

SYMPOSIUM OVERVIEWS

November 4, Wednesday				
16:00 – 19:30	Registration			(Crystal Ballroom)
18:00 – 19:30	Welcoming Reception			(Crystal Ballroom)
November 5, Thursday				
08:00 -	Registration			(Crystal Ballroom)
08:30 – 09:00	Opening Ceremony			(Crystal Ballroom)
09:00 – 09:30	Keynote Lecture 1			(Crystal Ballroom)
09:30 – 10:00	Keynote Lecture 2			(Crystal Ballroom)
10:00 – 10:30	Keynote Lecture 3			(Crystal Ballroom)
10:30 – 10:50	Coffee Break			
Session room	Crystal	Amethyst	Jade	Sapphire
10:50 – 12:20	Session 1 Recent Developments in Buckling Restrained Braces (BRBs)	Session 2 Structural Resilience and Repairability of Damaged Building Structures	Session 3 SMA & Smart Material Device	Session 4 Applications of Steel Components in Bridge Engineering
12:20 – 13:20	Lunch			
13:20 – 15:20	Session 5 Building Frame Analysis	Session 6 Composite and Fire-Resistant Structures	Session 7 Analysis of Bridges	Session 8 Evaluation and Rehabilitation of Bridges
15:20 – 15:40	Coffee Break			
15:40 – 17:40	Session 9 Advanced Steel Application	Session 10 Dynamics and Optimization	Session 11 Advanced Design of Steel and Composite Structures	Session 12 Evaluation of Advanced Steel Structures
18:00 - 20:00	Banquet			(Crystal Ballroom)
November 6, Friday				
08:30 –	Registration			(Crystal Ballroom)
09:00 – 09:30	Keynote Lecture 4			(Crystal Ballroom)
09:30 – 10:00	Keynote Lecture 5			(Crystal Ballroom)
10:00 – 10:20	Coffee Break			
Session room	Crystal	Amethyst	Jade	Sapphire
10:20 – 12:20	Session 13 Cold Formed, Light Gauge and Stainless Steel	Session 14 Seismic Design & Evaluation I	Session 15 Structural Stability	Session 16 Connection I
12:20 – 13:20	Lunch			
13:20 – 14:50	Session 17 Hybrid Structures	Session 18 Modular Composite Construction	Session 19 Steel Bridge Rehabilitation	Session 20 Spatial Structures: Analysis, Design and Construction
14:50 – 15:10	Coffee Break			
15:10 – 17:10	Session 21 Large Span Structures	Session 22 Seismic Design & Evaluation II	Session 23 Fatigue	Session 24 Connection II
November 7, Saturday				
10:00 – 18:00	Cultural Tours			

POSTER

November 5, Thursday

08:00 Registration
 08:30 – 09:00 Opening Ceremony
 Welcoming Address
 LOC Address
 Congratulatory Address

Sang-Seup Kim, Symposium Chair, President of KSSC, Korea
 Kyung-Jae Shin, Chairman of LOC

09:00 – 09:30 Keynote Lecture 1
 Chair: Young-Jong Kang(Korea University, Korea)
Comprehensive Stability Design of Steel Members and Systems via Inelastic Buckling Analysis
 Donald W. White, Georgia Institute of Technology, USA

09:30 – 10:00 Keynote Lecture 2
Future and Opportunity for Steel Technology in Indonesia
 Pantja D. Oetodjo, Institute of Road Engineering/Head of Program and Cooperation Deputy, Indonesia

10:00 – 10:30 Keynote Lecture 3
Seismic Design and Behavior of Steel Structures
 Charles W. Roeder, University of Washington, USA

10:30 – 10:50 Coffee Break

Time	Session 1(Crystal)	Session 2(Amethyist)	Session 3(Jade)	Session 4 (Sapphire)
10:50 – 12:20	Recent Developments in Buckling Restrained Braces (BRBs) Chairs: Oguz C. Celik, Istanbul Tech. Univ., Turkey Kyungkoo Lee, Dankook Univ., Korea	Structural Resilience and Repairability of Damaged Building Structures Chairs: Takumi Ito, Tokyo Univ. of Sci., Japan Tae-Soo Kim, Hanbat Natl. Univ., Korea	SMA & Smart Material Device Chairs: Reginald DesRoches, Georgia Inst. of Tech., USA Eunsoo Choi, Hongik Univ., Korea	Applications of Steel Components in Bridge Engineering Chairs: Yan Xu, Tongji Univ., China Kyung-Sik Kim, Cheongju Univ., Korea
10:50 - 11:03	Comparing Hysteretic Behavior of Buckling Restrained Braces (BRBs) with Bolted and Welded End Connections Kazuhiro Fujishita, Ahmet Bai, Fatih Sutcu, Oguz C. Celik, Toru Takeuchi, Ryota Matsui6, Masao Terashima	Residual Seismic Resistant Performance of Damaged Steel Braced Frames after Inelastic Response Behavior Shoichi Inoue, Takumi Ito, Shoma Sugiyama	Energy Dissipation Capacity of an Unstiffened Extended End-Plate Connection with a SMA Plate Jae-Guen Yang, Jae-Hyeong Lee, Min-Seok Kwak	Structural Analysis of Steel Gateway Switch for Low-Speed Maglev System Feng Ye, GuoFeng Zeng
11:03 - 11:16	Stability Assessment of Buckling-restrained Braces Including Moment Transfer Capacity at Restraint-ends Toru Takeuchi, Ryota Matsui	Repairability and Restoring Force Characteristics of Repaired Steel Member with Local Buckling and Cracks Occurrence Hiroka Munemura, Takumi Ito, Hiromu Fuse, Kenjiro Mori, Changhoon Choi	Seismic Retrofit of Building Frames Using Shape Memory Alloy Rings Jong-Su Jeon, Nan Gao, Reginald DesRoches, Darel E. Hodgson	Experimental Study on the Cable Tension in Consideration of Vibration Absorber Chunxiang Shi
11:16 - 11:29	Hysteretic Behavior of Aluminum Alloy Core Buckling Restrained Braces (BRBs) with Various Material and System Properties Cigdem Avci-Karatas, Oguz C. Celik	Evaluation Method for Structural Repairability of Building Structure Subjected to Seismic Loads Kenjiro Mori, Takumi Ito, Takeshi Matsumoto	Smart Damper Using Pre-Compressed Rubber Springs and Magnetic Friction Eunsoo Choi, Gvuchan Choi, Sol Lee, Yunjaeong Son, Chanyeong Jeon, Kyuho Jeong, Seungmin Gin	Experimental Study of A Precast Barrier Wall System Performance for Bridge Decks Zhangzhen Wei, Zhiqiang Wang, Hongyi Wei, Haixi Jiang, Xingfei Yan
11:29 - 11:42	Parametric Study on Hysteretic Behavior of BRBs with Varying Yielding Core Lengths Muhammed Safer Pandikkadavath, Dipati Ranjan Sahoo	Evaluation of Seismic Rehabilitation Effects and Development of Connection Joint Technique for Horizontally Mixed Structural System Takehiro Takahashi, Takumi Ito, Ryotaro Arai, Changhoon Choi	Cyclic Behavior of Slit Damper Systems with Recentering Shape Memory Alloy (SMA) Bending Bars used for Seismic Restraints Junwon Seo, Youngchan Kim, Jorgwan Hu	Influences of Constructional Deficiencies on Seismic Performance of Bridge Columns Hongliang Duan, Zhiqiang Wang, Hongyi Wei
11:42 - 11:55	Influencing factors analysis of damage concentration effect on buckling-restrained braced frame Yulong Feng, Jing Wu, Shaoping Meng, Zhen Zhou	Repair Process of Damaged Steel Members -Work Time of the Box-Shaped Repair Method ChangHoon Choi, Takumi Ito, Hiroka Munemura, Kenjiro Mori	The Seismic Performance of the Steel Frames Using Smart Bracing Systems Jang Ho Kim, Joo-Woo Kim, Sung Ju Lee, Jae-Guen Yang	Seismic Response Analysis of Self-anchored Suspension Bridge with Multi-tower Wei Xiao, Hongyi Wei, Zhiqiang Wang
11:55 - 12:08		General Description of Structural Resilience and Repairability of Building Structure Which Experienced Seismic Disaster Takumi Ito		Seismic Performance Study of a Cable-Stayed Bridge Model Using Passive Energy Dissipation Devices Yan Xu, Ruitong Wang, Jianzhong Li
11:08 - 12:21		Repair Method and Recovery after Repair Of Damaged Steel Brace Joint Hanako Sato, Takumi Ito, Ryotaro Arai, Changhoon Choi		Research of Transverse Seismic Systems of a Cable-Stayed Bridge by Using Different Dampers Shijie Zeng, Yan Xu
12:20 – 13:20	Lunch			

Time	Session 5 (Crystal)	Session 6 (Amethyst)	Session 7 (Jade)	Session 8 (Sapphire)
13:20 – 15:20	Building Frame Analysis Chairs: Kyoung Sun Moon, Yale Univ., USA Dongkyu Lee, Sejong Univ., Korea Role of P-Delta effect on Performance Based Plastic Design method for Steel Concentric Braced Frames MR. Banihashemi, AR, Goltabar, HF, Tavakoli	Composite and Fire-Resistant Structures Chairs: Jin Zhang, Southeast Univ., China SungMo Choi, Univ. of Seoul, Korea Analytical Study of Large-Diameter Concrete-Filled Tube(CFT) to Improve Shear Strength Expression Eun-Bi Jung, Jung-Han Yoo, Hee-Jin Yeom, Charles W. Roeder, Dawn E. Lehman	Analysis of Bridges Chairs: Jun He, Changsha Univ. of Science and Tech., China WooSeok Kim, Chungnam Natl. Univ., Korea The Analysis of Fatigue Stress Distribution Characteristics of Soldering Hole of Orthotropic Steel Bridge Deck Yongri An, Xian Yang, Lei Liang	Evaluation and Rehabilitation of Bridges Chairs: Toshiaka Yamao, Kumamoto Univ., Japan Young-Jong Kang, Korea Univ., Korea Investigation of Replacing Method a Deteriorated RC Deck of Steel Girder Bridge by an Aluminum Alloy Deck Toshiaka Yamao, Takashi Inoue, Nao Sasaki
13:30 – 13:35	The Influence of Several Design Parameters on the Seismic Response of Multi-Storey Buildings with Self-Centering Energy Dissipative Braces Qin Xie, Zhen Zhou, Shaoping Meng	The Deflection of Preloaded Deep Decks SeungJee Lee, SungHoon Choi, YuRi Ahn, JongWook Song, Jaehwan Kyung, SungMo Choi	Numerical Analysis on the Bending and Torsion Interaction of Ultimate Strength on Horizontally Curved I-Section Beam JeongHyeon Lim, KeeSei Lee, HeeSoo Kim, YoungJong Kang	Condition Assessment of a Steel-box Girder Bridge through Finite Element Model Updating with Effective Parameters Hyun-boong Kim, Do-been Kim, Hyun-Moo Koh
13:50 – 14:05	Effect of Interactive Buckling on Axial Compressive Capacity of Star-Battened Angle Column of High Strength Steel Haifeng Liu, Junke Han, Hu Xiaoguang	New Design Guide on Composite Columns with High Strength Steel and Concrete Du Yong, J.Y. Richard Liew, Mingxiang Xiong	Bucking Behavior of Integral Abutment Steel Girder Bridge during Deck Replacement Jaeha Lee, Yoseok Jeong, WooSeok Kim	Ultimate Strength of Simply Supported Steel I-girders Curved in Plan with Equal End Moments KeeSei Lee, HeeSoo Kim, JungHyun Lim, JeongHwa Lee, YoungJong Kang
14:05 – 14:20	Comparative Evaluation of Steel Structural Systems for Tall Buildings Kyoung Sun Moon	Temperature Field Simulation of Steel Components During Heating and Cooling Stage Ying Hu, Pengfei Zhao, Bo Yang, Shidong Nie, Guoxin Dai	An Analytical Evaluation of Flange Local Buckling for Horizontally Curved I-Girders HeeSoo Kim, KeeSei Lee, JeongHwa Lee, YoungJong Kang	The Distinctive Evaluation of Basler's Theory in Web Post-Buckling YoungJong Kang, Hang Mai, Kunda Chungsil, Dae Hyeok Kim
14:20 – 14:35	The Feasibility Study of Bonded Reinforcement Technology under Theoretical Analysis Yang Yang, Kangmin Lee, Keunyeong Oh, Sungbin Hong, Jaehyuk So	Fire-Resistance Analysis of Restrained Steel Columns with Initial Lateral Displacement Jin Zhang, ZhongLing Zong, YiXiang Xu, XiaoJing Yang, YiWei Bai	Dynamic Characteristic Analysis of Composite Girder with Corrugated Steel Webs Considering Shear Deformation Jun He, Chuanxi Li, Yuqing Liu, Hongli Li	Experimental Study and Finite Element Analysis of the Monolayer Cable Net Gang Shi, Hao Yin
14:35 – 14:50	Through the Finite Element Analysis to Study the Steel Plate Bonded Reinforcement Technology for Column to Beam Frame Structure Yang Yang, Kangmin Lee, Keunyeong Oh, Sungbin Hong, Jaehyuk So	The Temperature Distribution in a Portal Frame Building under Natural Fire Erieng Du, Ganping Shu	Mechanical Performance of Partially Encased Composite I-Girder with Corrugated Steel Web Jun He, Chuanxi Li, Yuqing Liu, Zhan Lv	Bridge Condition Rating: Correlation Results From Updated Indonesian Bridge Inspection Guideline to Instrumented Field Test Henry Vaza, Rullli Ranastra, Gatot Sukmara, Setyo Hardono
14:50 – 15:05	Simplified Algorithms of the High-Rise Building with the Basement Considering the Restraint of the Backfill Soil Foundation Liang Li, Jun-wu Chen, Tian-hua Zhou	The Effect of Thermal Creep on The Behavior of CFT Columns Kuo-Chen Yang, Chien-Yi Wu, Jung-Kuei Peng	Analytical Study on Mechanical Behavior of High Strength Bolted Tensile Joints Hao Xin, Yasuo Suzuki, Kunitomo Sugiura	Predicting Air-Blast Parameters for Blast-Resistant Design Jinwon Shin, Kyungsoo Lee
15:05 – 15:20	Concentric and Eccentric Axial Load Test of Bolt-connected Prefabricated Composite Column Hyeon-Jin Kim, Hyeon-Jong Hwang, Hong-gun Park	Simplified Formula for Evaluating Temperature Distribution of Unprotected Concrete-filled Steel Tubular Columns under Fire Jaekwon Ahn, Cheolho Lee	Mechanical Analysis on Steel-Concrete Joint Segment of Hybrid Pylon Cable-Stayed Bridge Guanghui Zhang, Yuqing Liu, Yongjun Li	Fatigue Damage Assessment of Steel and Steel Fiber Reinforced Concrete Composite Girder Chen Xu, Seiji Fukada, Hiroshi Masuya
15:20 – 15:40	Coffee Break			

Time	Session 9 (Crystal)	Session 10 (Amethyst)	Session 11 (Jade)	Session 12 (Sapphire)
15:40 - 17:40	Advanced Steel Application Chairs: Takashi Hara, <i>Natl. Inst. of Tech., Japan</i> Kangmin Lee, <i>Chungnam Natl. Univ., Korea</i>	Dynamics and Optimization Chairs: Ming Zhang, <i>Southwest Jiaotong Univ., China</i> Moochul Shin, <i>Western New England Univ., USA</i>	Advanced Design of Steel and Composite Structures Chairs: Richard Liew, <i>Natl. Univ. of Singapore, Singapore</i> Wentu Zhang, <i>Northeast Petroleum Univ., China</i>	Evaluation of Advanced Steel Structures Chairs: Woo-Young Jung, <i>Gangneung-Wonju Natl. Univ., Korea</i> Jung-Sik Kong, <i>Korea Univ., Korea</i>
15:40 - 15:55	A Comparative Study on Ductility of RC Frame with Various Steel Brace Kangmin Lee, <i>Sungbin Hong, Keunyeong Oh, Yang Yang</i> Jaehyuk So	Criterion for Judging Seismic Failure of Suspended-dome Based on Strain Energy Density Ming Zhang, <i>Shixuan Tian, Yanxia Huang, Guangchun Zhou</i>	M-V-P Interaction for Design of Steel Member Pratibha Alandkar, <i>Mukund Shiyekar, Sandeep Shiyekar</i>	Numerical Study of Fatigue Behavior of Gouted Connection under Bending Moment in Offshore Wind Turbines Xian Wang, <i>Tao Chen, Qi Zhao, Guokai Yuan, Jinchao Liu</i>
15:55 - 16:10	Failure Mechanism of Single-layer Steel Reticular Domes with Reinforced Concrete Substructure Subjected to Severe Earthquakes Zhiwei Yu, <i>Shuiming Li, Dagang L., Chen Lu</i>	Seismic Performance of Single-Layer Reticulated domes with Friction Pendulum Bearings Dewen Kong, <i>Feng Fan, Xudong Zhi</i>	Steel-Concrete-Steel Sandwich Composite Structures Subject to Extreme Loads J.Y. Richard Liew, <i>Zhenyu Huang, Tongyun Wang</i>	Productive Underground Excavation Support System using Tubular Section S. Jeyarajan
16:10 - 16:25	Displacement Based Fatigue Strength Evaluation for Root Failure in Fillet Weld Joints Kazuo Tateishi, <i>Nachiro Soda, Takeshi Hanji, Masaru Shimizu</i>	Characteristics of Vortices Flow Structure around Large-Span Roofs by PV Technique Huiye Sun, <i>Jihong Ye</i>	A Study on Residual Stress and Ultimate Strength of Steel Columns made of SBHS500 Kiyoshi Ono, <i>Tatsuya Ishikawa, Shota Hashimoto, Seiji Okada</i>	Prediction of Ultimate Strength of Pipe under External Pressure using Finite Element Analysis Jiwoon Yi, <i>Beom-Ho Jin, Soo-Chang Kang, Hyun-Moo Koh</i>
16:25 - 16:40	Fatigue Strength of Welded Joint with adjacent Attachments Shunsuke Kase, <i>Kazuo Tateishi, Takeshi Hanji, Masaru Shimizu</i>	Optimal Parameters of a Novel Frictional Pendulum Tuned Mass Damper Sung Yong Kim, <i>Cheol-Ho Lee</i>	Orthotropic Steel Deck: Design, Code Provisions and Recent Innovations Pipinato Alessio	Reliability-Based Evaluation of Indonesian Bridge Loading Code using Statistical Data of Weight-in-Motion (WIM) Vehicular Load Measurement in Cikampek-Palimanan Highway (North Java Highway), West Java Widi Nugraha, <i>Setyo Hardono</i>
16:40 - 16:55	Application of Steel Sheet to the Scaffold Elements Takashi Hara	Study of Shape Memory Alloy Servo-Biomimetic Actuators Jose Flofrio, <i>Nasir G. Hairri, Moochul Shin</i>	An Experimental Study for Joint Performance of Steel I-girders to Inverted-T Bent Cap under Fatigue Test ZinGon Ko, <i>Heeyoung Lee, Woosung Bin, WonSeok Chung, Zuog An</i>	A Study on Examination Wind Turbine Tower Design Criteria Development of South Korea Sung Yong Kang, <i>Kei Sei Lee, Jung Hwa Lee, Young Jong Kang</i>
16:55 - 17:10	An Estimation Method for Weld Crack Initiation in Weld Repair under Cyclic Loading Takeshi Hanji, <i>Yoshio Hasegawa, Kazuo Tateishi, Masaru Shimizu</i>	Some Applications of 2D and 3D Multidisciplinary Portable Topology Optimization Design Yusuf Khusainov, <i>Lee Dong Kyu, Doan Quoc Hoan</i>	Material Properties and Partial Factors for Resistance of Chinese High-Strength Structural Xi Zhu, <i>Gang Shi</i>	Effect of the Buoyancy Induced by Big Progressive Wave upon the Offshore Deck Ho-Seong Mha, <i>Jeong-Hun Won, Hwa-Jin Yim, Hyo Sang Cho, Kwang-Hi Cho, Ji-Hye Yoon</i>
17:10 - 17:25	Value of Results Obtained by Charpy Impact Test with Sub- and Half-size Specimens Mikihito Hirohata, <i>Kyong-Ho Chang, You-Chul Kim</i>	Use of Arched Trusses in Structural Design for Roof of Sports Facilities Kwangyang Chung, <i>Sungchul Chung</i>	Spacing of Intermediate Solid Diaphragms for Single-Span Horizontally Curved Steel Box Girder Bridges considering Bending-Distortional Stress Ratio Jeonghwa Lee, <i>KeiSei Lee, Jeonghyeon Lim, YoungJong Kang</i>	A Reconciliation of Experimental and Analytical Results for Piping Systems YongHee Ryu, <i>Abhinav Gupta, WooYoung Jung, BuSeog Ju</i>
17:25 - 17:40	Seismic Repair to Steel Beams with Strength Degradation due to the Local Buckling Yusuke Iwasaki, <i>Shoichi Kishiki</i>	Energy Variational Model and its Analytical solutions for the Elastic Flexural-torsional Buckling of I-Beams with Concrete-filled Steel Tubular Flang Wen-Fu Zhang	Developing Seismic Fragility Model of Buried Pipelines in the Domestic Urban and Application to GIS JinHyuk Lee, <i>Kyungwha Cha, Sangguen Song, Jungsik Kong</i>	
18:00 - 20:00	Banquet			

November 6, Friday

08:30 – Registration

09:00 – 09:30 Keynote Lecture 4

09:30 – 10:00 Keynote Lecture 5

Chair: Jaehong Lee, Sejong University, Korea
Supertall compact city Abeno Harukas
Kiyooki Hirakawa, Takenaka Corporation, Japan
A Historical Perspective and Recent Advances in U.S. Bridge Design Codes related to Curvature Effects on Steel Bridge Superstructures
James S. Davidson, Auburn University, USA

10:00 – 10:20 Coffee Break

Time	Session 13 (Crystal)	Session 14 (Amethyst)	Session 15 (Jade)	Session 16 (Sapphire)
10:20 – 12:20	Cold Formed, Light Gauge and Stainless Steel Chairs: Ramasamy Kandasamy, Anujitiga Palaniandavar Polytechnic College, India Pedro Vellasco, State Univ. of Rio de Janeiro - UERJ, Brazil Approaches for the material properties of cold formed RHS Carlos López-Colina, Miguel A. Serrano, Miguel Lozano, Fernando L. Gayarre	Seismic Design & Evaluation I Chairs: Chun-Lin Wang, Southeast Univ., China Sang Whan Han, Hanyang Univ., Korea Effect Of Brace Angle In Seismic Performance Of Diagrid Structure YongJae Lee, Young K Ju, InYong Jeong	Structural Stability Chairs: Rui Cheng, Chongqing Univ., China Jongsup Park, Sangmyung Univ., Korea Elastic Flange Local Buckling of I-shaped Welded Beams KyuHong Han and CheolHo Lee	Connection I Chairs: Miguel Serrano, Univ. of Oviedo, Spain Hayato Asada, Kobe Univ., Japan Experimental Study of the Eccentric Imperfect Configurations on the Bearing Capacity of Gouted Connection Qi Zhao1, Tao Chen, Xian Wang, Guokai Yuan, Jinchao Liu
10:20 - 10:35	Hysteretic Model of Cold-Formed Steel Shear Wall Based on Pivot Model Xingxing Wang, Jihong Ye	A Semi-analytical Method for Designing Anchor Bolts of Structures under Seismic Load KabSoo Lee, SoonBum Kiwon, YoungDoo Kiwon	Analytical Investigation and Design of Compressive Strength of Angles Built-Up Crisscross Section Members without Fillers Rui Cheng, Yang Chen, Xiaoli Yuan	RCS Joints with Simplified Connection Details HoJun Lee, HongGun Park, ChangSoo Kim, HyeonJong Hwang
10:35- 10:50	Experimental Studies of the Flexural Performance of Lipped Channel Beams (Light Gauge) Under Restrained Boundary Conditions R.Kandasamy, R.Thennmozhi, L.S.Jayagopal Experimental Investigation of the Influence Moment Gradient Factors on Flexural Behaviour of Lipped Channel Beams (Light Gauge) under Restrained Boundary Conditions R.Kandasamy, R.Thennmozhi, L.S.Jayagopal	Cyclic Behavior of WUF-W Connections according to Access Hole Slopes Sang Whan Han, Sunwook Cho, Sung-Jin Ha	A Study on the Inelastic Buckling Capacity of Stepped I-Beams Having Compact and Non-Compact Flanges Considering the Effects of Load-Height Using Finite Element Analysis Albert Surla, Jong Sup Park, Lay Allen Nicolas, Hannah Reyno	Behavior and Strength of High-Strength Circular Hollow Section Connections Dong-Hyun Chung, Cheol-Ho Lee, Dae-Kyung Kim
10:50 - 11:05	An Evaluation of Ferritic Stainless Steel Elements with Staggered Bolts Tension Capacity João Santos, Sebastião Andrade, Pedro Vellasco, Luciano Lima	Seismic Performance Evaluation of Concentrically Braced Steel Frames Charles W. Roeder, Dawn E. Lehman, Jeffrey W. Berman, Andrew D. Sen	Lateral-torsional Buckling Analysis of Cantilever Beam with Tip Lateral Elastic Brace under Uniform Load Ying-Chun Liu, Wen-Fu Zhang, Wen-yan Zhao, Wen-feng Leng, Jing Ji	Numerical Simulation of Welded Joints with Rectangular Hollow Sections Serrano-López Miguel, López-Colina Carlos, González Jorge, López-Gayarre Fernando
11:05 - 11:20	Numerical Modelling of Casted Duplex Stainless Steel Beams Isabella Gueiros, Luciano Lima, Pedro Vellasco, André Silva	Analytical Study on Low Cycle Fatigue of Shear Panel in Multiple Steel Columns Masaru Shimizu, Kazuo Tateishi, Takeshi Hanji, Riku Adachi	A Study on the Buckling Strength of Cylindrical Shells with Initial Imperfection Subjected to Bending Min-Seo Jang, Jeong-Hyeon Lim, Mai Thi Hang, YoungJong Kang	Local Web Buckling Performance of Steel Beams with Double-Coped End Connections Cheng Fang, Michael C.H. Yam, Angus C.C. Lam, Yunhao Liu
11:20 - 11:35	Investigation on the Calculation Methods of Stainless Steel Beam Deflection Baofeng Zheng, Yongquan Zhang, Kui Zhang, Ruihua Lu, Ganping Shu	Numerical Investigations on Eccentrically Braced Frames with a New Type of Link Rui-Yao Wu, Chun-Lin Wang, Xun Sun	Shear Characteristics of Perforated Hollow Rectangular Lean Duplex Stainless Steel (LDSS) Beam- A Finite Element Study Sonu J.K., Konjengbam Darunkumar Singh	Experimental Study on Beam-to-Column Connections with Cast Steel Connectors for Seismic Usage YingZhi Chen, LeWei Tong, YiYi Chen
11:35 - 11:50	Stress-Strain Models for Stainless Steel Morgan Dundu, Pierre van Tonder	Seismic Collapse Analysis of Steel Moment-Resisting Frames with Hysteretic Energy Dissipating Devices Considering Probabilistic Uncertainty-Propagations Hyoung-oon Kim, Dong-Hyeon Shin	Structural Behaviour of Fixed Ended LDSS Flat Oval Slender Columns under Pure Axial Compression Khwairakpam Sachidenanda, Konjengbam Darunkumar Singh	Prediction of Hysteretic Response of Group-Bolted Connections Subjected to Cyclic Eccentric Shear Loading DaeKyung Kim, CheolHo Lee, SeungPyo Jin
11:50 - 12:05	Experimental Investigation of Beam-to-Column Using SHN490 Steel under Cyclic Loading SoYeong Kim, JiMin Kang, HeeDu Lee, KyungJae Shin	Nonlinear Buckling and Postbuckling of Curved Beams using Isogeometric Analysis Anh-Tuan Luu, Thao-An Huynh, Jaehong Lee	Nonlinear Buckling and Postbuckling of Curved Beams using Isogeometric Analysis Anh-Tuan Luu, Thao-An Huynh, Jaehong Lee	Experimental Evaluation of Force Transfer between Embedded Column Base and Concrete Foundation on Interior Column Hayato Asada, Tsuyoshi Tanaka, Yasuaki Tomitani
12:00 - 13:20	Lunch	Lunch	Lunch	Lunch

Time	Session 17 (Crystal)	Session 18 (Amethyst)	Session 19 (Jade)	Session 20 (Sapphire)
13:20 - 14:50	Hybrid Structures Chairs: Hetao Hou, Shandong Univ., China Young-Kyu Ju, Korea Univ., Korea	Modular Composite Construction Chairs: Amit Varma, Purdue Univ., USA Byong-jeong Choi, Kyonggi Univ., Korea	Steel Bridge Rehabilitation Chairs: Masahiro Sakano, Kansai Univ., Japan Kab-Soo Kyung, KMLU, Korea	Spatial Structures: Analysis, Design and Construction Chairs: JinYu Lu, Southeast Univ., China Jaehong Lee, Sejong Univ., Korea
13:20 - 13:33	Innovative Shape Memory Alloy Ring Spring Systems for Steel Connections Cheng Fang, Wei Wang, Michael Yam	Finite Element Analysis of Deformed Rebar Anchorage Kai Zhang, Bernd Laskewitz	Fatigue Behaviour of Lower-Welded-Type Web Penetration Details with a Slit in Steel Girder Masahiro Sakano, Naoto Yoshida, Hideyuki Konishi, Takashi Fujii	Dynamic Response Analysis of a Novel Cable-Strut Tensile Dome Due to Cable Rupture Jinyu Lu, Xiao Dong, XiLeiZhao, Xiaolong Wu, Yiyi Zhou
13:33 - 13:46	The Stiffness of BRB Joint Zone in Concrete Frame Research and Software Application Liang Chen, Wenhan Yin, Yanbo Wang, Xiaoxuan Zhang	Lateral Load Capacity of Steel-Plate Composite (SC) Core Wall Structures Peter Booth, Amit Varma, Jungil Seo, Efa Kurt	Effects of Plate Thickness and Weld Toe Grinding on Low-Cycle Fatigue Strength of Cruciform Welded Joints Koji Kinoshita, Kyojiro Ueda	Scale Model Test Research of Radial Retractable Steel Roof Structure JinYu Lu, Jie Liao, GanPing Shu, Tao Zhang
13:46 - 13:59	Seismic Behavior of Blind Bolted CFST Frames with Steel Plate Shear Walls Jingfeng Wang, Beibei Li	An Analytical Study on the Connection of an SC wall to RC Foundation Samak Epachachi, Andrew S. Whitaker, Amit H. Varma	Reinforcement Effect in Orthotropic Steel Deck Bridge with Open Ribs According to Thickness Increases of Steel Deck KabSoo Kyung, SeongJin Ryu, SungJin Lee, JinEun Park	Topology-Finding of Tensegrity Structures Based on Ground Structure Method Xian Xu, Yafeng Wang, Yaozhi Luo
13:59 - 14:12	Seismic Retrofit of Steel Concentrically Braced Frames in Near-Fault Region through Implementation of Rocking Cores Bing Ou, Francisco Sanchez-Zamora, Michael Pollino, Hetao Hou	A Simplified Model for Ultimate Shear Strength of Steel-Concrete Composite Sandwich Beams Under Out-of-Plane Loading Meng Chu, Xiaobing Song, Honghui Ge	Re-welding Method for Retrofitting Fatigue Cracked Weld between Orthotropic Steel Deck and Ribs under the Traffic Service Yoriko Kawakami, Yoshihiko Takada, Masahiro Sakano	Seismic Progressive Collapse of Single-Layer Reticulated Domes based on the Finite Particle Method Ying Yu, Lin Jin
14:12 - 14:25	Seismic Performance of Steel Beam-through Frames with Self-centering Module Panels Wei Wang, Chao Zou, Yunfeng Zhang, Yiyi Chen	The Distribution of Tensile Strength Between Studs and Tie Bars Installed Alternately for Modular Composite Structures Subjected to Tensile Load Byong J Choi, H.Y. Park, Jongbo Lee, Wonki Kim	Stress Measurements on Transverse Beams and Longitudinal Beams End of the Yodogawa Bridge Luiza Hiroko Ichinose, Yoshihiro Natsuaki, Kanshirou Masuda, Masahiro Sakano	Hanging Fabric Based Form Finding Methods for Free-Form Surface Space Structures: Reverse Realization and Numerical Simulation Na Li, Wei Zong, Yue Wang, XiuZhen Zhou
14:25 - 14:38	Bending Test of Precast Concrete Composite Slab with Corrugated Steel Web Hetao Hou, Su Ma, Bing Ou, Mingyuan Feng	Long-term measurement of thermal stress in steel plate strengthened by CFRP plates Toshiyuki Ishikawa, Hiroataka Kawano, Takashi Nagao, Akira Kobayashi	Experiment Study on the Steel Plate Shear Wall with Unequal Length Slits Jinyu Lu, Xuodong Qiao, XiLei Zhao, Ganping Shu, Yi Tang	Experiment Study on the Steel Plate Shear Wall with Unequal Length Slits Jinyu Lu, Xuodong Qiao, XiLei Zhao, Ganping Shu, Yi Tang
14:38 - 14:51	Flexural Experiment and Parametric Study on Steel-Concrete Composite Beam Comprising Precast Composite Slabs Hetao Hou, Xiang Liu, Mingyuan Feng, Lu Geng, Haining Liu	Extending Fatigue Life of Out-of-Plane Gusset Joint by Bonding CFRP Plate under Bending Moment Risa Matsumoto, Toshiyuki Ishikawa, Manabu Takemura, Yoshisato Hiratsuka, Hiroataka Kawano	Investigation on impact damage induced denting for Aluminum Utility Poles Jun Xia, Kevin R. Mackie	Investigation on impact damage induced denting for Aluminum Utility Poles Jun Xia, Kevin R. Mackie
14:50 - 15:10	Coffee Break			

Time	Session 21 (Crystal)	Session 22 (Amethyst)	Session 23 (Jade)	Session 24 (Sapphire)
15:10 - 17:10	Large Span Structures Chairs: Langhui Guo, Harbin Inst. of Tech., China Kyung-Jae Shin, Kyungpook Natl. Univ., Korea Experimental Study of Semi-Rigid Composite Joints under Bending Moment Combined with Tension Shan Gao, Lanhui Guo	Seismic Design & Evaluation II Chairs: Gang Shi, Tsinghua Univ., China Changsu Shim, Chung-Ang Univ., Korea Evaluation of Seismic Capacity Assessment of Tubular Bridge Piers according to bracing details DongWook Kim, ChiHo Jeon, ChangSu Shim	Fatigue Chairs: Tao Chen, Tongji Univ., China Chin-Hyung Lee, Chung-Ang Univ., Korea Fatigue Life Prediction for Cracked Steel Plates repaired with CFRP Mamiko Hattori, Takeshi Hanji, Kazuo Tateishi, Masaru Shimizu, Kenyu Ushida	Connection II Chairs: Satoshi Yamada, Tokyo Inst. of Tech., Japan Taejin Kim, Chang Minwoo Structural Consultants, Korea Structural Behavior of Semi-rigid Pile-Head Connection Using Cast Steel Keita Kozaki, Shoichi Kishiki, Naoya Wakita
15:10 - 15:25				
15:25 - 15:40	Out-of-Plane Creep Buckling Analysis on CFST ARCHES Yue Geng, Yuyin Wang, Yao Ding	Buckling Strength of Cylindrical Steel Tanks under Earthquake Excitation Chang Kook Oh, Doobyong Bae	Effects of Residual Stresses on The Ratcheting Behavior of a Girth-Welded Stainless Steel Pipe Chin-Hyung Lee, Kyong-Ho Chang, Tae-Hwan Um, Wan-Gon Bae, Jung-Min Shin, Nam-Hyun Cho	Plastic Deformation Capacity of WBFW Type Beam-to-column Connection Ryota Sato, Shoichi Kishiki, Satoshi Yamada, DongSeok Lee
15:40 - 15:55	In-Plane Strength and Design of Fixed Concrete-Filled Steel Tubular Parabolic Arches Changyong Liu, Yuyin Wang, Sumei Zhang	The Natural Frequency Analysis of Wind Turbine Tower considering Effect of Soil-Pile Interaction Pyoung-Hwa Kim, Hee-Soo Kim, YunWoo Lee, YoungJong Kang	Buckling Behavior Accompanied with Crack Generation in Steel Pipe Member Jung-Min Shin, Seong-Uk kang, Chin-Hyung Lee, Kyong-Ho Chang	Seismic Behavior of Korean Column-tree Connections Type Using Composite Slab Kangmin Lee, SungBin Hong, Yang Yang, Jaehyuk So, Keunyeong Oh
15:55 - 16:10	Residual Behaviours of Eccentrically Loaded Circular Steel Tube Confined Concrete Columns Faqi Liu, Hua Yang, Sumei Zhang	Researches on a New Two Stage Energy Dissipation Device of Low Yield Point Steel Shenggang Fan, Zhixia Ding, Chunfang Shang, Meijing Liu	Redistribution Behavior of Residual Stress due to Weld Toe Grinding Satoshi Maeda, Kazuo Tateishi, Takeshi Hanji, Masaru Shimizu	Numerical Analysis of the Axial Strength of CHS T-joints Reinforced with External Stiffening Rings Yue Wei, Lei Zhu, Shuo Han, Qiming Song, Limeng Ma, Shuwen Li
16:10 - 16:25	Pseudo-Dynamic Tests of A New-typed Six-storey Fabricated Steel Frame Zhenggang Cao, Zongshuai Wan, Han Liu, Peng Du	Study on Steel H-Beams with Replaceable Energy Dissipation Angle Yiyi Chen, Tiejing Shao, Xiuzhang He	Fatigue Behavior of the Steel Pipe Member Accompanied by the Crack Nam-Hyun Cho, Jong-Hyeop Lee, Chin-Hyung Lee, Kyong-Ho Chang	Analytical Investigation on Seismic Performance of Diagrid System with a Friction Damper Taejin Kim, Heon-Woo Lee, Byung-Min Cho, Jong-Ho Kim
16:25 - 16:40	The Behavior of Steel Plate Shear Walls Braced with Unbound Multiple X-Shaped Restrainers under Monotonic and Cyclic Loadings Zhenggang Cao, Peng Du, Feng Fan	Experimental Study on the Seismic Performance of Full Scale Petrochemical Furnace Steel Structure with Wall Panels Gang Shi, Hao Yin	A Prediction Method for Extremely Low Cycle Fatigue Crack Propagation of Structural Steels Nao Terao, Takeshi Hanji, Kazuo Tateishi, Masaru Shimizu	Rate-dependent Performance of Steel Moment Connections in the Progressive Collapse Analysis Junling Chen, Wenya Shu, Huang Huang
16:40 - 16:55	Hysteretic Behavior of Composite Frame-CSPSW system Qin Rong, Lanhui Guo, Sumei Zhang	Evaluation of Structural Performance for High Strength Steel under Eccentric Loads Kangmin Lee, Sungbin Hong, Keunyeong Oh, Yang Yang, Jaehyuk So	Fatigue Test on CFRP Strengthened Out-of-Plane Gusset Welded Joints with Two Cracks Qian-Qian Yu, Xiang-Lin Gu, Tao Chen, Ning-Xi Zhang	Experimental Study of End-Plate Connections with Box Columns Xuesen Chen, Gang Shi
16:55 - 17:10	Seismic Responses of the Single-Layer Reticulated Domes with Substructures under Multiple-Support Excitations Da Qiao, Xudong Zhi, Yugang Li, Feng Fan, Zhiwei Yu	Effect of Revised Design Earthquake Ground Motions on Evaluation of Seismic Performance of Circular-section Steel Bridge Piers Kyoko Azumi, Kiyoshi Ono	Finite Element Simulation of SIF of Damaged Rectangular Hollow Section Steel Beams Retrofitted with Prestressed CFRP Plates Tao Chen, Ming Qi, Xianglin Gu	Finite Element Analysis of Dual-Resistant Beam-to-Column Connections in Steel Frames Xuesen Chen, Gang Shi

13:20 - 17:10

Poster Session (Crystal Ballroom Corridor)

<p>Research on Structural Behavior of Hybrid Pylon Connection in Cable-Stayed Bridge <i>Cong Chen, Yuqing Liu, Yulong Feng, Yue Zhang</i></p>	<p>Advanced Continuum Model for Dynamic Analysis of Suspension Bridges <i>Sun-Gil Gwon, Dong-Ho Choi</i></p>	<p>Experimental Study on Welding Residual Stress in High Strength Stiffened Plates <i>Yuqing Liu, Jia Wang</i></p>
<p>Numerical Analysis of a Multi-cell Composite Box Girder Bridge with Corrugated Steel Webs <i>Jingchao Mi, Yuqing Liu, Zhan Lv, Jun He</i></p>	<p>Assessment of Vibration Serviceability for Steel Cable-Stayed Bridge by Normal Traffic <i>Eui-Seung Hwang, Ki-Jung Park, Do-young Kim, Sung-Ho Hong</i></p>	<p>Seismic-Resistance Effect of Reinforced Concrete Moment Frame Strengthened with X-Brace <i>Kyungjae Shin, Hak Sub Kwon, Swoo-Heon Lee, Gi Yo Min</i></p>
<p>Calculation Method of Effective Length of Lattice Shell Member <i>Si-Yong Pan and Yuan-Qi Li</i></p>	<p>Research and Application of BIM Technology in Steel Structures <i>Yunhao Wang, Lili Wu, Xuewu Liu</i></p>	<p>Numerical and Analytical Study about Vibration of Track System <i>JeongHun Kim, JungBum Jang, YoungJong Kang</i></p>
<p>An Experimental Study for Analysis of Structural Behavior of Rail Fastening System <i>JeongHun Kim, SangYun Han, YoungJong Kang</i></p>	<p>Strength Estimation of Single Shear Ferritic Stainless Steel Bolted Connections with two Bolts using Finite Element Analysis <i>BoKyung Hwang, YongHyun Cho, TaeSoo Kim</i></p>	<p>Assessment of Corrugated Steel Plate Culvert Using Point Cloud Data <i>DaeYoung Kim, ChangSu Shim, ByeongJu Lee</i></p>
<p>Dynamic Testing and System Identification of Steel Bridge in Building using Motion Capture System <i>Byung Kwan Oh, Doyoung Kim, Yousok Kim, Hyo Seon Park</i></p>	<p>A Case Study on Evaluation of a Cable Tension by Types of Damper in the Cable-Stayed Bridge <i>HyunJun Jung, JinWoo Jung, DaeJoong Moon, GoangSeup Zi, TaeHwan Yang</i></p>	<p>Development of X-SEA Software 2.0 for Advanced Offshore Structure Analysis <i>KiDu Kim, BumJoon Kim, Chana insavarodom, Pasin Plopradit</i></p>
<p>A Study on Performance Model for Evaluation and Updating the Bridge Management System in Korea <i>WonWoo Lee, JinHyuk Lee, Kyung-Hoon Park, Jungsik Kong</i></p>	<p>Collapse Test on Rectangular Steel Beam with Different Support Condition <i>Kyung Jae Shin, Sunghyun Park, So Yeong Kim, Swoo-Heon Lee, Woo Bum Kim</i></p>	<p>Stability of Elliptic Paraboloid Cable-Braaced Grid Shells with Assembled Joints <i>Feng Ruo-qiang, Xi Wang, BaoChen Zhu</i></p>
<p>Investigation of Structural Behaviors of Laminated Composite Plate with Uncertainty Parameters <i>Luu Anh Tuan, Dongkyu Lee, Jaehong Lee</i></p>	<p>Seismic Reliability Analysis of Offshore Wind Turbine Support Structure Considering Dynamic Effects <i>DongHyawn Kim, GeelNam Lee</i></p>	<p>Investigation of Infill Effect on Seismic Behavior of Steel Eccentrically Braced Frames Systems <i>Farshid Baktash, Roozbeh Fallah, Mostafa Barghi, Amir Davoodi</i></p>
<p>Applicability of Portable Heat Source on Residual Stress Release of Box Welded Joints <i>Mikihito Hirohata, Yoshito Itoh</i></p>	<p>Finite Element Analysis of Diagrid Structural System <i>Hussam Hassan Abdu, YoungJea Lee, InYoung Jeong, YoungKyu Ju</i></p>	<p>Reliability-based of Wind-Resistant Design of Roadside Structural Supports <i>JunYong Park, Seong-Wook Han, Sang-Sup Ahn, Ho-Kyung Kim</i></p>
<p>Method of Corrosion Damage Assessment on the Steel Guardrail Post Root <i>Seiji Fukada, Chen Xu, Takuya Mizuno, Minobu Aoyama</i></p>	<p>Mechanical Behavior and Failure Mechanism of Steel Reticulated Shells in Fire <i>Zhiwei Yu, Shuiming Li, Dagang Lu, Da Qiao</i></p>	<p>Reliability Analysis of Continuous Girder Bridges Using Incremental Launching Method <i>Jin Cheng, Fenghui Dong</i></p>
<p>Dynamic Response of a Cable-stayed Bridge Under a High Speed Train with Random Track Irregularities and Parabola Cable <i>Di Mu, Dong-Ho Choi</i></p>	<p>Seismic Dynamic Response Analysis of Wind Turbine System Considering Soil-Structure Interaction <i>Tao Hua, Lewei Tong</i></p>	<p>Compressive Strength at Junction between Multi-Column and Single-Shell in Hybrid Steel Wind Tower <i>Kyungsik Kim, Jongmin Kim</i></p>
<p>Mitigation Effect of Vortex-Induced Vibration of Suspension Bridge Hangers with Stockbridge Dampers <i>Min-Kyu Bang, Sun-Joon Kim, JunYong Park, Ho-Kyung Kim</i></p>		

13:20 - 17:10