

Scientific Program

Sunday, July 13, 2008

Monday Morning (MoM), July 14, 2008

Sunday, July 13, 2008

- 13:00 - 19:00 Registration (Vista Hall Lobby)
- 19:00 - 21:00 Welcome Reception (Vista Hall)

Monday Morning (MoM), July 14, 2008

- 08:30 - 09:00 Opening Ceremony
- 09:00 - 09:30 T.Y. Lin Lecture
- 09:30 - 10:30 Keynote Lecture
- 10:30 - 11:00 Coffee Break
- 11:00 - 13:00 Concurrent Technical Sessions: MoM-1 to MoM-8

Chairs: Man-Chung Tang & Young Soo Chung
 John Fisher: Fatigue of steel bridge infrastructure
 Chairs: Masanobu Shinzuka & Joan Ramon Casas
 Mehdi Saïdi: Managing seismic performance of highway bridges Evolution in experimental research
 Holger Svensson: Cost-effective and durable cable-stayed bridges

MoM-1. Vista Hall 1	MoM-2. Vista Hall 2	MoM-3. Vista Hall 3	MoM-4. Cosmos	MoM-5. Art Hall	MoM-6. Presidio 1	MoM-7. Presidio 2	MoM-8. Calla
Health monitoring (1) Chairs: Christian Clemona, Soobong Shin Detachable sensor for bridge cable maintenance and safety S. Sumitro, H. Hoshita, T. Okamoto & M.L. Wang Stock Condition Index analyses response to Bridge Condition Index determinations P.S. McCurtin Traffic-induced vibration of bridges: Input force identification C.-H. Loh, A.-L. Wu & J.-H. Weng Turning the Humber Bridge into a smart structure N.A. Houdi, P.R.A. Fuller, C.R. Middleton & P.G. Hill Application of data fusion in the safety monitoring of Sitting Bridge foundation Z.J. Chen, L. Bian, T. Xue & X.W. Zhang Remote measurement of crack length in sacrificial test piece by self-reference lock-in thermography Y. Sakino, T. Sakagami & Y.-C. Kim	Reliability and risk management (1) Chairs: Reginald DesRoches, Zbigniew Mianko Challenges for structural maintenance in coastal and offshore Zones-Floating structures E. Watanabe Reliability analysis of Steel-Concrete Hybrid Cable-Stayed Bridge during construction J.H. Yun, C. Moon, J.W. Sun & H.N. Cho Reliability analysis of a high-speed railway bridge system based on an improved response surface method A.S. Nowak, T. Cho, D.H. Lee & M.-K. Song ANN-based reliability analysis of a fiber reinforced polymer deck J. Cui, D. Kim & D.H. Kim Strength of the chain for suspended scaffolds Y. Hino Multimode analysis of extraneously induced excitation due to turbulence on cable-stayed bridges, including temporary stabilizing measures J.-Y. Cho, Y.-R. Cho & H.-E. Lee	Mini-Symposium Integrating health monitoring and lifecycle management of bridge and highways (1) Chairs: Xiaolin Meng, Hee Sung Lee Integrating human, natural and engineered systems and associated paradigms for infrastructure asset management F. Moon, P. Gurian, F. Montalvo & A.E. Aktan Structure and infrastructure health monitoring as a key enabling paradigm for integrated asset management F. L. Moon, A.E. Aktan, F. Jalilmoos & H. Ghazemi Challenges for asset management in W-Europe L.(H.E.) Klatter Effective bridge management using ABMS H. Kawanura, K. Kudo, M. Soma, H. Kawaragi & M. Kaneuji Development of BMS and possibility of performance based contracting using BMS M. Kaneuji, H. Kawanura, M. Soma & E. Watanabe A Study on LCC Prediction for bridge management taking future uncertainty into account K. Mitsuura, Y. Takahashi & Y. Otani	Seismic and dynamic analysis (1) Chairs: Kuo-Chun Chang, Mitsuo Kawatani Prioritization and seismic risk assessment of bridges D. Cardone, G. Perrone, M. Dolce & L. Pardi Ambient vibration test and seismic evaluation of steel-deck truss bridge S. Jang, S.-T. Oh, S. Kim, Y.-W. Shim & S.S. Chen Finite element model updating of a concrete arch bridge through static and dynamic measurements H. Schläpke, M. Plos, K. Gylltoft, F. Jonsson & D. Johnson Seismic response of highway viaducts under design live load considering vehicle as a dynamic system M. Kawatani, C.-W. Kim, S. Konata & R. Kitaura A substructure approach in the dynamic analysis of continuous beams under moving oscillators V. De Sulyo, G. Muscolino & A. Palmieri Improvement of seismic analysis concerning the characteristic difference of HDR-S between the stages of design and inspection H. Youhika, M.-S. Yoo, D.-H. Ha & K.-Y. Kim Vulnerability assessment of an existing highway bridge by 3-D nonlinear time history analyses and proposing its retrofit design M. Hosseini & S.R. Khanvari	Bridge inspection and diagnostics (1) Chairs: Konrad Bergmeister, Zhi Sun Application of data fusion technology on scour and siltation monitoring in river bed Z.J. Chen, W. Wang, S. Chen & S.H. Cao Special tests of two post-tensioned concrete viaducts J. Cicula, M. Lagoda & P. Olaszek Active lamb wave propagation-based damage detection and location for steel plate W. Jeong, J. Seo & H. Kim Settlement prediction model for pile foundation based on field observation X. Li, Z. Chen & X. Dong Ambient vibration of stay cables used for damage detection in cable-stayed bridge C.-C. Chen, W.-H. Wu & J. Lin Special inspections and maintenance of prestressed concrete in Rio-Niterói-Bridge C.H. Siqueira	Fatigue analysis (1) Chairs: Wassim Raphael, Richard Sause Evaluation of fatigue strength of one riveted historical railway bridge A. Pipinato, C. Pellegrino & C. Modena Global-local finite element analysis of riveted railway bridge connections for fatigue evaluation B.M. Imam, T.D. Rightonitis & M.K. Chrysanthopoulos Fatigue of riveted metal structures T. Larsson & O. Lagerqvist Influence of the fatigue resistance of duplex steel on the bridge design - a span length investigation T. Rauert, B. Hoffmeister, A. Gieseking & O. Hehler Fabrication procedure effects on fatigue resistance of steel orthotropic deck welds H.B. Shin, C.M. Uang & C. Sikorsky	Integrated assessment - Practical application of probabilistic methods Chairs: Ib Enevoldsen, Jens Sandager Jensen Guideline for probabilistic assessment of deteriorated bridges J. Lauridsen, F.M. Jensen & S. Engelund Probability based assessment of railway bridges in Denmark - current state and future possibilities J.S. Jensen, D.F. Wisniewski & O.B. Ulstrup Probability based assessment of motorway bridges in Denmark J. Bjerrum, A. Østgaard, C. Pedersen & L. Enevoldsen Optimization of special inspections of concrete bridges S. Engelund & M. Stolt Probability based assessment of a large riveted truss railway bridge A. Østgaard, C. Pedersen, J. Enevoldsen, L. Gustavsson & J. Hammurback	Loads and capacity assessment (1) Chairs: In-Yeol Paik, Jan Bien Evaluation of ultimate capacity of deteriorated reinforced concrete bridge columns M. Tapan & R.S. Aboutaha Load test of bonded post-tensioned concrete beams with corroded tendon S.G. Yuan, S.H. Park, C. Lee & E.K. Kim The bridges and the floods V. Papa 3 DOFs collision model for the analysis of bridge super-structures and deck house collision G.H. Lee & S.L. Lee Modeling granular soil to predict pressures on integral bridge abutments J. Banks, T. Knight, J. Young & A. Bloodworth Assessment of bridge capacity through proof load testing J.D. Gómez & J.R. Casas

Scientific Program

Monday Afternoon (MoA), July 14, 2008

Monday Afternoon (MoA), July 14, 2008

13:00 - 14:00 Lunch Break

14:00 - 16:00 Concurrent Technical Sessions: MoA-1 to MoA-8

MoA-1, Vista Hall 1	MoA-2, Vista Hall 2	MoA-3, Vista Hall 3	MoA-4, Cosmos	MoA-5, Art Hall	MoA-6, Presidio 1	MoA-7, Presidio 2	MoA-8, Cala
<p>Health monitoring (2)</p> <p>Chairs: Chin-Hsiung Loh Chung-Bang Yun</p> <p>Wind-induced vibrations and countermeasures for cable systems on long-span bridges <i>I. Yamada, S. Kasahara, K. Furumoto & N. Toyama</i></p> <p>Structural monitoring of a bridge prestressed concrete beam under loading <i>C. Cremona, C. Tesarier, V. Le Cam, B. Tomblair, R. Leconte & V. Barbier</i></p> <p>Application of InSAR on ground deformation in the location of Sutong Bridge <i>Z.J. Chen, N.N. Zhang, X.Y. Li & L.Y. Fang</i></p> <p>Long-term structural health monitoring of the Torino' speed-rail-cabled-stayed bridge <i>L.M. Giacomini & A. De Stefano</i></p> <p>Identifying bridge damage using Brillouin optical fiber sensing <i>W. Zhang, B. Shi, Y.Q. Zhu & Y.F. Zhang</i></p>	<p>Reliability and risk management (2)</p> <p>Chairs: Maria-Karina Söderqvist Eiichi Watanabe</p> <p>Reliability assessment of seismic expansion joints in bridges <i>J.E. Padgett & R. DesRoches</i></p> <p>System-level reliability evaluation of bridge structures and networks by matrix-based system reliability method <i>J. Song & W.-H. Kang</i></p> <p>Rehabilitation and monitoring of a marine bridge in Ireland <i>A. Farrell, L.L. Duffin, A. O'Connor & J. Kelly</i></p> <p>Repair of damaged footbridge after strike of excavator <i>A.G. Mondak & Z. Manko</i></p> <p>Effect of corrosion on the reliability of a bridge based on Response Surface Method <i>S.J. Jo, T. Onofriou & A.D. Croce</i></p> <p>Vibration control of cable-stayed bridge and derrick crane system during construction <i>H.-J. Paik, D.-S. Kim, W. Park, K.-S. Park & H.-M. Koh</i></p>	<p>Mini-Symposium</p> <p>Integrating health monitoring and lifecycle management of bridge and highways (2)</p> <p>Chairs: Leo Klaiter Hitoshi Furuta</p> <p>Load testing and analysis of bridges missing critical documentation <i>J. Prader, J. Weidner, H. Hasanah, F. Moon, E. Alan, F. Jalimoo, B. Buchanan & H. Ghosami</i></p> <p>Integrating health monitoring in asset management <i>H. Furuta, H. Hatori, T. Ohama, K. Yoshida & D.M. Frangopol</i></p> <p>Integrative research supporting decision making for bridges <i>F.N. Cuthbs, D.M. Frangopol & A.E. Aktan</i></p> <p>Development of affordable GPS displacement monitoring system <i>M. Saeiki, K. Ogami & M. Hori</i></p> <p>Methods for measuring structural deflection and applications to bridge deck performance monitoring <i>J.M.W. Brownjohn & X. Meng</i></p> <p>Experimental identification of multiple oscillation frequencies using GPS <i>P.A. Paimonidis, S. Pytharoulis & S. Striros</i></p>	<p>Seismic and dynamic analysis (2)</p> <p>Chairs: Jamie Padgett Qiwei Zhang</p> <p>Shake table studies of scaled reinforced concrete bridge piers subjected near-fault ground motions <i>Y.-S. Chang, C.-Y. Park, H.-K. Hong, D.-H. Lee & C.-S. Shim</i></p> <p>Computer wind investigations for long bridge crossings <i>D. Janjic & A. Domingio</i></p> <p>Identification of the dynamic characteristics of long span bridges using ambient vibration measurements <i>A.L. Hong & R. Betti</i></p> <p>Application of indexing and detailed seismic risk assessment approaches to existing bridges <i>D. Cardone, G. Perrone & L. Pardi</i></p> <p>Effectiveness of rupture controllable steel side blocks for elevated girder bridges with isolation bearings <i>N. Asada, M. Matsunaga, T. Kitada, M. Sakaida & M. Yoshida</i></p> <p>Influence of bullet train as dynamic system on seismic performance of Shinkansen viaducts <i>M. Kawatani, X. He, K. Shinagawa & S. Nishiyama</i></p>	<p>Bridge inspection and diagnostics (2)</p> <p>Chairs: Dwyer Huston Hae Sung Lee</p> <p>Non-destructive testing of suspender ropes with magnetostriiction <i>M.S. Higgins & O. Tveer</i></p> <p>Judging suitability of arch bridges for higher axle loading by load testing <i>R.K. Gupta</i></p> <p>Health assessment of pre-stressed concrete girder bridges by non-destructive testing <i>R.K. Gupta</i></p> <p>Optimal inspection and maintenance strategies for bridge network using supply and demand approach <i>A.D. Oresti & C.F. Cremona</i></p> <p>Experimental investigations on the strength behavior of box beam and circular column connections <i>Y.P. Kim & W.S. Hwang</i></p> <p>Nondestructive evaluation of effective prestress using the core-drilling method <i>S. Pessik & M.J. McGinnis</i></p>	<p>Fatigue analysis (2)</p> <p>Chairs: Ove Lagerqvist Abilio De Jesus</p> <p>Estimation of low-cycle fatigue strength of steel structural members under earthquake loading <i>J. Iyama & J.M. Ricles</i></p> <p>Variability analysis of fatigue crack growth rates of materials from ancient Portuguese steel bridges <i>J.A.F.O. Correia, A.M.P. Jesus, M.A.V. Figueiredo, A.S. Ribeiro & A.A. Fernandes</i></p> <p>Assessment of the coupled effect of corrosion-fatigue on the reliability of RC bridges <i>E. Bastidas-Arteaga, M. Sanchez-Silva, Ph. Bressollette, A. Chateaufort & W. Raphael</i></p> <p>An optimal design of TMD for the improvement of fatigue reliability of steel-composite high-speed railway bridges using target performance approach <i>S.-J. Kim, S.-C. Kang, H.-M. Koh & W. Park</i></p> <p>Fatigue damage of orthotropic steel bridge decks and its retrofit <i>T. Shimozato, T. Yabuki, Y. Arizumi, Y. Hirabayashi, N. Inaba & S. Ono</i></p> <p>Fatigue design for highway bridge ancillary structures <i>Y.C. Park, S. Roy & R. Sause</i></p>	<p>Mini-Symposium</p> <p>Information technology for lifetime management of bridge (1)</p> <p>Chairs: Sang-Ho Lee Jerome Lynch</p> <p>A Strategy for IT-based lifetime management of bridge <i>S.-H. Lee, B.-G. Kim, H.-J. Kim & S.-J. Kim</i></p> <p>Use of information technology in a regional bridge management contract <i>R. Kihlstrom & M. Tervo</i></p> <p>Development of a structural health monitoring system with wireless sensor networks <i>H. Emoto, A. Miyamoto & K. Kawamura</i></p> <p>Development of a multi-purpose remote health monitoring system for existing bridges <i>A. Miyamoto, J. Sonoda & K. Kawamura</i></p> <p>Automated identification of modal properties in a steel bridge instrumented with a dense wireless sensor network <i>A.T. Zimmerman, R.A. Swartz & J.P. Lynch</i></p> <p>Downsizing seismic sensing system and its implementation <i>Y. Mizuno & Y. Fujino</i></p>	<p>Loads and capacity assessment (2)</p> <p>Chairs: Eugene OBrien Dong-Ho Choi</p> <p>Micro-simulation modelling of traffic loading on medium- and long-span road bridges <i>E.-J. O'Brien, A. Hovgaardova & C. Wadhvani</i></p> <p>Nonlinear analysis of PSC structures with internal tendon by strengthened using external tendon <i>J.-G. Park, J.-H. Cheon, M.-Y. Kim, H.M. Shin, B.-J. Lee & H. Choi</i></p> <p>Enhancement of bridge serviceability due to a strong wind <i>A. Krcak, P. Sesar & M. Masalic-Buhin</i></p> <p>Comparison of theoretical and measured temperature distributions for concrete slab bridges <i>E.-S. Hwang & J.I. Lee</i></p> <p>Numerical analysis of old masonry bridges supported by field tests <i>J. Bie Th, T. Kamiński & Ch. Trella</i></p> <p>Input ground motion for seismic design considering near fault effects in stable continental regions <i>J.H. Kim & J.K. Kim</i></p>

Scientific Program

Monday Evening (MoE), July 14, 2008

Monday Evening (MoE), July 14

16:00 - 16:30 Coffee Break

16:30 - 18:30 Concurrent Technical Sessions: MoE-1 to MoE-8

MoE-1, Vista Hall 1	MoE-2, Vista Hall 2	MoE-3, Vista Hall 3	MoE-4, Cosmos	MoE-5, Art Hall	MoE-6, Presidio 1	MoE-7, Presidio 2	MoE-8, Calla
<p>Health monitoring (3)</p> <p>Chairs: Danièle Inaudi Danhui Dan</p> <p>Bridge demolition while partial demolition under-traffic K. Zilch, E. Penka, M. Hennecke, U. Willberg, Th. Wu nderlich & Th. Schäfer</p> <p>Development and implementation of a low-cost, continuous bridge health monitoring system Y.-S. Lee, B.M. Phares, & T.J. Wipf</p> <p>Structural health monitoring of civil infrastructures using MEMS-based technologies T. Miyashita & M. Nagai</p> <p>Error-resilient routing for wireless SHM powered by solar cells J. Ryu, J. Kim, I. Yeo, Y. Chok & H. Shin</p> <p>Correlation analysis on long term monitoring data of Donghai Bridge L. Sun, Z. Min & D. Dan</p> <p>Low-latency routing for wireless SHM powered by solar cells J. Kim, Y. Cho, J. Ryu, I. Yeo & H. Shin</p>	<p>Bridge management systems (1)</p> <p>Chairs: Paul D. Thompson Deshan Shan</p> <p>Design and implementation of a new bridge management system for the Ministry of Transport of Québec R.M. Ellis, P.D. Thompson, R. Gagnon & G. Richard</p> <p>Comprehensive lightning protection technologies for mechanical and electrical systems of Sutong bridge B. Yao, W. Zhang, G. Chen & C. Jiang</p> <p>Risk evaluation and management for road maintenance on urban expressway based on HELM (Hanshin Expressway Logic Model) Y. Sakai, K. Kobayashi & H. Uetsuka</p> <p>Asset management system development J. Radtke, J. Bleiflörer & G. Puz</p> <p>Development of a smart-client based bridge management and maintenance system for existing highway bridges D. Shan & Q. Li</p> <p>A new bridge management system for the National Department of Transportation of Argentina M.E. Ruiz, E.A. Castelli & T.A. Pratto</p>	<p>Mini-Symposium</p> <p>Integrating health monitoring and lifecycle management of bridge and highways (3)</p> <p>Chairs: Franklin Moon Necati Catbas</p> <p>Real-time dynamic monitoring with GPS and geobot during Sutong Bridge construction S.X. Huang & B.C. Yang</p> <p>The safety assessment method of existing large span steel structural members X. Liu & Y. Luo</p> <p>A mechanical model of steel frames with joint damages Y. Luo & H. Song</p> <p>Statistic analysis of a prototype structural health monitoring system for the Nanpu Bridge in Shanghai, P.R.China R. Wang, X. Meng, Y. Luo, L. Yao & W. Huang</p> <p>The analysis of GPS single epoch positioning algorithm based on the deformation monitoring L. Yao, P. Yao & X. Meng</p> <p>Deformation analysis of the supporting towers of the Nanpu Bridge from GPS measurements L. Yao, Y. Xie, Y. Sze & X. Meng</p> <p>Deformation monitoring and analysis of high pylon of Su-Tong Bridge in construction Y. Dongjie, W. Chaoqing & Li Hongxiang</p>	<p>Seismic and dynamic analysis (3)</p> <p>Chairs: Issan-Harik Jae-Kwan Kim</p> <p>Vibration-based tension identification of ultra long stay cables J. Liu, N. Fang & Q. Zhang</p> <p>Calculation of the influence line of a bridge using a moving vehicle A. González & E.J. O'Brien</p> <p>Seismic assessment and evaluation of 520 Highway Bridges in Western Kentucky C.C. Choo, I.E. Hank, W. Zumar & H.S. Ding</p> <p>Cross-sectional stress distribution of short suspenders in arch bridges Y.B. Li & Q.W. Zhang</p> <p>Experimental investigation on the Bi-lateral seismic behavior of a two-span bridge model isolated by rolling-type bearings K.-C. Chang, M.-H. Tsai & Z.-Y. Lin</p> <p>Modal analysis of corrugated steel flexible shell bridge structure before backfilling D. Beben & Z. Manko</p> <p>Experimental study on the shear characteristics of seismic isolation bearings I.J. Kwak, C.B. Cho & Y.J. Kim</p>	<p>Bridge inspection and diagnostics (3)</p> <p>Chairs: Giorgio Valerita Chang-Su Shim</p> <p>Bridge safety management system by using Bridge Inspection Robot D.-j. Park, H.-g. Jung, B.-j. Lee, W.-t. Lee & Jo. Kim</p> <p>Matrix based cable-stay bridge cable force and deck elevation adjustments and FEM updating A. Turer</p> <p>A regularization scheme for displacement reconstruction using measured structural acceleration data Y.H. Hong, H.W. Park & H.S. Lee</p> <p>Dynamic testing of existing bridges for high speed trains A. Turer</p> <p>Concrete bridge deck condition assessment with automated multisensor techniques D. Huston, J. Cui, D. Burns & F. Jalilovs</p> <p>Parameter estimation of concrete bridge using ambient acceleration measured by wireless measurement system S.J. Lee, S.B. Kim, K.Y. Choi, G.Y. Song, D.O. Kang & Y.H. Lee</p> <p>Impact-Echo scanning for grout void detection in post-tensioned bridge ducts - Findings from a research project and a case history Y. Tinkey & L. Olson</p>	<p>Advanced and high performance materials</p> <p>Chairs: Fernando Branco Kwang Myoung Lee</p> <p>Durability of bridges made of advanced composite materials J.R. Correia, F.A. Branco, J.G. Ferreira, S. Cabral-Fonseca, M.I. Eusebio & M.P. Rodrigues</p> <p>Analytical study on the performance of reinforced high-strength concrete bridge columns D.J. Seong, H.M. Lee, H.M. Shin, J.H. Choi & M.S. Oh</p> <p>Use of steel fibre concrete to eliminate shear reinforcement in pretensioned concrete beams P. De Paauw, L. Taerwe, N. Van den Bouverie & W. Meermans</p> <p>Development of self-consolidating concrete for bridge construction and repairs P. Puczkowski, A.S. Nowak & G. Morcous & M. Kaczynska</p> <p>On the use of duplex stainless steels in bridge construction O. Hechler & P. Collin</p> <p>Self-consolidating lightweight concrete - excellent material for bridge applications M. Kaczynska</p>	<p>Mini-Symposium</p> <p>Information technology for lifetime management of bridge (2)</p> <p>Chairs: Ayaho Miyamoto Risto Kiviluoma</p> <p>SHM sensor networking with remote powering and interrogation M.D. Todd, D. Maccarenus, E. Flynn, B. Lee, K. Lin, D. Miskani, T. Rosing, R. Gupta, S. Kpoteje, D. Hsu, S. Desgagnis, G. Park, K. Farahani, M. Nathuaged & C. Farrar</p> <p>Development of an advanced inspection system for weathering steel bridges based on digital image recognition S. Goto, T. Aso & A. Miyamoto</p> <p>A study on the self-anchored suspension bridge behavior using GPS H.J. Han, S.H. Oh, I.H. Bae & G.H. Ha</p> <p>SHM role in bridge life cycle analysis (BLCA) S. Alampalli & M. Entouney</p> <p>Interoperable information model based on IFC for the cable-stayed bridge monitoring system J.-H. Yi, H.-J. An, H.-J. Kim & S.-H. Lee</p> <p>An automatic crack recognition system for concrete bridge inspection by image processing approach A. Miyamoto</p>	<p>Loads and capacity assessment (3)</p> <p>Chairs: Franco Bontempi Eui-Seung Hwang</p> <p>Calculation of dynamic interaction of train and an arch bridge J. Gyöngy & G. Szabó</p> <p>Structural behavior of corroded reinforced concrete structures K.Z. Hanjari, K. Lundgren, P. Kettli & M. Plos</p> <p>Field evaluation of dead and live load hanger rod stresses in a continuous steel girder bridge S. Pessia & J. Hodgson</p> <p>Dynamic behaviour of soil-steel road bridge made from corrugated plates D. Beben & Z. Manko</p> <p>Development of live load model using Weigh-In-Motion data E.-S. Hwang, I.R. Paik & J.-I. Lee</p> <p>Bridge safety analysis considering heavy truck loading J. Du & D.-J. Han</p> <p>Behaviors of bracing members in U-type trapezoidal steel box girders K. Kim & J.H. Park</p>

Scientific Program

Tuesday Morning (TuM), July 15, 2008

Tuesday Morning (TuM), July 15, 2008

08:30 - 10:30 Keynote Lecture
 Chairs: Ulrike Kuhlmann & Hyun-Moo Koh
 Man-Chung Tang: A new concept of orthotropic steel bridge deck
 Atab Muftic: Health monitoring of structures & related education and training needs of civil engineers
 Chairs: Masaribu Shirazuka & Andrzej Nowak
 Ib Enevoldsen: Practical implementation of probability based assessment methods for bridges
 Yozo Fujino: Bridge monitoring in Japan: The needs and strategies

10:30 - 11:00 Coffee Break

11:00 - 13:00 Concurrent Technical Sessions: TuM-1 to TuM-8

TuM-1, Vista Hall 1	TuM-2, Vista Hall 2	TuM-3, Vista Hall 3	TuM-4, Cosmos	TuM-5, Art Hall	TuM-6, Presidio 1	TuM-7, Presidio 2	TuM-8, Calla
Health monitoring (4) Chairs: Andrea Del Grosso & Eki Yamaguchi Health monitoring for corrosion detection in reinforced concrete bridges A. Del Grosso, F. Lanata, L. Pardi & A. Merzavalli Investigation of the relationship between displacement and acceleration in nonlinear dynamics using chaos theory R.A. Livingston & S. Jin The application of the frequency-shifted feedback laser optical coordinates measurement system for field measurement of bridges in service S. Umemoto, N. Miyamoto, K. Kubota, T. Okamoto, T. Hara, H. Ito & Y. Fujino Life-cycle monitoring of the structural configuration of a suspension bridge H.-K. Kim, H. Lee, J.-H. Jang, Y.-H. Kim & S.-K. Ro An FIS and AHP based on line evaluation system on Donghai Bridge D. Dai, L. Sun, Z. Yang & D. Xie Structural health monitoring of complex structural systems using adaptive models S. Aravangin	Bridge management systems (2) Chairs: Seok-Goo Youn & Woo Kim Development of a bridge maintenance decision support module for Taiwan Bridge Management System H.-K. Liao, C.-I. Yen & N.-J. Yau Optimization of bridge management policies on the French national roads network N. Odent, J. Berthelieny, C.F. Cremona, A.D. Orest & M. Triel Bridge management: A challenge for local authorities B.M. Kanyo A condition index based on the concept of apparent age D. Zonta, F. Borra & R. Zandemmi Design of the standardized measuring system for the integrated safety management of bridge structure W.S. Lee & K.T. Park	Mini-Symposium Integrating health monitoring and lifecycle management of bridge and highways (4) Chairs: Makoto Kaneuji & Den-Mi Frangopol The statistical investigation on one year GPS monitoring data from Donghai Bridge health Monitoring System (DHBHMS) D. Dai, L. Sun, X. Meng & D. Xie Nonlinear dynamic responses of large span hybrid structures under multi-dimensional seismic excitation Y. Huang & Y. Luo Research into the use of GNSS to monitor the deflections of suspension bridges, and the role of the FG in deformation monitoring of bridges G.W. Roberts, X. Meng & C.J. Brown Deflection monitoring of bridges: A case study of the fourth road bridge C.J. Brown, X. Meng, & G.W. Roberts Recent progress in GNSS-based long bridge deformation monitoring X. Meng, G.W. Roberts, A.H. Dodson, L. Xu & Z. Wan Investigation on the severe corroded steel girder bridge, Hakkeibashi-Bridge H. Furuta, M. Kawatani, T. Yamaguchi, H.H. Kim & M. Soma System of partial safety factors in reliability-based bridge assessment I. Park, D. Kim, & S. Shin	Damage assessment (1) Chairs: Murat Diodoli & Eugen Bruehwiler Evaluating composite steel girder-concrete slab bridge beams using simplified plastic analysis P.S. M. Caroten Improving bridge component deterioration forecasting precision H.S. Kleywegt Stochastic subspace-based structural identification and damage detection - Application to a long span cable-stayed bridge W. Zhou & H. Li Structural safety of historical stone arch bridges in Korea N.K. Hong, H.-M. Koh, S.G. Hong & B.S. Bae Realistic estimation method of moment redistribution in reinforced concrete beams based on the analytical methods J.H. Cheon, J.G. Park, S.C. Lee, M.S. Oh & H.-M. Shin Probabilistic analysis of the structural behaviour of a bridge prestressed concrete beam C. Cremona, S. Mohammadbakhshi-Shahi, B. Richard, C. Marcente & B. Tonnair	Life cycle costing (1) Chairs: Ikumasa Yoshida & Jung Sik Kong Life time assessment of steel bridges via monitoring and testing U. Pehl, M. Frenz & I. Schenkel Life cycle cost evaluation of neutralized reinforced concrete bridges subjected to earthquake Y.G. Sung, C.K. Su, C.C. Hsu, M.C. Lai, K.Y. Liu & K.C. Chang Degradation, repair methods and real service life of soil steel composite bridges in Sweden H.-A. Mattsson & H. Sundquist Study on function extension of an existing PC rigid frame bridge during its life cycle X.-X. Li, X.-F. Shi, X. Ruan & T.-Y. Ying Residual life assessment of steel girder bridges R.K. Gupta Application of a new metal spraying system for steel bridges Part 4: Reference product service life prediction for the system T. Kowda, S. Okano, A. Yamazaki & H. Matsuno Resource allocation for seismic retrofit of highway network U.I. Na, M. Shinzuka, P. Franchetti, E. Du-Lozzo & C. Modena	Special Session SAMSUNG special session on Incheon bridge Chairs: Jae-Yeol Cho & Hyun-Yang Shin Incheon Bridge project outline J.H. Yang, Son, M.G. Yim, H.S. Kim, H.Y. Shin & I.S. Shim Design and construction of approach bridge in Incheon Bridge project J.-Y. Song, K.-Y. Choi, H.-Y. Shin, W.-S. Lee, B.-C. Cho & D.-W. Hwang Development of geometry control system for cable-stayed bridges and application to the Incheon Bridge K. Jung & H.S. Lee Seismic design and performance assessment of pile-bents in Incheon Bridge viaduct H.-S. Son, M.-S. Oh, K.-L. Park & J.-H. Yang Geometry control for the concrete pylon of Incheon Cable Stayed Bridge D.K. Im, J.G. Yoo, C.H. Kim & H.S. Kim Case study of Osterberg-Cell pile load test on large diameter drilled shaft in Incheon Bridge project S.-H. Shin, Y.-K. Lee, Z.-C. Kim, J.-H. Kim & H.-G. Lee Design of ship impact protection in Incheon Bridge J.H. Kim, H.Y. Shin, H.T. Kim & S.H. Lee	Special Session Structural robustness Chairs: Franco Bontempi & Uwe Starossek Collapse resistance and robustness of bridges U. Starossek Approaches to measures of structural robustness U. Starossek & M. Haberland Measure of structural robustness under damage propagation F. Biondini & S. Reskellì Robustness assessment of a cable-stayed bridge M. Wolff & U. Starossek Evaluation of the dynamic amplification factor for cable breakage in cable-stayed bridges Y. Park, H.-M. Koh, J.F. Choo, H. Kim & J. Lee Dynamic analysis for structural robustness evaluation L. Giuliani & F. Bontempi Robustness investigation of long suspension bridges F. Bontempi & L. Giuliani	Special Session New developments in large-scale model studies of bridge components and systems subjected to earthquakes Chairs: Mahdi Saidi & Hirokazu Iemura Hybrid distributed simulation of a bridge-foundation-soil interacting system A.S. Elhachai, B.F. Spencer, S.J. Kim, C.J. Hollub & O.S. Kwon Research and application of precast segmental bridge columns for seismic regions K.-C. Chang, M.-S. Yai, Y.-C. Ou, G.C. Lee, J.-C. Wang & P.-H. Wang Seismic performance of a two-span bridge subjected to fault-rupture H. Choi, M.S. Saidi, P. Somerville & S. El-Azazy Nonlinear modeling of a two-span reinforced concrete bridge model from pre-yield through failure utilizing contemporary analytical methods N. Johnson, M. Saidi & D. Sanders Development of an innovative seismic damper for large-scale bridges and sub-structured hybrid earthquake loading tests H. Iemura, A. Igarashi & A. Toyooka

Scientific Program

Tuesday Afternoon (TuA), July 15, 2008

Tuesday Afternoon (TuA), July 15, 2008

13:00 - 14:00 Lunch Break

14:00 - 16:00 Concurrent Technical Sessions: TuA-1 to TuA-8

TuA-1, Vista Hall 1	TuA-2, Vista Hall 2	TuA-3, Vista Hall 3	TuA-4, Cosmos	TuA-5, Art Hall	TuA-6, Presidio 1	TuA-7, Presidio 2	TuA-8, Calla
Bridge codes (1) Chairs: Carlos Jurado Sung-Kon Kim Distribution of demand in single-column-bent viaducts with irregular configuration in longitudinal direction <i>R. Aburi & S. Madak</i> Effective length factor of X-bracing system <i>J. Moon, H.-E. Lee & K.-Y. Yoon</i> Monitoring system of suspension bridges and the utilization of recorded data <i>C. Kawatah, S. Kawahara, S. Fukunaga & K. Endo</i> Reliability analysis of composite girder under positive and negative flexure designed by LRFD method <i>D.K. Shin, J.S. Roh & E.Y. Cho</i> Flexural design of prestressed high-strength concrete girders <i>W. Choi, H.C. Meral, S. Riekkalla, P. Zia & A. Mirman</i> Strength prediction on the stiffened plates in compression <i>Y.B. Kwom, D.W. Kang, B.H. Choi & T.Y. Yoon</i> Strength of fillet welded splices of S1M70-TMC, extra thick plates <i>J.B. Jo & J.W. Kim</i>	Mini-Symposium Research & applications for bridge health monitoring (1) Chairs: Necati Catbas Joan Ramón Casas Residual structural performance of corroded steel tubes submerged in seawater <i>K. Sugitara, E. Watanabe, K. Nagata & I Tamura</i> Modal flexibility and curvature for damage assessment: Laboratory demonstrations <i>M. Gal & F.N. Curbas</i> Benchmark studies for structural health monitoring using computer vision <i>R. Zaurin & F.N. Curbas</i> Field monitoring of continuous steel-concrete composite girder during internal force adjustment of the Suan Bridge <i>W. Lu & D.M. Frangopol</i> Application of GPS monitoring technology to the construction of the pylon <i>J.S. Lee & J.G. Yoon</i> Bridge fatigue reliability assessment and prediction <i>K. Kwom & D.M. Frangopol</i> Eigenfrequency estimation for bridges using the response of a passing vehicle with excitation system <i>Y. Oshima, Y. Kobayashi, T. Yamaguchi & K. Sugitara</i>	Mini-Symposium Integrating health monitoring and lifecycle management of bridge and highways (5) Chairs: A. Erim Aktan Hyun-Moo Koh Bridge management system for national highway network in Korea <i>H.Y. Kim</i> Autonomous bridge inspection and monitoring based on the robotic systems <i>J.S. Lee, S. Kim, I.Hwang & J.F. Choo</i> Development of inspection robot to PSC box bridge using digital image processing <i>J. Kim, B. Lee, D. Park, J. Shin & C. Park</i> Quantification models of bridge condition and performance affected by temperature <i>K.-J. Lee, S.-H. Park, J.-S. Kong, K.-H. Park & C.-H. Park</i> Structural behaviors of Seohae Cable-stayed Bridge affected by temperature <i>S.G. Kang, J.B. Kwom, J.K. Lee & G.H. Lee</i> Influences of diffusion coefficient and verification of validity on prediction of chloride induced deterioration of concrete bridges <i>H. Tsunoda, H. Furuta, I. Inaki, A. Kamitarako, M. Soma & M. Suzuki</i>	Damage assessment (2) Chairs: Salvatore Russo Dong-Ho Choi Gi-Lu Cable Stayed Bridge - from earthquake damage to full recovery <i>Z.K. Lee, K.C. Chang, C.C. Chen & C.C. Chou</i> Stress monitoring of steel girder bridges with different boundary conditions <i>N. Nakatani, M. Kano, K. Tani, N. Tanaka, T. Tsuji, H. Hattori & M. Kawatani</i> Evaluation of compressive stiffness of elastomeric bearings <i>H.L. Yoon, Y.J. Kim, C.B. Cho & J.I. Kwak</i> Effect of soil-bridge interaction and continuity on live load distribution in integral bridges <i>M. Dileli & S. Erhan</i> Application of the analytic hierarchy process in performance evaluation of existing concrete cable-stayed bridge <i>Q. Li, D. Shan & W. Yan</i> Analysis of box girder bridges using finite elements and AASHTO-LRFD <i>R.R. Doerfer & R.A. Hindi</i> Self-adapting models of bridge degradation <i>J. Ben & A. Banakiewicz</i>	Life cycle costing (2) Chairs: Yoro Fujino Hyo-Nam Cho Probabilistic cost model for bridge integrated project delivery and management <i>M.G. Huang, B.G. Kim, S.H. Lee & J.H. Park</i> Reliability analysis for bridge piles <i>A.S. Nowak, M. Kozicki, T. Litomirski & J. Larsen</i> Influence of chloride ion diffusion coefficient on the service life of concrete structures subjected to coastal environment <i>J.I. Park, S. H. Bae, K.G. Yu, K.M. Lee, H.Y. Shin & D.O. Kang</i> Damage to structures due to increasing traffic numbers related to service life predictions <i>A. de Beer & B.(M.H.) Djorja</i> Optimal design of cable-stayed bridges based on minimum life-cycle cost <i>S.-H. Han & A. H.S. Ang</i> Design planning decision for deteriorating wearing surfaces based on whole-life design considering life-cycle cost <i>J.X. Peng, X.D. Shao & M.G. Stewart</i> Optimal seismic design of cable-stayed bridges based on LCC concept <i>D. Halim, H.-M. Koh, W. Park, K.-S. Park & S.-Y. Oh</i>	Special Session Life-cycle structural engineering Chairs: Fabio Biondini Sofia Diniz Structural geometry effects on the life-cycle performance of concrete bridge structures in aggressive environments <i>F. Biondini, D.M. Frangopol & P.G. Malerba</i> FRP reinforced concrete: Reliability assessment for life-cycle analysis <i>S.M.C. Diniz</i> Seismic performance upgrading of existing bridge structures <i>G. Furlanetto, L. Ferrari Torricelli & A. Marchionelli</i> Estimation of fatigue life for suspension bridge hangers under wind action and train transit <i>F. Perrini, F. Giuliano & F. Bottampai</i> Life-cycle bridge management considering member interference <i>K.-H. Park, S.-Y. Lee & J.-S. Kong</i> Bridge maintenance strategy based on life-cycle cost and rebuild cost stabilization <i>A. Miyamoto & J. Ishida</i> Damage modeling and life-cycle reliability analysis of aging bridges <i>F. Biondini, D.M. Frangopol & E. Garavaglia</i>	Special Session Practical applications of SHM techniques for railway systems Chairs: Jeong-Tae Kim Nam-Sik Kim Active piezoelectric sensor nodes and sensor self-diagnosis for structural health monitoring <i>S. Park, C.B. Yim, G. Park & D.J. Inman</i> Structural monitoring of a maglev guideway with wavelength division multiplexed FBG sensors <i>W. Chung, D. Kang, I. Yeo & J.S. Lee</i> Modal parameter extraction of high-speed railway bridge using TOD technique <i>B.H. Kim, J.-W. Lee & T.-Y. Yoon</i> Real-time damage detection of railroad bridges using acceleration-based ANN algorithms <i>J.T. Kim, J.H. Park, D.S. Hong & J.H. Yi</i> Evaluation of modal parameters of a full scaled prestressed concrete beams for railway bridges <i>S.I. Kim & N.S. Kim</i> Practical acceleration reducing method in high-speed railway bridges <i>W.J. Chin, J.W. Kwark, J.R. Cho, E.S. Choi & B.S. Kim</i>	Mini-Symposium Sustainable bridges (1) Chairs: Lennart Elfgren Björn Täljsten Test of a concrete bridge in Sweden - I. Assessment methods <i>A. Paunila, O. Enochsson, H. Thun, B. Täljsten, L. Elfgren, J. Olfjesson & B. Paulsson</i> Test of a concrete bridge in Sweden - II. FRP Strengthening and Structural Health Monitoring <i>H. Nordin, O. Enochsson & L. Elfgren</i> Test of a concrete bridge in Sweden - III. Ultimate Capacity <i>O. Enochsson, A. Paunila, H. Thun, L. Elfgren, B. Täljsten, J. Olfjesson & B. Paulsson</i> Test to failure of a railway reinforced concrete through bridge in Ornskoldsvik Sweden - IV. Evaluation of damage detection methods <i>P.-J.S. Cruz & R. Salgado</i> Field test - strengthening and monitoring of the Fröv Bridge <i>A. Kernerke, W.J.O. Boyle, Y. Gebremichael, L. Alwis, K.T.Y. Grattan, B. Täljsten & A. Bernitz</i> Complex multi-tool inspection of masonry arch bridge using non-destructive testing <i>C. Treha, J. Ben & G. Bernadini</i>

Scientific Program

Tuesday Evening (Tue), July 15, 2008

Tuesday Evening (Tue), July 15, 2008

16:00 - 16:30 Coffee Break

16:30 - 18:30 Concurrent Technical Sessions: TuE-1 to TuE-9

TuE-1, Vista Hall 1	TuE-2, Vista Hall 2	TuE-3, Vista Hall 3	TuE-4, Cosmos	TuE-5, Art Hall	TuE-6, Presidio 1	TuE-7, Presidio 2	TuE-8, Calla	TuE-9, Pine
<p>Bridge codes (2)</p> <p>Chairs: Emin Aktan Dong-Ku Shin</p> <p>Safety of ductility demand based seismic design for bridge columns J.-H. Lee, J.-H. Choi, J.-K. Hwang & H.-S. Son</p> <p>An experimental investigation of the ultimate flexural behavior of steel tub girders with top lateral bracing B.H. Choi, T.Y. Yoon & Y.S. Park</p> <p>Reliability based calibration of limit state bridge design code with material land member resistance factors I.Y. Paik & D.J. Bang</p> <p>Bridge E-8 in the new railroad of high velocity to the northwest of Spain C. Jurado</p> <p>A simple iterative method for determining the effective length of structural members in steel cable-stayed bridges D.-H. Choi, H. You, D.-S. Lee & Y.-S. Kim</p> <p>The influence of friction/sliding behavior of rubber bearing to the seismic performance of highway bridges K.Y. Liu, K.-C. Chang, W.J. Chen & J.S. Hwang</p> <p>Ultimate flexural strength of hybrid composite girders at sagging bending S.G. Youn, Y.T. Kim & D.B. Bae</p>	<p>Mini-Symposium Research & applications for bridge health monitoring (2)</p> <p>Chairs: Hitoshi Furuta Ahmet Turer</p> <p>Monitoring and inspection of a 30 years old prestressed concrete bridge M. Pimentel, J. Santos, J.R. Casas & J. Figueiras</p> <p>Boundary condition parameter estimation for structural identification Y. Derve & F.N. Catbas</p> <p>Long-term monitoring of stochastic characteristics of a full-scale suspension bridge H.-B. Yun, S.F. Masri, R.D. Nayeri, F. Taabtgoo, E. Kallinikidou, M. Wabbeh, R.W. Wolfe & L.-H. Sheng</p> <p>The need, challenges, and opportunities for research and application of Bridge Health Monitoring, a Turkish Experience A. Turer</p> <p>Systems-based monitoring approaches for improved infrastructure management under uncertainty: novel approach F.N. Catbas & D.M. Frangopol</p>	<p>Mini-Symposium Monitoring and assessment of bridges using novel techniques (1)</p> <p>Chairs: Drahomir Novak Miroslav Vorechovsky</p> <p>Wireless sensor networks for model based bridge monitoring S. Deix, M. Raibovskiy & R. Stütz</p> <p>Recent Austrian activities in bridge monitoring R. Geier</p> <p>Computational model updating for bridge maintenance planning S. Deix, M. Raibovskiy & H. Friedl</p> <p>AIFT - user orientated identification for infrastructure theory R. Wendner, S. Hoffmann, A. Strauss & K. Bergmeister</p> <p>AIFT - user orientated identification for infrastructure, application S. Hoffmann, R. Wendner, K. Bergmeister, M. Maunier & W. Steinhauser</p>	<p>Damage assessment (3)</p> <p>Chairs: Peter McCarter Harold Claywegt</p> <p>Nonlinear finite element analysis of precast segmental prestressed concrete bridge piers H.-M. Lee, D.-J. Seong, J.-G. Park, K.-S. Kim, H.-M. Shin, T.-H. Kim, Y.-J. Kim & S.-W. Kim</p> <p>Advanced numerical study of asphaltic surfacings on orthotropic steel deck bridges X. Liu, T.O. Medlam, & A. Scarpas</p> <p>Estimation of damping characteristics for cable using system identification scheme S.-K. Park, K.W. Lyu & H.S. Lee</p> <p>Computational model generation based on 3D CAD digital data of RC bridges J. Lee & M.-S. Kim</p> <p>Artificial intelligence: Historical development and applications in civil engineering field L. Spambi</p> <p>Safety factor prediction for steel cable - stayed bridges by iterative eigenvalue analysis D.-H. Choi, H. You, D.-S. Kim & H.-S. Na</p>	<p>Design and analysis (1)</p> <p>Chairs: Lennart Elfgren Haluk Aktan</p> <p>Stonecutters bridge - design for operation M. Curvez & N. Hussain</p> <p>Strut-and-Tie method for FRP strengthened deep RC members S. Park & R.S. Abouathala</p> <p>Design of the Machang mainbridge E.-H. Bae, S.-Y. Kim, R.-G. Kim, S. Hoppf, A. Pausch & P. Walser</p> <p>Durability of suspension bridge with multi main spans M. Inoue, M. Kudo, K. Doi & Y. Takizawa</p> <p>Effect of main steel corrosion reinforced concrete beams F.J. O'Flaherty, P.S. Mangat, P. Lambert & E.H. Browne</p> <p>Optimum life-cycle-cost design for bridge structures considering damage probability Y.S. Shin, J.H. Park & T.H. Kim</p> <p>The study on the methods for slimming bridge K.H. Kim, C.S. Lee, K.S. Hong & C.-G. Lee</p>	<p>Special Session Practical application of BMS and BMS-DB</p> <p>Chairs: Ayaho Miyamoto Bryan Adley</p> <p>Decision making processes and deterioration models of bridge management systems in Korea B.-G. Kim, J.-N. Park, S.-H. Lee & M.-S. Park</p> <p>J-BMS database system 2007 for management of existing bridges in Yamaguchi prefecture K. Kawamura, A. Miyamoto & J. Ishida</p> <p>Practical application of J-BMS to existing bridges in Yamaguchi Prefecture A. Miyamoto, K. Kawamura & J. Ishida</p> <p>Rational approach for the management of a medium size bridge stock E. Brühwiler</p> <p>Proposal for BMS deterioration curves based on the analysis of Hanshin Expressway inspection data H. Nakajima, T. Yamagami, T. Kagayama, & M. Hayashida</p> <p>Methodology for determination of financial needs of gradually deteriorating bridges B.T. Adley & R. Hajdin</p> <p>The measure towards advanced of Bridge Management System in Japan Expressway/Bridges Y. Wada, S. Sakai, T. Oshiro, A. Homma & N. Ogata</p> <p>Application of Chirabridgemanagementsyste mindivruancy B.F. Yan & X.D. Shao</p>	<p>Special Session Lifetime-perspective design of Kwangyang suspension bridge with main span 1545m</p> <p>Chairs: Soon-Duck Kwon Jaehong Kim</p> <p>The planning and design of the long-span suspension bridge connecting Myodo and Gwangyang in Korea J.-H. Kim, M.-J. Lee, S.-H. Shin & S.-B. Chon</p> <p>Wind resistance design of Kwangyang Bridge S.-D. Kwon, S.-H. Lee, H. Uejima & M.-J. Lee</p> <p>Planning, design and construction of the largest concrete pylon in the world K.-T. Kim H.-S. Lee, W.-S. Jang, S.-B. Oh & K.-T. Kim</p> <p>The design for anchorage of sea-crossing long-span suspension bridge H.-S. Jang, Y.-J. Jang, Y.-S. Choi, K. Park & K.-T. Kim</p> <p>IDC for economical and safe design for the suspension bridge connecting Myodo and Gwangyang H. Kim & Y. Yamasaki</p> <p>The innovative construction method for the long-span suspension bridge connecting Myodo and Gwangyang in Korea S.-H. Shin, P.-J. Yu, S.-W. Jeong & Y. Takizawa</p> <p>The planning of ship collision protections based on risk analysis H.-C. Kwon, M.-J. Lee, J.-H. Park & H. Andersen</p> <p>Measurement and evaluation of data from wind observation station in Gwangyang S.-L. Lee, G.-M. Han, Y.-S. Gwon & Y.-G. Bae</p> <p>Vehicle-structure dynamic interaction by displacement constraint equations and stabilized penalty method M.-K. Song & J.-G. Paik</p>	<p>Mini-Symposium Sustainable bridges (2)</p> <p>Chairs: Paulo Cruz Jan Blen</p> <p>Assessment of a railway concrete arch bridge by numerical modelling and measurements G. He, Z. Zou, O. Enochsson, A. Benitez, L. Elfgren, A. Kronborg, B. Thyra & B. Paulsson</p> <p>Assessment and monitoring of an old railway steel truss bridge in northern Sweden O. Enochsson, L. Elfgren, A. Kronborg & B. Paulsson</p> <p>Evaluation of corrosion situation on reinforced concrete by portable electrochemical technique R. Bülter, B. Andreas & T. Fröhlich</p> <p>Railway bridge loaded to failure test in Ömsköldsvik, Sweden - strain measurement using fiber bragg grating system incorporated in Carbon fibre reinforced polymer A. Kerrouche, J. Leighton & W.J.O. Boyle</p> <p>Single and multiple crack monitoring in concrete bridges P.L.S. Cruz, A. Diaz de León & C.K.Y. Leung</p>	<p>Special Session Fiber reinforced composites in bridges</p> <p>Chairs: Dolores G. Pulido Kee Jeung Hong</p> <p>On mechanical performance of different type of FRP beams as reinforcement of pedestrian bridge G. Boscato & S. Russo</p> <p>Shaping composite bridges for traffic and the environment R.A. Daniel</p> <p>Composite 'Delta Deck': the promising bridge deck for new and rehabilitated bridges S.W. Lee & K.J. Hong</p> <p>Advanced removable connection for glass fiber reinforced polymer bridges D.-U. Park, K.-J. Hwang & J. Knippers</p> <p>Full pultruded FRP profile structures M.D.G. Pulido</p> <p>A Study on the dynamic behavior of a CFRP cable J. Park & K.J. Hong</p>

Scientific Program

Wednesday Morning (WeM), July 16, 2008

Wednesday Morning (WeM), July 16, 2008

<p>08:30 - 10:00 Keynote Lecture</p>	<p>Chairs: Emin Aktan & Andrzej S. Nowak Sung-Pil Cheng: Overcoming technological challenges to create new values for bridges Yaotun Ge: Bridging capacity innovations on cable-supported bridges Heonsang Koo: Overview of Korean Government's Policy on Maintenance of Road Structures</p>		<p>10:00 - 10:30 Coffee Break</p>	<p>10:30 - 12:30 Concurrent Technical Sessions: WeM1 to WeM9</p>	
<p>WeM-1, Vista Hall 1 Special Session Seismic design and performance issues for highway bridges</p>	<p>Chairs: Murat Dicleli Mehdi Saitidi</p>	<p>Chairs: Ulrike Kuhlmann Sang-Hyo Kim</p>	<p>WeM-2, Vista Hall 2 Innovative construction technology (1)</p>	<p>WeM-3, Vista Hall 3 Mini-Symposium Monitoring and assessment of bridges using novel techniques (2)</p>	<p>WeM-4, Cosmos Mini-Symposium Smart sensing and monitoring technologies for bridge maintenance, safety and management (1)</p>
<p>Retraining structures with a combination of seismic isolation and attenuation <i>A. Cauer, M.J. Abdalrhman, E. Dogan & C. Ozkaya</i></p>	<p>Erection of asymmetric pylon table and geometry control of Machang Cable-stayed Bridge <i>H. Lim, M. Kim & J. Seo</i></p>	<p>Structural health monitoring and passive vibration control of an Austrian road bridge <i>M. Reiterer & L. Pranzner</i></p>	<p>Advances in sensor technologies on Korean Bridges: Field benchmark opportunities <i>J.P. Lynch, J.H. Kim, Y. Zhang, M. Wang, H. Sohn & C.B. Yun</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>Post-earthquake evaluation of reinforced concrete bridge columns <i>A. Vovogghi, M. Santit & S. El-Azay</i></p>	<p>Experimental study on the stability of temporary support for girder construction <i>K. Ohdo, S. Takamasaki & H. Takahashi</i></p>	<p>Stochastic nonlinear finite element analysis of bridges <i>R. Pukl, M. Vorechovsky & D. Novak</i></p>	<p>Test-bed implementation of piezopaint-based acoustic emission sensor for crack initiation monitoring <i>Y. Zhang & X. Li</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>Enhancement of axial ductility of circular concrete bridge columns <i>L.A. Marvel, J.C. West & R.A. Hindi</i></p>	<p>Design of Cheong-Poong (steel-concrete hybrid cable-stayed) bridge <i>D.-H. Yoo, J.-S. Ko & J.-G. Paik</i></p>	<p>Overview of 40 bridge monitoring projects using fiber optic sensors <i>D. Inaudi & B. Glisic</i></p>	<p>Remotely controllable structural health monitoring systems for bridges using 3.5 generation mobile telecommunication technology <i>K.Y. Koo, J.Y. Hong, H.J. Park & C.B. Yun</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>Identification of effective seismic retrofits for common bridge classes on the basis of failure probability <i>J.E. Padgett & R. DeRoches</i></p>	<p>Influence of initial imperfections on stability of temporary support for bridge girder <i>H. Takahashi, K. Ohdo & S. Takamasaki</i></p>	<p>Reliability assessment of an existing bridge using long-term monitoring <i>A. Strauss, D.M. Frangopol & S. Kim</i></p>	<p>Development of experimental benchmark problems for international collaboration in structural response control <i>C.-H. Loh, A.K. Agrawal, J.P. Lynch & J.N. Yang</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>Supplemental device to improve the performance of seismic-isolated bridges in near-fault zones <i>M. Dicleli</i></p>	<p>Analysis for initial equilibrium condition and erection stages of Sorok (Self-Anchored Suspension) Bridge <i>Y. Son, D. Yoo, S. Jeong & T. Yoon</i></p>	<p>Seosang bridge movable scaffolding system <i>A.A. Pothos</i></p>	<p>Baseline knowledge discovery from one-year structural monitoring measurements of Donghal Bridge <i>Z. Sun, Z.H. Min & Z.F. Zhou</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>WeM-5, Art Hall Design and analysis (2)</p>	<p>The construction of Machang Cable-stayed Bridge <i>M. Kim, J. Seo, J. Song & H. Lim</i></p>	<p>Structural system durability through jointless bridge decks <i>U.B. Altunbayrak, A.E. Ulku & H.M. Altun</i></p>	<p>Modal flexibility-based FEM model updating for bridges <i>J. Cui, D. Kim, K.Y. Koo & H.Y. Jung</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>WeM-6, Presidio 1 Repair and strengthening (1)</p>	<p>Behavior under compressive loads of steel structural members repaired by heating and pressing <i>M. Hirohata & Y.-C. Kim</i></p>	<p>Effectiveness of prestressed carbon fibre reinforced polymer (CFRP) sheets for rehabilitation of prestressed concrete girders <i>Y.J. Kim, M.F. Green, C. Shi, J. Ford, L. Bindlavay & R.G. Wright</i></p>	<p>The use of polymer concrete materials for construction, maintenance, rehabilitation and steel orthotropic bridge decks <i>A.M. Dintzis & S. Park</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>WeM-7, Presidio 2 Special Session Bridges for high-speed railways (1)</p>	<p>Dynamic testing and numerical modelling of a typical short span high-speed railway bridge <i>V. Zabel & M. Breilm</i></p>	<p>Fatigue assessment of composite bridges for high speed railway traffic <i>H. Figueiredo, R. Calçada & R. Delgado</i></p>	<p>Experimental modal analysis of a twin composite filler beam railway bridge for high-speed trains with continuous ballast <i>T. Rauer, B. Hoffmeister, R. Cantieni, M. Breilm & V. Zabel</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>WeM-8, Cailla Mini-Symposium Sustainable bridges (3)</p>	<p>Guideline for load and resistance assessment of existing European railway bridges <i>J.S. Jensen, M. Plos, J.R. Casas, C. Crennon, R. Karoumi & C. Melbourne</i></p>	<p>Improved assessment methods for static and fatigue resistance of old metal railway bridges <i>C. Crennon, A. Patern, B. Johansson & T. Larsson</i></p>	<p>Consideration of dynamic traffic action effects on existing bridges at ultimate limit state <i>E. Brihwiler & A. Hervig</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>
<p>WeM-9, Pine Special Session Steel Bridge Rehabilitation</p>	<p>Reframing methods of existing orthotropic steel decks without traffic restriction <i>Y. Takada, Y. Aoki, M. Sakano & Y. Sakai</i></p>	<p>Reinforcing procedure for fatigue damage of stiffener ends in steel bridges <i>T. Kondo, A. Koshihara, M. Sakano, T. Kamizano & H. Namiki</i></p>	<p>Fatigue Test of an Urban Expressway Steel Girder Bridge constructed in 1964 <i>K. Bessho, Y. Nishikawa, Y. Takada & M. Sakano</i></p>	<p>Design of deck continuity details for steel and prestressed concrete bridges <i>A.P. Ranasinghe & W.L. Haugato</i></p>	<p>Reliability-based optimum design of high-speed railway bridges considering structure-rail interaction <i>J.-S. Lee, H.-N. Cho & Y.-R. Kim</i></p>

Wednesday Afternoon (WeA), July 16, 2008

12:30 - 13:30 Lunch Break

13:30 - 15:30 Concurrent Technical Sessions: WeA-1 to WeA-9

WeA-1, Oak	WeA-2, Vista Hall 2	WeA-3, Vista Hall 3	WeA-4, Cosmos	WeA-5, Art Hall	WeA-6, Presidio 1	WeA-7, Presidio 2	WeA-8, Calla	WeA-9, Pine
<p>Special Session Bridge 200 toward durable bridge</p> <p>Chairs: Byung Suk Kim Dong-Ku Shin</p> <p>Research project "Bridge 200" B.S. Kim, S.Y. Kim, K. Cho, J.R. Cho & S.T. Kim</p> <p>Development of FRP bridge decks in Korea K.-T. Park, Y.-H. Lee, J. Jeong & Y.-K. Hwang</p> <p>Development of FRP-concrete composite bridge deck system S.Y. Park & Cho, J.R. Cho, S.T. Kim & B.S. Kim</p> <p>Development of ultra high performance cementitious composites(UHPC) in Korea S.W. Kim, J.J. Park, S.T. Kang, G.S. Ryo & K.T. Koh</p> <p>Flexural strengthening of RC structures with externally unbonded prestressed CFRP plates Y.H. Park, J.S. Park & W.T. Jang</p> <p>Bridge scour countermeasures to minimize bridge failures during floods J. Lee, I. Park, M. Chung & K. Kwak</p>	<p>Mini-Symposium Innovative construction technology (2)</p> <p>Chairs: He-Kyung Kim Antonio Povoas</p> <p>Construction planning and analysis of six continuous extradosed PSC bridge S. Kim, J.W. Seo, Y. Lee & I. Seo</p> <p>Underpass in the street 'O' Dornell in Madrid C. Jurado</p> <p>Construction of P.S.C. Box girder bridge (F.C.M) which pre-compensation method is applied to H. Lee, J.H. Shim, M.K. Min & H.J. Lee</p> <p>Large scale cyclic tests of precast segmental concrete bridge columns with unbonded post-tensioning tendons Y.-C. Oh, G.C. Lee, P.-H. Wang, M.S. Tsai & K.-C. Chang</p> <p>Key-segment closing method using artificial heat for partially earth-anchored cable stayed bridges with classical span length J.H. Won, K.I. Cho, J.H. Yoon & S.H. Kim</p> <p>Highway bridges made of circular hollow sections U. Kuthannam & M. Eider</p> <p>Monitoring of early stage prestress change of long span girder with pretension method K.-Y. Choi, G.-Y. Song, D.-O. Kang & S.-W. Cha</p> <p>Effect of deformation of spans on serviceability of composite highway bridge Z. Manko</p>	<p>Mini-Symposium Monitoring and assessment of bridges using novel techniques (3)</p> <p>Chairs: Radimir Pukl Alfred Strauss</p> <p>Stochastic aging model for infrastructure buildings M. Peuschner</p> <p>Dynamic damage identification of Colle Isarco viaduct D. Leik'y, D. Novak, P. Franatik, A. Strauss & K. Bergmeister</p> <p>Virtual testing of bridges for life cycle reliability assessment R. Pukl, V. Červenka, B. Tepř, y, D. Novak & K. Bergmeister</p> <p>Degradation modelling of bridge components based on cellular automata J. Podrany, M. Chromá & A. Strauss</p> <p>Damage detection by pattern recognition at bridge components H. Wenzel & R. Veit-Egger</p>	<p>Mini-Symposium Smart sensing and monitoring technologies for bridge maintenance, safety and management (2)</p> <p>Chairs: Zhi Sun Jeong-Tae Kim</p> <p>A nonlinear impedance method and its potential application in baseline free crack detection in metallic structures D. Dutta & H. Sohn</p> <p>Structural damage assessment using optical fiber bragg grating vibration sensing system R.J. Sun, Z. Sun & L.M. Sun</p> <p>Fatigue reliability updating through inspections and monitoring data of steel bridges C. Wang, X. Yu, Y. Feng & X. Liu</p> <p>Advanced signal processing for ultrasonic structural monitoring of waveguides M. Cammarata, P. Rizzo, D. Dutta, H. Sohn & K.A. Harries</p> <p>Stochastic subspace identification (SSI) model analysis using wireless data logger system in grand bridge under wind load effect Y.-S. Kim, S.-Y. Park, C.-B. Yun & J.-S. Choi</p> <p>Sequential health monitoring in steel plate-girder bridges by using combined vibration-impedance signatures D.S. Hong, J.H. Park, J.T. Kim & W.B. Na</p>	<p>Design and analysis (3)</p> <p>Chairs: Riyad Aboulaha Doobyoung Bae</p> <p>Optimal design of a steel box girder bridge considering aesthetics Y.S. Shin, J.H. Park & G.O. Kim</p> <p>Complex shapes and innovative technologies for bridges I. Paolotti</p> <p>Reliability-based design optimization using a response surface method S.C. Kang & H.-M. Koh</p> <p>Durability design procedure of concrete structures in marine environment J.S. Kim, K.J. Shim, J.H. Kim, K.M. Lee & S.H. Bae</p> <p>Analysis of static behavior of CFTA girder H. Lee, K.-H. Park & J.-S. Kang</p> <p>Durability analysis of RC bridges using Monte-Carlo simulation W. Raphael, R. Faddoul & J. Hlavayon</p> <p>Bridge-weight-in-motion based on strain measurement of vertical stiffeners E. Yamaguchi, Y. Naitou, K. Masuo, Y. Masuda & S. Kawamura</p>	<p>Repair and strengthening (2)</p> <p>Chairs: B. Tajstien Wojciech Radomski</p> <p>The correlation between crack and residual stress generated by repair welding in service Y.C. Kim, S.H. Lee & Y. Agano</p> <p>Repair of a concrete bridge by composites FRP M. Abdessamed, S. Kenai, A. Kibboua, J.-L. Chatelein, B. Guiller & A. Bali</p> <p>Innovative rehabilitation of a damaged prestressed concrete girder bridge using prestressed FRP sheets: design and specification Y.J. Kim, M.F. Green, G.J. Faldis, R. Eden & R.G. Wight</p> <p>Rehabilitation of bridges with concrete overlays C.A.M. de Smet & J. Kantz</p> <p>Bond and flexural behaviour of RC members strengthened with FRP composites D.S. Yang, J.M. Park, S.N. Hong & S.K. Park</p> <p>Seismic performance improvement of bridges by earthquake protection systems in Korea D.-H. Ha, H.-M. Koh, S.Y. Lee, H.J. Kim & J.I. Kwak</p>	<p>Special Session Bridges for high-speed railways (2)</p> <p>Chairs: Rui Calçada Walter Salvatore</p> <p>A study of the lateral dynamic behaviour of high speed railway viaducts and its effect on vehicle ride comfort and stability R. Dias, J.M. Goicolea, F. Gabaldón, M. Cuadrado, J. Nasarre & P. González</p> <p>Dynamic response of the Cahir Viaduct - an investigation into the derailment of a freight train M. Majka & M. Harmert</p> <p>A comfort limit for evaluating the serviceability due to bridge vibration B.G. Jeon, S.S. Kim & S.I. Kim</p> <p>Vibration control through TMDs in high-speed railway bridges J.F. Henriques & J.M. Proença</p> <p>Development of an efficient finite element model for the dynamic analysis of the train-bridge interaction S. Neves, A. Azevedo & R. Calçada</p>	<p>Mini-Symposium Sustainable bridges (4)</p> <p>Chairs: Jean Ramón Casas Christian Cremona</p> <p>High cycle fatigue strength of brick masonry. A probabilistic approach J.R. Casas</p> <p>Probabilistic models for resistance of European concrete railway bridges J.R. Casas & D.F. Wisniewski</p> <p>Probabilistic models of material properties for design and assessment of concrete bridges D.F. Wisniewski, P.J.S. Cruz, A.A.R. Henriques & R.A.D. Simões</p> <p>Safety assessment of railway bridges by non-linear and probabilistic methods Z. Janda & R. Pukl</p>	<p>Special Session The structural analysis of the Messina Strait Bridge</p> <p>Messina Strait Bridge F. Bontempi</p> <p>Influence of large displacements on the structural stability of cable supported bridges F. Biondini, P. Limonta, P.G. Malerba & R. Sacchi</p> <p>Wind-induced fatigue assessment in main cables and hangers of suspension bridges F. Ubertini & F. Bontempi</p>

Wednesday Evening (WeE), July 16, 2008

15:30 - 15:50 Coffee Break

15:50 - 17:50 Concurrent Technical Sessions: WeE-1, WeE-4 to WeE-9

WeE-1, Oak	WeE-4, Cosmos	WeE-5, Art Hall	WeE-6, Presidio 1	WeE-7, Presidio 2	WeE-8, Calla	WeE-9, Pine
<p>Special Session Assessment and control of bridge vibrations</p> <p>Chairs: Helmut Wenzel Walter Salvatore</p> <p>Detection of bridge damages by recognition of non-linear dynamic effects <i>H. Wenzel</i></p> <p>Experimental dynamic analysis of steel concrete composite railway bridges: the Sesia viaduct on the high speed line <i>Turin-Milano</i> <i>G. Chellini, L. Nardin, W. Salvatore, G. De Rocco, K. Liu, E. Rezniers, B. Peters, M. Tsahuridu & G. Sorrentino</i></p> <p>A novel active mass damper for vibration control of bridges <i>U. Starossek & J. Scheller</i></p> <p>Analysis of fuzzy active control for traffic-induced vibration of highway girder bridge <i>M. Kawatani, Y. Nomura, C.-W. Kim & Y. Otaubo</i></p> <p>Sensitivity-based optimal design of damper connecting system for vibration control of parallel bridges under wind excitations <i>D.-S. Kim, S.-Y. Oh, K.-S. Park, H.-M. Koh & C.-Y. Choi</i></p>	<p>Mini-Symposium Smart sensing and monitoring technologies for bridge maintenance, safety and management (3)</p> <p>Chairs: Hyoung-Jo Jung Jerome P. Lynch</p> <p>Sensing capability of electromagnetic induction system for vibration control of structures <i>H.J. Jung, D.D. Jang, H.J. Lee, S.W. Cho & J.H. Ko</i></p> <p>Piezoelectric sensor system for structural health monitoring <i>B. Kim & Y. Roh</i></p> <p>Smart bearings for structural behavior monitoring <i>F.M. Wagiani, G. Fu, J. Feng, Y. Zhuang & P.-J. Chuan</i></p> <p>Smart structural elements for the condition monitoring of bridge structures <i>D. Zonta, M. Pozzi, H.Y. Wu & D. Inaudi</i></p> <p>Self-sensing and power harvesting carbon nanotube-composites based on piezoelectric polymers <i>K.J. Loh, J. Kim & J.P. Lynch</i></p> <p>Development of an optical fiber corrosion sensors based on light reflection <i>H. Huang & N. Gupta</i></p>	<p>Design and analysis (4)</p> <p>Chairs: Ingrid Paoletti Young Seok Shin</p> <p>System stability design of cable-stayed bridges based on elastic/meleastic system buckling analyses <i>Y.-S. Kyung, J.-S. Lee & M.-Y. Kim</i></p> <p>Experimental research on passive cable dampers' performance <i>S.-S. Ahn, J.-H. Park & S.H. Lee</i></p> <p>Conformity control of concrete based on the "concrete family" concept <i>R. Casprete & L. Taeerwe</i></p> <p>Effective slab width in steel-concrete composite girder bridges <i>D. Bae, S.G. Youm & Y.S. Park</i></p> <p>Preference-based optimal maintenance planning for deteriorating bridges <i>S.Y. Lee, W. Park, H.-M. Koh & H.J. Kim</i></p> <p>Analysis of steel-soil bridge structure made of corrugated plate <i>D. Bebon & Z. Manko</i></p> <p>Introduction of design for concrete filled steel tubular arch girder with external tendons <i>E. Lee, H. Park, M.G. Park, K.H. Park, S.Y. Lee & J.H. Kim</i></p>	<p>Repair and strengthening (3)</p> <p>Chairs: Jimmy Kim Jongsung Sim</p> <p>Application of new prestressing method using carbon fiber plates <i>T. Oshiro, Y. Wada, A. Takeuchi, K. Morikita, H. Yasumori & T. Takehashi</i></p> <p>Experimental study of bolted joint with ultra thick plate and M30 bolt <i>J. Kim, J. Byoum, J.B. Jo & K. Jang</i></p> <p>Monitoring for fatigue crack propagation of steel plate repaired by CFRP strips <i>H. Nakamura, K. Muraoka, H. Suzuki & T. Iribe</i></p> <p>Reevaluation of stresses and displacement of horizontally curved girders of a continuous span bridge <i>D.J. Kim, C.P. Fom & B.T. Yen</i></p> <p>Railroad bridge replacement in the US today: current technology and future possibilities <i>F. Moreu, T. Nagayama, J. Zenati, G. Rus, S.Y. Lee & T. Park</i></p> <p>Assessment of repair cost and service life of repaired concrete structures after chloride attack <i>H.-W. Song, A. Pacharathoo & H.-B. Shim</i></p> <p>Tests on cast iron carried out to repair bearings in Tumski Bridge in Wroclaw (Poland) <i>Z. Manko</i></p>	<p>Special Session Damage assessment of existing bridges</p> <p>Chairs: Seobong Shin Chul-Woo Kim</p> <p>Feasibility investigation of health monitoring from traffic-induced vibration data of bridge <i>M. Kawatani, C.-W. Kim & T. Fujimoto</i></p> <p>Evaluation of load-carrying capacity of the damaged bridge model using the updated FE model <i>D.S. Jang & C.Y. Kim</i></p> <p>Detection of sudden damages of structure by regularized autoregressive model using measured acceleration <i>J. Kang & H.S. Lee</i></p> <p>Regularization of inverse problem for damage detection <i>J. Yoshida, C.W. Kim & M. Kawatani</i></p> <p>Internal damage localization in a thick plate using moving sensing windows <i>Y.H. Kim, H.W. Park, J.W. Whang & H.S. Lee</i></p> <p>Hybrid health monitoring technique for PSC girders using wireless sensing and embedded monitoring algorithm <i>J.H. Park, J.T. Kim, Y.S. Ryu, D. Maccarenas & M.D. Todd</i></p> <p>Localization of damage in a bridge using measured response signals <i>S. Shin & H. Park</i></p>	<p>Special Session Development of the advanced robot systems for bridge inspection and monitoring</p> <p>Chairs: Jong Seok Lee Kye-Young Lim</p> <p>Introduction of the bridge inspection robot development interface (BIRDII) <i>J.S. Lee, J. Hwang, H.S. Lee & S.H. Hong</i></p> <p>Robotic diagnosis system for detection of bridge structures <i>D.-J. Moon, K.-T. Yang, S.-S. Nam & K.-H. Im</i></p> <p>Development of bridge inspection robot system: wall climbing robot and flying robot <i>I.M. Koo, C.M. Lee, S.-H. Whang, D.-H. Kim, M.-S. Kang, K. Cho, W.-H. Son, S. Park, S.K. Park & H.R. Choi</i></p> <p>Bridge inspection robot system with novel image processing <i>J.-K. Oh, A.-Y. Lee, S.M. Oh, Y. Choi, B.-J. Yi, H.W. Yang, J.H. Lee & Y.S. Moon</i></p> <p>Intelligent bridge management system based on the image data from robotic devices <i>S. Kim, J.S. Lee, Y. Choi & Y.S. Moon</i></p> <p>Optimum NDT using infrared thermography for detected concrete <i>G. Zi, J.G. Sim, H. Oh & J. Lee</i></p> <p>A development of repair mechanism and control technologies for bottom part of concrete bridge <i>K.-Y. Lim</i></p>	<p>Special Session Structural health monitoring on cable supported bridges</p> <p>Chairs: ChenMin Park Chul-Young Kim</p> <p>Development of bridge WIM systems without axle detector using artificial neural network <i>M.-S. Park, J. Lee, B.-W. Jo & S. Kim</i></p> <p>Development of local live load truck model for long span bridges based on BWIM data of Seohae cable-stayed bridge <i>M.-S. Park, C.-H. Park & J. Lee</i></p> <p>Long-term structural behaviors of Seohae cable-stayed bridge based on results from SHM and surveys <i>J.C. Park, C.M. Park, M.S. Park, J.K. Lee & B.W. Jo</i></p> <p>Modal parameter extraction of Seohae cable-stayed bridge using TDD technique <i>B.H. Kim, J.C. Park, M.S. Park & I.K. Lee</i></p> <p>Analysis model updating of the Seohae cable-stayed bridge <i>H.K. Kim, S.D. Park, K.T. Kim, W. Park, S.H. Lee, J.F. Cho, J.C. Park & M.S. Park</i></p> <p>Development of prediction method of non-linear observed data from cable-stayed bridge using support vector regression <i>M.-Y. Park, H.-N. Cho, K.-W. Park, J.-C. Park, M.-S. Park & J.-K. Lee</i></p> <p>SHMS and wind engineering on the Busan-Geoje fixed link bridges <i>Y.M. Kim, D.Y. Kim, C.H. Kim, A. Galvani, P.D. Frederiksen & J.E. Andersen</i></p>