a way for closing the concrete loop

V. Corinaldesi, G. Moriconi & L. Dezi

Life cycle cost analysis in pavement type selection: state-of-the-practice

Z. Guven, P. R. Rangaraju & S. N. Amirkhanian

LCC case studies for bridges in different design phases

S. Noponen & A. Jutila

Life cycle cost and function analysis in value based design decision

C. Utomo & A. Idrus

13:00-15:00 Lunch Break – Hotel Villa Cipressi

Wednesday Afternoon (WA), June 11, 2008

15:00-16:30 Concurrent Session WA1 – Fermi Room

Life–Cycle Assessment and Design II

Chairs: G. Toniolo & J. R. Casas

Nonlinear dynamic analysis of frames with arbitrary plastic hinges

Z.H. Yan & F.T.K. Au

Lifetime seismic performance of precast reinforced concrete industrial buildings

F. Biondini, A. Palermo & G. Toniolo

Direct displacement based design and force based design of precast concrete structures

A. Belleri & P. Riva

Analysis of the local ductility in reinforced concrete beams dimensioned according to Eurocode 8

A. Kassoul, A. Bougara, M. Belkhatir & K. Ezziane

Seismic loss estimation based on end-to-end simulation

M. Muto, S. Krishnan, J.L. Beck & J. Mitrani-Reiser

Uncertainty in structural capacity and influence on seismic demand and damage

M. Mezzi

15:00-16:30 Concurrent Session WA2 – Musica Room

Life–Cycle Damage Processes II

Chairs: S. Diniz & D.V. Val

The critical role of marine bacterial processes in the development of models for pitting corrosion of structural steels

R. E. Melchers

Effect of spatially variable corrosion damage on strength and time-dependent reliability of RC beams

M.G. Stewart & Q. Suo

Stochastic modeling of corrosion propagation for service life prediction of chloride contaminated RC structures

Z.-H. Lu, Y.-G. Zhao & K. Yu

Damage propagation and structural robustness

F. Biondini & S. Restelli

Service-life performance of reinforced concrete structures in corrosive environments

D.V. Val & L. Chernin

Effect of cracking on long-term performance of reinforced concrete slabs

T. Yamamoto

15:00-16:30 Concurrent Session WA3 – Polvani Room

Life–Cycle Monitoring, Maintenance, and Rehabilitation II

Chairs: A.-R. Chen & C. Gläser

Experimental identification of cable damping parameters towards robust design against aeroelastic instability

L. Faravelli & F. Ubertini

Effect of unsteady aerodynamic admittances on life cycle of guyed masts

U. Peil & M. Clobes

Maintenance and inspection of stay cables using prestressing steel at a German bridge

C. Gläser & H. Weiher

Maintenance strategies for large span suspension bridges against fatigue and corrosion

A.-R. Chen, Y. Zeng & R. Ma

Invention of crack inspection system using a light wave survey camera with a built-in crack scale

K. Nakaniwa, M. Maeda, Y. Koyama & T. Asakura

15:00-16:30 Concurrent Session WA4 – Larius Room

Life–Cycle Cost of Structures and Infrastructures II

Chairs: A. Miyamoto & M. D. Lepech

An information model for life-cycle cost management of cable-stayed bridge

S.H. Lee, M.G. Huang, B.G. Kim & Y.H. Park

Guidelines for LCC analysis and evaluation of public construction projects in Korea

T. K. Kang & Y.S. Lee

Design of green engineered cementitious composites for pavement overlay applications

M. D. Lepech, G. A. Keoleian, S. Qian & V. C. Li

Development of life-cycle cost based budget allocation system for bridge group

A. Miyamoto & H. Uchino

Financial viability of TPSM applied continuous composite bridges

J.-H. Kim, J.-H. Ahn, C.-Y. Jung, & S.-H. Kim

16:30-18:30 Guided Tour of the Villa Monastero Museum

18:30-19:30 Jazz Concert – Garden of Villa Monastero

Thursday Morning (TM), June 12, 2008

9:00-11:00 Keynote Lectures – Fermi Room (*)

Chairs: R. Melchers & T. Moan

Life cycle optimization in earthquake engineering

Luis Esteva, National University of Mexico, Mexico City, Mexico

Life-cycle cost of civil infrastructure with emphasis on bridges

Hitoshi Furuta, Kansai University, Takatsuki, Japan

The new life of the Theatre alla Scala

Pier Giorgio Malerba, Politecnico di Milano, Milan, Italy

(*) Video-conference with Loggiato Room, Nera Room, and Musica Room.

11:00-11:30 Coffee Break

11:30-13:00 Concurrent Session TM1 – Fermi Room

Life–Cycle Monitoring, Maintenance, and Rehabilitation III

Chairs: C. Modena & H. Corres-Peiretti

Life time assessment of steel bridges via monitoring and testing

U. Peil, M. Frenz & I. Schendel

Seismic retrofitting of bridges

G. Furlanetto, L. Ferretti Torricelli & A. Marchiondelli

Peeling failure along the interface in FRP-strengthened beams subjected to transverse loads

E. Oller, A. R. Marí & D. Cobo

Widening and strengthening of bridge decks with composite materials

G. Furlanetto & R. L. Pefano

Assessment of bridge capacity through proof load testing

J.D. Gómez & J.R. Casas

Lifespan evaluation of 8 bridges of the Indiana Toll Road. A case study

J. León, H. Corres-Peiretti, S. Pérez-Fadón, J.E. Herrero, F. Rodríguez & F. Prieto

11:30-13:00 Concurrent Session TM2 – Musica Room

Life–Cycle Damage Processes III

Chairs: U. Peil & F. Ubertini

Fatigue damage measures with a statistical model for the Wöhler field

M. L. Ruiz-Ripoll, A. García, E. Castillo, A. Fernández-Canteli & R. Koller

Dilatometric tests combined with computer simulations and parameter identification for in-depth diagnostic analysis of concrete dams

A. Zirpoli, G. Maier, G. Novati, & T. Garbowski

Discussion concerning the multi-ranked deterioration forecasting model based on incomplete inspection data

Y. Shumuta

FEM-Models of cathodic protection systems for concrete structures

L. Bertolini, F. Lollini, E. Redaelli, R.B. Polder & W.H.A. Peelen

Corrosion characterization of reinforcing bar in existing RC structures

E. Kato, M. Iwanami, H. Yokota & H. Hamada

Influence of localized corrosion of steel bars on structural performance of reinforced concrete beams

H. Hamada, E. Kato, M. Iwanami & H. Yokota

11:30-13:00 Concurrent Session TM3 – Polvani Room

Life–Cycle Assessment and Design III

Chairs: F. Bontempi & M. Ghosn

Life-cycle analysis of buildings with R/C frames

D.O. Astafiev & [L.A. Fedotova](#)

Fatigue design of precast structural concrete plates for access floors

[M. Breccolotti](#), A. L. Materazzi & I. Venanzi

Combined reinforcement

[B. De Rivaz](#)

Fuzzy probabilistic analysis of prestressed concrete structures

L. Giordano, G. Mancini & [F. Tondolo](#)

Modeling maximum live load effects on highway bridges

[M. Ghosn](#), B. Sivakumar & F. Moses

The influence of design and detailing on the life and maintenance of a bridge

[A. G. Mordey](#)

11:30-13:00 Concurrent Session TM4 – Larius Room

Life–Cycle Oriented Computational Tools I

Chairs: I. F. C. Smith & J.-U. Sickert

Intelligent agents for life cycle management of structures and infrastructures in seismic areas

[G. M. Atanasiu](#), F. Leon & M. H. Zaharia

Model based reasoning for life-cycle structural engineering

I. F. C. Smith & [P. Kripakaran](#)

Strengthening with textile reinforced concrete – reliability based design with imprecise probability

[J.-U. Sickert](#), W. Graf & S. Pannier

Analysis, heuristics, and uncertainty of hybrid life cycle assessment: agriculture and construction case studies

[A. E. Landis](#) & M. M. Bilec

Advanced performance evaluation system for existing concrete bridges with machine learning

[A. Miyamoto](#) & J.-I. Ishida

13:00-15:00 Lunch Break – Hotel Villa Cipressi

Thursday Afternoon (TA), June 12, 2008

15:00-16:30 Concurrent Session TA1 – Fermi Room

Life–Cycle Monitoring, Maintenance, and Rehabilitation IV

Chairs: A. De Stefano & A. Strauss

Measuring the displacements of a steel structure by GPS units

F. Casciati & C. Fuggini

Monitoring based structural performance assessment

A. Strauss, D. M. Frangopol & S. Kim

Including structural monitoring activities in safety probabilistic formulations

R. Ceravolo, A. De Stefano & M. Pescatore

Monitoring based performance prediction of steel bridges against traffic loading exemplified at the Europabrücke

R. Veit-Eggerer & H. Wenzel

Corrosion detection in reinforced concrete structures using static and dynamic response measurements

F. Lanata & A. Del Grosso

Estimation of life-cycle fatigue damage for suspension bridge hangers

F. Petrini & F. Bontempi

15:00-16:30 Concurrent Session TA2 – Musica Room

Life–Cycle Damage Processes IV

Chairs: K. Lennerts & L. Neves

Ageing and lifecycle of building envelopes and thin shells made of quasi-brittle conglomerates of glass and epoxy resin

F. Aymerich, G.P. Cossu & L. Fenu

New developed expansive ultra rapid hardening fiber reinforced concrete for bridge deck repair

I. Iwaki, S. Banchi & Y. Koda

Feasibility analysis of the use of stainless steel reinforcement for concrete members subjected to aggressive exposure conditions

C. Molins, E. Real & L. Medina

A comparison of tomographic reconstruction algorithms for acoustic non destructive testing of stone masonry

B. Cannas, S. Carcangiu, M. Di Mauro, A. Fanni, A. Montisci, M.L. Mulas & G. Concu

Features extraction techniques for sonic and ultrasonic NDT on building materials

B. Cannas, F. Cau, M. Usai & G. Concu

The behavior of a building as a part of its conceiving

V. Spigai & E. Dalla Vecchia

15:00-16:30 Concurrent Session TA3 – Polvani Room

Life–Cycle Assessment and Design IV

Chairs: P. Maydl & S.G. Reid

Strengthening of aged RC structures using spreadsheet analyses with optimisation methods and linearised moment-curvature relations

P. Mark

Life-cycle design of residential buildings: appearance and reality of ecological assessments

M. Michlmair & P. Maydl

Probabilistic durability design of RC structures in Persian Gulf using DuraPGulf model

M. Shekarchi, A. Rafiee, H. Layssi & F. M. Marani

Reliability-based fatigue assessment of welded connections

S.G. Reid

Service life predictions for new and rehabilitated concrete bridge structures

B. Czarnecki & R. L. Day

15:00-16:30 Concurrent Session TA4 – Larius Room

Life–Cycle Oriented Computational Tools II

Chairs: A.S. Kiremidjian & R. Pukl

Advanced fragility curves of interdependent lifelines using decision making process

M. N. Alexoudi, K. G. Kakderi & K. D. Pitilakis

Cost versus sustainability of reinforced concrete building frames by multiobjective optimization

I. Payá-Zaforteza, V. Yepes, F. González-Vidoso & A. Hospitaler

Algorithm for identification of damage on bridge piers

A.S. Kiremidjian, P. Sarabandi, A. Cheung, C. Cabrera, K.K. Nair & G. Kiremidjian

Value analysis for decision making on highway cross-sections

N. Villegas, B. De los Ríos, A. Aguado & R. Núñez

16:30-17:30 IALCCE General Assembly – Fermi Room (*)

(*) Video-conference with Loggiato Room, Nera Room, and Musica Room.

16:30-18:00 Guided Tour of the Villa Monastero Museum

18:00-23:30 Gala Dinner – Grand Hotel Tremezzo Palace

18:00-19:00 Boat Tour and Transfer from Varenna to Tremezzo

19:00-20:00 Cocktail Reception and Award Ceremony

20:00-23:00 Gala Dinner

23:00-23:30 Transfer from Tremezzo to Varenna

Friday Morning (FM), June 13, 2008

9:00-11:00 Keynote Lectures – Fermi Room (*)

Chairs: A. H-S. Ang & H. Furuta

Life-cycle assessment of marine civil engineering structures

Torgeir Moan, Norwegian University of Science and Technology, Trondheim, Norway

Practical approaches to the application of life-cycle civil engineering for infrastructures in Korea

Hyo-Nam Cho, Hanyang University, Ansan, Korea

Structural integrity monitoring for dependability

Franco Bontempi, University of Rome "La Sapienza", Rome, Italy

(*) Video-conference with Loggiato Room, Nera Room, and Musica Room.

11:00-11:30 Coffee Break

11:30-13:00 Concurrent Session FM1 – Fermi Room

Life-Cycle Assessment and Design V

Chairs: G. Maier & H. Budelmann

New aspects on bridge design for durability

M. Empelmann, V. Henke, G. Heumann & M. Wichers

Life-cycle multi-objective optimization of deteriorating structures

F. Biondini & G. Zani

Cost-based design and renewal strategy for long-life structures

J. Menčík

Probabilistic treatment of bridge monitoring data and associated errors for reliability assessment and prediction

T. B. Messervey & D. M. Frangopol

Integration of degradation prognosis of concrete structures into life cycle management

H. Budelmann, K. Hariri & T. Starck

Safety assessment of civil engineering structures throughout their life-cycle

R. Pukl, D. Novák & B. Teplý

11:30-13:00 Concurrent Session FM2 – Musica Room

Life-Cycle Performance of Special Structures I

Chairs: L. Ferretti Torricelli & A. Marchiondelli

Maintenance and rehabilitation of the "Incoronata" viaduct along the Salerno Reggio Calabria highway

C. Ceccoli, T. Trombetti, A. Forlani & F. Baroni

Rehabilitation and modernization of the Monte Bianco Tunnel

G. Furlanetto & L. Ferretti Torricelli

Structural safety evaluation of a r.c. arch bridge

A.M. Avossa, P. Famigliuolo & P. Malangone

Design of durable bridges by using self-compacting concrete filled steel tubes

G. Furlanetto, L. Ferretti Torricelli & A. Marchiondelli

Effects of soil-structure interaction on the seismic damageability of coupled wall-frame structures on pile foundations

F. Dezi, S. Carbonari & G. Leoni

Experiment based performance prediction of long span bridges subjected to non-uniform excitation

M. M. S. Cheung & C. Y. Yang

11:30-13:00 Concurrent Session FM3 – Polvani Room

Life–Cycle Cost of Structures and Infrastructures III

Chairs: M. Crispino & M.G. Stewart

Life-cycle cost assessment and service life estimate of precast concrete culverts

D. K. Panesar, C. J. Churchill, S. E. Chidiac & E. Kling

A successive LCC model development of marine RC structures exposed to chloride attack using a Bayesian approach

H. Park, H. Jung, J. Kong & G. Zi

Optimal floor plan design of high-rise apartment buildings based on life-cycle cost consideration

K. J. Park & A. H-S. Ang

Maintenance – LCC analysis based on real data

C. Bahr & K. Lennerts

Technical sustainability of civil engineering infrastructure: some examples of the use of embodied energy calculations

N.J. O’Riordan, C.Y.K. Chau, D.P. Nicholson, K. Soga

11:30-13:00 Concurrent Session FM4 – Larius Room

Life–Cycle Monitoring, Maintenance, and Rehabilitation V

Chairs: J.S. Kong & E. Garavaglia

Behavior of RC bridge girders strengthened with CFRP laminates

A. El-Safy

On the road of multi-performance profiles aided maintenance

A. Talon, D. Boissier & J. Hans

Development of a work carriage for tunnel maintenance

H. Terato, K. Yokozawa, N. Takemoto, Y. Miura & Y. Inagawa

A maintenance concept for concrete tunnel linings in soft soil conditions

A.H.J.M. Vervuurt, G.A. Leegwater & R.B. Polder

Reasons for repair need in Finnish concrete facades in practice

J. Lahdensivu & S. Varjonen

Selection of repair method for concrete facades

S. Varjonen & J. Lahdensivu

13:00-15:00 Lunch Break – Hotel Villa Cipressi

Friday Afternoon (FA), June 13, 2008

15:00-16:30 Concurrent Session FA1 – Fermi Room

Life-Cycle Assessment and Design VI

Chairs: P.G. Malerba & A. Palermo

Life-cycle performance of structures: combining expert judgment and results of inspection

L. C. Neves & D. M. Frangopol

Structural behavior of cable stayed bridges under damage

F. Biondini, P. Limonta, P.G. Malerba & R. Stucchi

Simple supported RC bridge design process considering durability

X. Ruan, A.-R. Chen & Z.-C. Pan

Increasing pavements durability through construction: a model for compaction design

M. Crispino, E. Mariani & R. Rampini

Fatigue life of precast decks of high speed railway bridges

C.F. Sousa, R. Calçada & A.S. Neves

Bending performance of reinforced concrete member deteriorated by corrosion

M. Oyado, T. Sato, T. Kanakubo & Y. Yamamoto

15:00-16:30 Concurrent Session FA2 – Musica Room

Life-Cycle Performance of Special Structures II

Chairs: F. Bontempi & C. M. Krüger

Functionality and strength of arch concrete dams cracked by shrinkage

M. Como & S. Imperatore

Structural reliability analysis and monitoring program applied to a roller-compacted concrete dam

C. M. Krüger, A. Chaves Neto & D. A. V. Krüger

Towards life-cycle assessment of foundations of guyed towers in electrical transmission lines

C.B.P. Azevedo & S.M.C. Diniz

Structural reliability of the “Palazzo della Civiltà Italiana” in Rome EUR

C. Ceccoli, T. Trombetti & D. Biondi

Medium-term life-cycle monitoring of random behaviour components of in-service pile-supported wharves

H. Yáñez-Godoy, J. Boéro & F. Schoefs

Probability-based durability design and performance-based concrete quality control of a concrete harbor structure

V. Årskog & O.E. Gjørv

15:00-16:30 Concurrent Session FA3 – Polvani Room

Life–Cycle Cost of Structures and Infrastructures IV

Chairs: J. Menčík & J. Weissmann

Life cycle deterioration and cost comparison of bridge deck designs including rehabilitation strategies

L.R. Feldman, M. Boulfiza, J. Zaccaruk, P.N. Christensen & G. Sparks
Equipment replacement decisions based on life-cycle cost analysis

J. Weissmann & A. J. Weissmann

Life-cycle cost analysis for fire protection of buildings

L. Razdolsky

An integrated life cycle assessment and life cycle analysis model for pavement overlay systems

H. Zhang, G. A. Keoleian & M. D. Lepech

Birth certificate as an important tool for public-private-partnership projects

T.F. Mayer, P. Schiebl & M. Zintel

15:00-16:30 Concurrent Session FA4 – Larius Room

Life–Cycle Monitoring, Maintenance, and Rehabilitation VI

Chairs: Hyo-Nam Cho, F. Lanata

Aspects of sustainability of repair-systems for concrete structures

M. Empelmann, V. Henke, G. Heumann & M. Wichers

Life-cycle reliability analysis and selective maintenance of deteriorating structures

F. Biondini, D.M. Frangopol, E. Garavaglia

Optimal inspection and maintenance strategies for bridge network using supply and demand approach

A.D. Orcesi & C.F. Cremona

The life-cycle maintenance strategy for the bridge system

K.-H. Park, S.-Y. Lee, J.-H. Kim, J.-S. Kong & H.-N. Cho

Inspection of bridges in Austria – Practice and outlook

R. Wendner, S. Hoffmann, A. Strauss, K. Bergmeister & R. Geier

16:30-17:30 Closing Ceremony – Fermi Room (*)

Closing Remarks

Guest Speakers

Venue of IALCCE 2010

Organizers of IALCCE 2010

Closing Message

Fabio Biondini & Dan M. Frangopol

(*) Video-conference with Loggiato Room, Nera Room, and Musica Room.

Welcome Reception

The Welcome Reception of the Symposium will be held at the Hotel Villa Cipressi on June 10, 2008. Villa Cipressi is a complex of buildings and gardens, rich in history, built mainly between 1400 and 1800. During the centuries, Villa Cipressi was the property of noble and aristocratic families. In 1980 it was purchased through a voluntary subscription by the people and friends of Varenna for a public use. Reconstructed in compliance with the pre-existing architectural lines by reconciling harmoniously antiquities with practicality, Villa Cipressi is now managed as a Hotel.

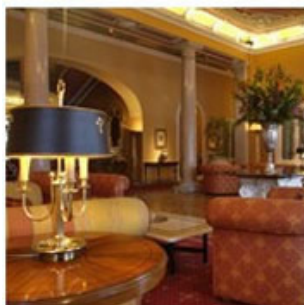


Boat Tour

A ferry boat transfer from Varenna to Tremezzo will be provided for Delegates and Accompanying Persons who will participate in the Gala Dinner on June 12. This transfer will include a boat tour towards the west branch of Lake Como, with breathtaking views of the village of Bellagio and of the famous ancient residences Villa del Balbianello and Villa Carlotta, with their flowering gardens located on the shores. The meeting point is the Varenna Ferry Boat Station at 17:45.

Gala Dinner

The Gala Dinner of the Symposium will be held at the Grand Hotel Tremezzo Palace on June 12, 2008. Grand Hotel Tremezzo Palace overlooks the center of Lake Como where the landscape is enchanting. Fascinating Palace dating back to the beginning of the century, Grand Hotel Tremezzo Palace is a five-stars Hotel built in Liberty style. The saloons with frescos and the rooms are furnished with vintage objects and furniture, which preserve the flavor and the glamour typical of the Belle Époque hotels.



Events in the Villa

Jazz Concert

A jazz concert by an accordion and sax Duo will be presented in the beautiful context of the gardens of Villa Monastero on June 11, 2008.

Guided visits of the Villa Monastero Museum

Villa Monastero is directly located on the lake shore, and surrounded by a botanical garden decorated with architectural elements like tortile columns and balustrades. Besides hosting an International Congress Center, the Villa harmoniously includes museum apartments preserving the beautiful residential rooms with precious pieces of art and the original furnishings. Guided tours of the Villa and of its museum apartments will be organized on June 11 and June 12, 2008.



Post-Symposium Tour – *The Best of Milan*

An optional Post-Symposium tour will be organized for Delegates and Accompanying Persons on June 14, 2008. This optional tour is managed by Promoest Agency and require a separate registration. In the morning the tour will introduce to the most beautiful treasures of the historical center of Milan, including the monumental symbols of the city: the Cathedral, one of the most famous and complex Gothic constructions of the world, and the La Scala theatre, one of the world's best known Opera Houses, where conductors and composers have been performed since 1778.



In the afternoon the tour will propose a guided visit of the majestic complex of Sforzesco Castle and its art and history museums, in which some unique pieces of art like the Rondanini Pietà by Michelangelo and works by Mantegna, Bellotto and Canaletto, are exposed. The tour will also include the visit of the Convent of Santa Maria delle Grazie, tied up to the name of Leonardo da Vinci and Donato Bramante. This visit will allow to admire, in the ancient Dominican convent refectory, the famous Leonardo da Vinci's masterpiece "The Last Supper".



Social Program for Accompanying Persons

The Social Program for Accompanying Persons includes the attendance of Welcome Reception, Concert, and Gala Dinner. Moreover, optional tours on Lake Como and nearby attractions are organized. The optional tours are managed by the Promoest Agency and require a separate registration.

Trip Boat to Como, the City of Silk

June 11, Wednesday, 8:30-17:30

Como is situated on the shores of the lake and is encircled by enchanting hills. After a pleasant boat trip along the west branch of Lake Como, with breathtaking views of its most famous villas, the tour allows to explore the historical center of Como, located inside the ancient medieval walls dated back to the centuries from the XII to the XV. Como is also known as the Silk Capital. The Como's silk creative tradition will be discovered by visiting one of its most representative firm, the Mantero Factory, founded in 1902.

Bellagio and the Villas of Lake Como

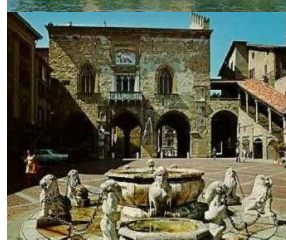
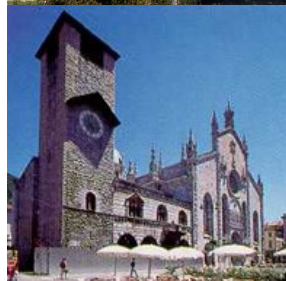
June 12, Thursday, 8:30-16:30

The fascination of Lake Como mainly arises from the small characteristic villages and the ancient residences situated along the shores, each one having its own peculiarities. This tour offers the opportunity of discovering two of the most famous villas of Lake Como, the neoclassical residence Villa Carlotta and the splendid Villa Balbianello, as well as to visit the village of Bellagio, called "the pearl of the lake" for its unique position at the top of a flourishing promontory with one of the best view of Lake Como.

Bergamo Alta and the Franciacorta Region

June 13, Friday, 8:30-18:00

This tour will offer you the opportunity to discover one of the charming treasure of Lombardy region, the historical center of Bergamo, characterized by an extraordinary heritage of art and architecture. At the end of the visit of Bergamo Alta (Upper City), a bus transfer will allow to enjoy a panoramic view of the enchanting hills covered by vineyards, as well as to taste the flavor of a unique eno-gastronomic itinerary in the Franciacorta region, where the history of viticulture is centuries old.



Useful Information

Optional Tours

The optional Post-Symposium tour for Delegates and Accompanying Persons, as well as the optional tours for Accompanying Persons, are managed by the Promoest Agency and require a separate registration. A representative of Promoest Agency will be at disposal of the participants during the Symposium in the Secretariat Office located at the ground level of the main building of Villa Monastero.

Payments

During the Symposium all extra-payments should be by cash (in Euros). Credit cards are accepted by the Promoest Agency for payments related to the optional tours.

Currency

The unit of currency in Italy is the Euro. Foreign currency may be exchanged at banks during normal business days (as an indication Monday to Friday, 9:00-13:00 and 14:30-15:30), as well as at the international airports.

Taxi

Taxi stand is in front of the railway station Varenna-Esino. A taxi cab can be reserved by calling one of the following phone numbers:

+39-338-4441084

+39-338-8554687

+39-340-2568692

Time Zone

Varenna is one hour ahead of Greenwich Mean Time (GMT).

Temperature

At the middle of June the climate in Varenna is usually mild and the temperature is about 24-28°C (75-82 °F) during the day, and 16-20°C (35-68 °F) during the night.

Electricity

Electricity in Italy is 220 volts, 50 cycles alternating current (AC). Italian sockets are designed to accept round pins.

Notes to Delegates

Registration Desk

The Registration Desk will be located in the Secretariat Office at the ground level of the main building of Villa Monastero. Operating hours:

June 10 (Tue)		15:00-19:00
June 11 (Wed)	8:00-12:00	15:00-17:00
June 12 (Thu)	8:00-12:00	15:00-17:00
June 13 (Fri)	8:00-12:00	15:00-17:00

Preview and Internet Lounge

Preview and Internet facilities will be provided in the Sottotetto Room at the third floor of the main building of Villa Monastero. Operating hours will be 9:00-13:00 and 15:00-17:00 from June 11 to June 13.

Presentation Guidelines

The time allocated for each keynote lecture is 40 minutes including questions. The time allocated for each technical presentation is 15 minutes including questions. A personal computer with Power Point and Acrobat Reader will be available at each session room. The presenters will be not allowed to connect their own personal computer to the projector. The presenters are requested to provide their CD-ROM or USB Memory Key containing the presentation files at the Secretariat Office one day in advance. The correct uploading of the presentation files has to be checked by the presenters at least 20 minutes before the session starts. Presenters are also required to fill out the "Speaker Information Form" and submit it to the Chairs of their session at least 10 minutes before the session starts.

Meetings Room

The Committee Meetings scheduled during the Symposium will be hosted in the Consiglio Room at the second floor of the main building of Villa Monastero.

Lunch and Coffee Breaks

Coffee and refreshment will be served in the gardens of Villa Monastero at 11:00, June 11-13. Lunches will be served in the Hotel Villa Cipressi at 13:00, June 11-13.

Participant Identification

The participants are invited to wear the Symposium name tag to entry into the Symposium venue, and to attend all sessions and social events. For the admission to the Welcome Reception, Lunches, Coffee Breaks, and Gala Dinner, the participants will be required to provide the appropriate coupons included in the Symposium kit.

Personal Property

The participants are invited to take good care of their personal belongings, and to do not leave them unattended. Neither the Symposium organizers nor their staff will be responsible for any loss or damage of the personal property of the participants.

IALCCE'08 Secretariat

Paola Limonta and **Roberta Stucchi**

Department of Structural Engineering

Politecnico di Milano

P.za L. da Vinci, 32

20133 Milan, ITALY

Email: info@ialcce08.org

Symposium Website:

<http://www.ialcce08.org>