

ISTS 19 Symposium Programme

30 November 2025 (Sunday)
18:00 – 21:00
Registration at Le 188° Restaurant (Level 41/F)
Welcome Reception at Le 188° Restaurant (Level 41/F)
1 December 2025 (Monday)
08:00 – 08:30
Registration at Grand Ballroom 2 (Level 1/F)
08:30 – 09:00
Grand Ballroom 2 (Level 1/F)
<p>ISTS 19 Welcome Address & Group Photo Tak-Ming CHAN ISTS 19 Symposium Chairman, The University of Hong Kong</p> <p>Opening Speech Wei PAN Head, Department of Civil Engineering, The University of Hong Kong</p>
09:00 – 10:00
Grand Ballroom 2 (Level 1/F)
<p>Kurobane Lecture Session Chair: Jeffrey A. PACKER Tubular Structures – New Materials, Profiles and Manufacturing Methods Leroy GARDNER, Imperial College London</p>
10:00 – 10:30
Coffee Break at Salon I, II and VIII (Level 5/F)
10:30 – 12:00
Salon VI–VII (Level 5/F)
<p>Parallel Session: Tubular Members I Session Co-Chairs: Chung-Che CHOU & Tim WILKINSON</p> <p>Design Width-Thickness Limit for Highly Ductile Steel Built-Up Box Columns <u>Chung-Che CHOU</u>, <i>Hou-Kuan SHEN</i>, <i>Daniel Yen-Hsun CHOU</i>, <i>Man-Hong TAM</i></p> <p>Elastic Bending Performance of Slender Rectangular Hollow Sections with Circular Web Penetrations <i>D'Arcy KEMP</i>, <i>Haobo WANG</i>, <i>Oscar TALBERT</i>, <u>Tim WILKINSON</u>, <i>Faham TAHMASEBENIA</i></p> <p>Seismic Ductility Limits for Square Tubular Columns <i>Laura CONSTAIN-MONTOYA</i>, <i>Emma REMIEN</i>, <i>Chao-Chun KO</i>, <u>Jason</u></p>

McCORMICK, Tung-Yu WU

Factors that Determine Local Buckling in Steel Tubes

Nol GRESNIGT, Sjors van ES, Daniil VASILIKIS, Spyros KARAMANOS

Flexural Behavior of Fold-fastened Multi-cellular Steel Panels

Sheng-Jie DUAN, Jing-Zhong TONG

Novel Cold-Formed Steel Built-up Tubular Section Stub Columns Using an Interlocking Design: Concept and Behaviour

Ke-Jiang ZHAN, Shuai LI, Tak-Ming CHAN, Ben YOUNG

Salon III (Level 5/F)

Parallel Session: Tubular Joints & Connections I

Session Co-Chairs: **Xudong QIAN & Lewei TONG**

Shear Behavior of Stainless Steel T-Bolts in Square CFSTs

Ying-Lei LI, **Xiao-Lin ZHAO**

Behaviour of Bolted Tubular Beam-to-Column Joints

Melaku SEYOUUM LEMMA, Carlos REBELO, **Luis SIMOES DA SILVA**

Structural Response of Stainless Steel SHS T-Joints under Brace Axial Load: Experiments and Numerical Simulations

Chrysthyan R. S. de OLIVEIRA, **Luciano R. O. de LIMA**, Monique C. RODRIGUES, André T. da SILVA, Ben YOUNG

Sizing of Cracks in CHS X-Joints Using a Strain-based Machine Learning Approach

L FENG, **Xudong QIAN**

Experimental Investigation of Stress Concentration Reduction in Optimized Cast Steel Tubular Joints

Ju CHEN, Zi-Ming YANG, Fei XU

Mechanical Behaviours of Q690 Plate-to-Circular Hollow Section X-Joint under Brace Tension

Shentao ZHAO, Junbo CHEN, Tak-Ming CHAN

12:00 – 13:30

Lunch at Grand Ballroom 1 (Level 1/F)

13:30 – 15:30

Salon VI–VII (Level 5/F)

Parallel Session: Modular Construction & Fatigue

Session Co-Chairs: **André DÜRR & Jia-Ji WANG**

Mean Stress Related Tests on the Fatigue Strength of Welded Tubular Joints Made from Mild and High-Strength Steels

A. DÜRR, M. WINKLER, S. KNEFELKAMP, K. ROTHER, M. KLING

Feasibility Study on Corrosion Repair of Steel Tubular Structures Using Wire Arc Additive Manufacturing

Yongjian GUO, Fei XU, Yun'er HUANG

R2U – A Steel Tubular Modular System Fostering Reusability

Helena GERVASIO, David ANDRADE, Luís SIMÕES DA SILVA

Challenges in the Seismic Design of Modular Steel Structures

Rita PERES, Elisa CERQUEIRA, Cyrus ESHAGHI, José M. CASTRO

Numerical Study on the Structural Performance of High-rise Modular Buildings

Peifeng TIAN, Chen WANG, Tak-Ming CHAN, Ahmed Y. ELGHAZOULI

Exploration of Structural Design and Mechanical Behaviour of High-Rise Steel-Concrete Composite Modular Buildings

Si FU, **Jia-Ji WANG**

Tensile and Shear Behaviour of Novel Grouted Connections for RHS Steel Beams in Modular Steel Buildings

Xiao-Huang-Can HE, De-Tian YU, Yu-Xing WEI

Fatigue Design of Square Hollow Section Joints Strengthened with Gusset Plates Using the Structural Stress Concept

M. WINKLER, A. DÜRR, P. LADENDORF, S. HERION

Salon III (Level 5/F)

Parallel Session: Additive Manufacture & Welding I

Session Co-Chairs: **Man-Tai CHEN & Trayana TANKOVA**

Plug-and-Play Meets CHS: A WAAM-Based Connection Solution

Trayana TANKOVA, Grigor AYVAZYAN, Milan VELJKOVIC

Optimized Weld Design of Gusset Plates to Increase the Fatigue Resistance of Hollow Section Joints

S. HERION, P. LADENDORF, A. DÜRR, S. KNEFELKAMP

WAAM-oriented Parametric Topology Optimization Design of Steel Joints

Yangyu CHEN, **Man-Tai CHEN**, Ou ZHAO, Leroy GARDNER

Welding Qualifications for 100mm Ultra-Thick Grade S690 Steel Kingposts

Lulu ZHANG, **Keong-Liam LIM**, Sing-Ping CHIEW

Automated Finite Element Discretization for Welded Tubular Joints

Seon-Hu KIM, Cheol-Ho LEE

Axial Performance of Ultra-High Power Laser-Welded Composite Square Tube
Confined Square Tube Steel Columns

De-Hong HUANG, Mi-Yang Li, Zi-Yi ZENG, **Yao-Peng LIU**, Si-Wei LIU, Siu-Lai
CHAN

Stress Concentration in WAAM CHS Joints: Effect of Weld Geometry and Joint
Stiffness

Hagar El BAMBY, Trayana TANKOVA, Milan VELJKOVIC

Mechanical Behaviour and Failure Mechanism Comparison Between Topology-
Optimized 3D-Printed and Welded Stainless Steel Joints

Senbin HUANG, Xiaowei DENG

15:30 – 16:00

Coffee Break at Salon I, II and VIII (Level 5/F)

16:00 – 17:30

Salon VI–VII (Level 5/F)

Parallel Session: Tubular Members II

Session Co-Chairs: **Yao-Peng LIU & Jiongyi ZHU**

Statistics for the Reliability Analysis of HSS Members and Connections

Yousef AHMED, Kyle TOUSIGNANT, Jeffrey A. PACKER

Post-fire Compressive Performance of 6063-T5 Aluminium Alloy RHS and SHS
Stub Columns

Neng WANG, Ziheng DING, Jianmin HUA, Xuanyi XUE, Fei WANG, **Dou FENG**

Study on Web Crippling of Aluminium Alloy Tubular Members Exposed to Elevated
Temperatures

Fei WANG, Xuanyi XUE, Jianmin HUA, Ruixiang SUN, Junjie WU, Neng WANG

A New Experimental Setup for Combined Tension and Bending of Tubular Walls
with Variable Load Ratios

Yangqing LIU, Liujie LUAN, Jiongyi ZHU

Numerical Investigation on Concrete Columns Strengthened with High-Strength
Thin-Walled Octagonal Steel Tube and Sandwiched ECC Layer

Jiongyi ZHU, Liya JIA, Haichao HUANG, Yangqing LIU, Haixin LIU

WAAM Elliptical Hollow Stub Column under compression
Sungjemla IMSONG, *Konjengbam Darunkumar SINGH*

Salon III (Level 5/F)

Parallel Session: Additive Manufacture & Welding II

Session Co-Chairs: **Lan KANG & Barbara ROSSI**

Fatigue Behaviour of Wire Arc Additively Manufactured Rough Circular Hollow Sections

*Xiongfeng RUAN, **Barbara ROSSI***

WAAM Elliptical Hollow Stub Column under compression

Khwairakpam SACHIDANANDA, *Laiphrakpam Indrajit SINGH*

Research on Steel Structures Repaired by Laser Cladding: Influence of Printing Posture and Initial Load

Bochen LI, *Lan KANG*

Experimental Investigation on Flexural Buckling Behaviours of Wire Arc Additively Manufactured Tubular Columns

Liang CHEN, *An-Rui Liang, Si-Wei LIU*

Testing of Hybrid WAAM-conventional Steel Tubular T-joints

Tong HU, *Xin MENG, Pinelopi KYVELOU, Lorenzo MACORINI, Leroy GARDNER*

Structural Performance of SLM-based Bio-inspired Multi-cell Tubes

Jidan HU, *Shuxian CHEN, Tak-Ming CHAN*

2 December 2025 (Tuesday)
08:00 – 08:30
Registration at Salon rooms (Level 5/F)
08:30 – 10:00
Salon VI–VII (Level 5/F)
<p>Parallel Session: Tubular Members III Session Co-Chairs: Shuxian CHEN & Min SUN</p> <p>Numerical Study on Residual Stresses in S690 High-Strength Steel Continuously Roll-Formed Rectangular Hollow Sections <u>Ling-Zhao MENG</u>, Kwok-Fai CHUNG, Yi-Fei HU, Ho-Cheung HO</p> <p>Elastic Buckling Formulae for Web Crippling of SHS and RHS Members Subjected to Concentrated Transverse Loading <u>Ruikai DAI</u>, M. Ahmer WADEE, Leroy GARDNER</p> <p>Numerical Investigation of Slender Welded Square Columns Using S690 High-Strength Steel under Concentric Loading <u>Yang Y.</u>, Li S., Liew J.Y.R.</p> <p>Behaviour of Y-Shaped RHS Column Assembly under Axial Load Ambrose LALREMRUATA, <u>Ricky LALTHAZUALA</u></p> <p>Behaviour of Y-Shaped CHS Column Assembly under Axial Load <u>Ambrose LALREMRUATA</u>, Ricky LALTHAZUALA</p> <p>Design of Cold-formed Ferritic Stainless Steel Beams with Web Openings under Post-fire Conditions <u>Zheyi LI</u>, Ningyi SUN, Yun'er HUANG</p>
Salon III (Level 5/F)
<p>Parallel Session: Tubular Joints & Connections II Session Co-Chairs: Partha P. DEBNATH & Xiaowei DENG</p> <p>Load-Capacity Enhancement of CHS K-joints Strengthened by Partial-Filling with Cementitious Materials: Experimental and Numerical Study <u>Yifei WANG</u>, Lewei TONG, Weizhou SHI, Jeffrey A. PACKER, Minbo LI</p> <p>Analysis of Two-Sided Bolted Rectangular Hollow Section Splice Connections <u>Ian G. KENNEDY</u>, Jeffrey A. PACKER, Kyle TOUSIGNANT</p> <p>Finite Element Fracture Criteria for Welds in Hollow Section Connections <u>Benjamin R.W. NEWCOMB</u>, Kyle TOUSIGNANT</p>

Uniaxial and Biaxial Bending Tests on Hollow Steel-to-Concrete Corner-Bolted End-Plate Connections

Maël SONNA DONKO, *Maël COUCHAUX, Jean-Pierre BOUDOT*

Experimental tests on I-beam-to-SHS-column joints using through plates subjected to equal self-equilibrating bending moments

*M. MADHOUNI, M. COUCHAUX, **M. HJIAJ**, A. KANYILMAZ*

Experimental Study of Sidewall Plate Reinforced SHS T-joints under Load

*Zhaowei LI, Shiyu RAN, Lei CHEN, **Hongfei CHANG***

10:00 – 10:30

Coffee Break at Salon I, II and VIII (Level 5/F)

10:30 – 12:00

Salon VI–VII (Level 5/F)

Parallel Session: Tubular Members IV

Session Co-Chairs: **Andi SU & Ou ZHAO**

Improved Finite Tube Method for Elastic Buckling Analysis of Tubular Members

Wen-Long GAO, *Liang CHEN, Si-Wei LIU*

Second-Order Analysis of Tubular Members with Arbitrary Geometry

An-Rui LIANG, *Liang CHEN, Si-Wei LIU*

Evaluating Steel Grade Effects on Axial Impact Resistance of Circular Hollow Section (CHS) Tubular Columns

*L.T. LEE, **F. AZHARI**, A. HEIDARPOUR*

Behaviour of Hybrid Tapered Box Girder under axial load

TC LALRAMCHHUANMAWIA, *Ricky LALTHAZUALA*

First Steps for the Proposal of a Loading Protocol for Biaxial Cyclic Testing of Steel Tubular Columns

Marco CARAGLIANO, *Elisa L. CERQUEIRA, Melina BOSCO, José M. CASTRO, Mario D'ANIELLO, Pier Paolo ROSSI*

Structural Performance and Design Analysis of S890 Ultra-High Strength Steel Circular Hollow Section Members After Exposure to Fire

Andi SU, *Hua YANG, Yuyin WANG*

Salon III (Level 5/F)

Parallel Session: Tubular Joints & Connections III

Session Co-Chairs: **Dan GAN & Xiao-Zhou HAN**

Welded K-Joints out of High-Strength Hollow Sections – Experimental Investigations

W. KNECHT, *U. KUHLMANN, M. KNOBLOCH*

Rotational Capacity and Stiffness of Flag Plate Connections to Square Hollow Section Columns

Zhuoyan XIE, *Jurgen BECQUE*

Experimental Study on Axial Compression Behavior of Square CFST Column-to-RC Beam Stiffened Connections

Y.-H. CHEN, **D. GAN**, *Z. ZHOU, J. LI, S. JIN*

Block Shear Failure in Stainless Steel Staggered Gusset Plate Connections for Tubular Structures

Youtian WANG, *Yuchen SONG, Xue-Mei LIN, Michael C.H. YAM*

Strain Limit of Tubular K Gap Joints Fabricated with High Strength Steel

I.H. RYU, *S. Park, C.-H. LEE, S.-H. KIM*

Numerical Investigation on the Versatility of a Directly Reusable Tubular Column Base Connection

Aswin Kumar Rajakala JEYABALAN, *Ragul Revathi UMARAJ, Sivaganesh Kanmani SELVARAJ, Tak-Ming CHAN, Wei PAN*

12:00 – 13:30

Lunch at Grand Ballroom 1 (Level 1/F)

13:30 – 15:30

Salon VI–VII (Level 5/F)

Parallel Session: Composite Members I

Session Co-Chairs: **Shuai LI & Hua YANG**

Performance and Design of High-Strength CFST Columns Subjected to Transverse Impact Loading

Hua YANG, *Yong ZHU*

Axial Resistance Performance of Concrete-filled Corrugated Steel Tubular Columns

Jia-Ming ZHANG, *Jing-Zhong TONG*

Strength Interaction Diagrams of Innovative Trapezoidal Concrete-Filled Steel Tube Columns with Steel Casing in Outdoor Fire Scenarios

Chan, J. L. Y, *Li, G.H, Liu, S. W, Liu, Y.P., Chan, S. L*

Research on Strength Capacity Behavior of High-Strength Concrete-Filled Steel

Tubular Chords

Bo-Wen CHEN, *Yi-Jie ZONG, Biao-Yang XU*

Portable Non-Destructive Evaluation of Self-Healing Concrete in Steel Tubes via Acoustic Excitation and Motion Magnification

Yishuang ZHANG, *Danyang ZHAO, Cheuk Lun CHOW, Denvid LAU*

Design of Slender Rectangular Concrete Filled Steel Tubes using S690 Steel

S. LI, *Y. YANG, S. D. PANG, J. Y. R. LIEW*

Strain Distribution in Octagonal Concrete-Filled Steel Tubular Structure under Axial Loads

ABDULLAH, *Y.F LEUNG, Tak-Ming CHAN*

A Unified Equation for Elliptical Concrete-filled Steel Tubular Stub Columns

Peishi LIAO, *Yuchen SONG, Yancheng CAI*

Salon III (Level 5/F)

Parallel Session: Tubular Joints & Connections IV

Session Co-Chairs: **Xiaoyi LAN & Marko PAVLOVIC**

Experimental Investigation and Design of CFRP Grid-Reinforced UHS-ECC Jackets for Circular CFST Beam-Columns

Pouria AYOUGH, *Yu-Hang WANG, Edris RASA, Meini SU, Ahmed Y. ELGAZOULI*

Experimental Study on Static Behavior of S690 Steel CHS X-Joints Subjected to Brace Axial Tension

*Jia-Jun ZHANG, **Xiaoyi LAN***

Investigation of Welding-Induced Residual Stresses in Double-K Tubular Joints

Le WANG, *Xudong QIAN*

Structural Performance of T-Joints of High-Strength S690 Steel Square Hollow Sections under Brace Axial Compression and In-Plane Bending

*Keyang NING, Kwok-Fai CHUNG, Ho-Cheung HO, **Yi-Fei HU***

Effect of End Distance on the Stiffness of Full-Culm Bamboo Members with Steel Bolted Connections

Nahid KHODABAKHSHI, *Theodora MOUKA, Elias G. DIMITRAKOPOULOS*

Experimental Study on Welded N-Joints of High-Strength Steels

R. M. STROETMANN, *B. RUST, A. MUENCH, T. UMMENHOFER*

Numerical Investigation of the Load-Bearing Capacity of High-Strength Hollow

Section Joints Subject to Punching Shear Failure

A. MUENCH, *S. BECKER, P. WEIDNER, T. UMMENHOFER*

Hybrid Steel-Composite Joints for Tubular Structures

Marko PAVLOVIC, *Mathieu KOETSIER, Mees WOLTERS*

15:30 – 16:00

Coffee break at Salon I, II and VIII (Level 5/F)

16:00 – 17:30

Salon VI–VII (Level 5/F)

Parallel Session: Composite Members II

Session Co-Chairs: **Wei LI & Jianmin HUA**

Localized Transverse Response of Aluminium Alloy Composite Tubular Component Filled with Lunar Regolith Simulant Geopolymer

Jianmin HUA, *Ziheng DING, Xuanyi XUE, Neng WANG, Fei WANG, Junhong ZHOU*

FRP-Confined Steel Tubes with Large Diameter-to-Thickness Ratios under Axial Compression

Xi LI, *Wei XIONG, Fubo LAI, Guan LIN*

Mechanical Performance of FRP Confined Rectangular High-Strength Concrete-Filled Steel Tube Members

Dinghui GAO, *Yan-bo WANG, Yansheng DU*

Behaviour of UHPC-S690 Concrete Encased Steel Stub Columns with Tubular-Shaped Steel Skeleton

Ming-Shan ZHAO, *Tao LI, Ahmed Samir ELSEMEEN, Mohammed Ali AL-DHABYANI, Elavarasu SOMASUNDARAM, Sing-Ping CHIEW*

Innovative Structural Solution Using Cold-formed Steel and Lightweight Concrete

Rohola RAHNAVARD, *Hélder D. CRAVEIRO, Rui A. SIMÕES*

Salon III (Level 5/F)

Parallel Session: Offshore Structures

Session Co-Chairs: **Jiachen GUO & Jun-Zhi LIU**

Virtual Sensing of Offshore Tubular Structures Using Kalman Filter Estimation

Shen LI, *Jinsheng WANG, Feargal BRENNAN*

Research on Structural Vibration Prediction Based on LSTM Models - An Example of Offshore Wind Turbines Jacket Basement

Haoyan WU, *Raffaele De RISI*

Numerical Investigation of Operational Floating Offshore Wind Turbines Subjected to Ship Collisions

Kaiming BI, Xudong YE

Structural Feasibility and Vulnerability Assessment of Jacket Substructures for 15 MW Offshore Wind Turbines

Kiwon JEONG, Sangkyung LEE, Jonghyun LEE, Seungjung KIM

Whipping Response of Submarine Pipeline Structures Subjected to Underwater Explosions: A Semi-Analytical Approach

Sumang LI, Jiewen WANG, Yang HE, Zhenming LEI, Facheng WANG

Random Field-based Probabilistic Analysis for the Deterioration of Marine Tubular Steel Structures

Xinyi YE, Jiajun ZHAO

18:00 – 22:00

Symposium banquet at Grand Ballroom 1 (Level 1/F)

3 December 2025 (Wednesday)
08:00 – 08:30
Registration at Salon rooms (Level 5/F)
08:30 – 10:00
Salon VI–VII (Level 5/F)
<p>Parallel Session: Tubular Members V Session Co-Chairs: Haixin LIU & Xiang YUN</p> <p>Robust Energy Localization in Tubular Topological Metastructures <u>A.C. NI</u>, <i>J.W. WANG, Y. HE, Z.M. LEI, F.C. WANG</i></p> <p>The Continuous Strength Method for Tubular Structural Elements <u>Xiang YUN</u>, <i>Fiona WALPORT, Leroy GARDNER</i></p> <p>Numerical Modelling and Design of Aluminium Alloy Square and Rectangular Hollow Section Columns <u>Yufei ZHU</u>, <i>Fangfang LIAO, Xiang YUN</i></p> <p>Health Assessment and Reinforcement Design of Main Frame for Horse Riding Statue <u>Feng LUO</u>, <i>Caiqi ZHAO, Gang WANG</i></p> <p>Auto-Tuning Machine-Learning Model for Stainless Steel Tubular Member <u>Wenkang ZUO</u>, <i>Yuner HUANG</i></p> <p>Residual Stresses and Local Buckling Behaviour of Q960 UHSS Welded Box Section Stub Columns <u>J.Z. LIU</u>, <i>C.X. FAN, F. XU, T.M. CHAN</i></p>
Salon III (Level 5/F)
<p>Parallel Session: Tubular Members VI Session Co-Chairs: Huiyong BAN & Xuanyi XUE</p> <p>Design Method for Fe-Mn Damping Steel Square Tubular Column Buckling <u>Yeja WANG</u>, <i>Jiangwen LI, Li MA, Shanglin LV, Huiyong BAN</i></p> <p>Experimental Study on Mechanical Properties of Tubular Cross Section Links Made of Low-Yield-Point Steel <i>Liang-Dong ZHUANG, <u>Jun-Yu WU</u>, Li-Long FAN</i></p> <p>Design Methods for Stainless-Clad Bimetallic Steel Welded Box Section Columns <u>Huiyong BAN</u>, <i>Zhuo ZENG, Pingyu ZHAO</i></p> <p>The Compressive Performance of Q1100 Ultra-high-strength Steel SHS and RHS</p>

Stub Columns Post-fire

Xuanyi XUE, Fei WANG, Zhiping REN, Chunming HOU, Dou FENG, Jianmin HUA, Ziheng DING

Development and Validation of an Experimental Setup for Biaxial Cyclic Testing of Steel Tubular Columns

Elisa L. CERQUEIRA, Marco CARAGLIANO, Rita PERES, Melina BOSCO, Mario D'ANIELLO, José M. CASTRO

10:00 – 10:30

Coffee Break at Salon I, II and VIII (Level 5/F)

10:30 – 12:00

Salon VI–VII (Level 5/F)

Parallel Session: Tubular Members VII

Session Co-Chairs: **Hai-Ting LI & Daniel TW LOOI**

Cold-Formed Lean Duplex Stainless Steel Tubular Stub Columns at Elevated Temperatures: Experimental and Numerical Investigations

Qiang-Jun LIU, Zhi-Hao FAN, **Hai-Ting LI**

Post-fire Mechanical Response of Dual-phase High Strength Steel after Water-Cooling

Abdulla ABDULMAKSOD, Madhup PANDEY, Fangying WANG, Jia-Hui ZHANG, Luke J PRENDERGAST, Georgia E. THERMOU

Bamboo – Nature's Optimised Tubular Section

N SAKIB, **DTW LOOI**, SW LIU, HH TSANG, GWM HO

Torsional Behaviour of Cold-formed High-Strength Steel Elliptical Hollow Sections

Soibam M DEVI, Tekcham G SINGH

Influence of Perforation on Cold-Formed Circular Hollow Section Stub Columns

Soibam M DEVI, **Keshav SAINI**, Ankit K MAURYA, Yengkhom T SINGH, Tekcham G SINGH

Salon III (Level 5/F)

Parallel Session: Corrosion

Session Co-Chairs: **Chao HOU & Tekcham G SINGH**

Flexural Behavior of CFRP-Strengthened CFST with Localized Corrosion

Jingyi ZHANG, Xinxiang LIANG, Guan LIN, **Chao HOU**

Probabilistic Assessment of Tubular Truss Structures under Stochastic Corrosion and Variable Lateral Loads

Scarlet MONTILLA, R. BOSSE, G. GIDRÃO, R. PICÓN, A. BECK, W. LI, J. FLOREZ-LOPEZ

Active Strengthening of Corroded CFST Columns Using Iron-based Shape Memory Alloys: A Proof-of-Concept Numerical Study

Oun HE, Zeyu ZHOU, Michael C.H. YAM

Structural Behaviour of Square Hollow Section Stub Columns with Localised Corrosion Damage Based on 3D Scanning

Haixin LIU, Cheng ZHANG, Tak-Ming CHAN

Experimental Investigation on the Axial Compression Behaviour of Corroded Steel Rectangular Stub Columns

Ankit K MAURYA, **Tekcham G SINGH**

Numerical Investigation on Flexural Behaviour of a Demountable and Reusable I Beam-to-CHS Column Interlocking Connection

Ji-Yuan LI, Xiao-Zhou HAN, Tak-Ming CHAN

12:00 – 13:30

Lunch at Grand Ballroom 1 (Level 1/F)

13:30 – 15:30

Salon V (Level 5/F)

IIW-XV-E Committee Meeting

Salon VI–VII (Level 5/F)

Parallel Session: Tubular Joints & Connections V

Session Co-Chairs: **Yancheng CAI & Yi-Fei HU**

DIC-Based J-Integral Evaluation for Through-Thickness Crack in Circular Hollow Section Joint

Cheng CHEN, Xudong QIAN

Case Studies: Large-Scale Tubular Structures Incorporating Cast Steel Nodes

Fei WEI, Justin I. BINDER, Carlos de OLIVEIRA

Experimental Investigation on CHS X-joints of Steel Grade up to 1100 MPa

Yancheng CAI, Tak-Ming CHAN, Ben YOUNG

Circular Tubular T-Joints of Steel Grade 1100 MPa with Brace Subjected to Axial Compression

Yancheng CAI, Tak-Ming CHAN, Ben YOUNG

Experimental Study on the Structural Behaviour of Stainless-Clad Bimetallic Steel

CHS T- and K-joints at Elevated Temperatures

Yi YANG, Fei GAO, Junbo CHEN

Numerical Investigation on SHS Aluminium Alloy Welded Joints' Structural Behavior

Zheng CHEN, **Zongji LI**, Meini SU, Xiaoming ZHANG

Experimental Study on Ductility of Corroded Diamond Bird-Beak (DBB) Steel Square Hollow Section Joint

Haochen ZHANG, **Yuner HUANG**

Experimental Study on Composite Behaviour of CFST Columns with Welded and Bolted Shear Connections

Weijie NING, Partha P. DEBNATH, Tak-Ming CHAN, Ahmed Y. ELGHAZOULI

Salon III (Level 5/F)

Parallel Session: Tubular Joints & Connections VI

Session Co-Chairs: **Xiao-Huang-Can HE & Sivaganesh Kanmani SELVARAJ**

Seismic Behaviour of High-strength Circular CFST Column to Composite Beam Joint using External Diaphragm

Hao GUAN, Wei LI

Analytical Strength for Chord Face Plastification of RHS X Joints

Sihyeong PARK, Ihyun RYU, Cheol-Ho LEE, Seon-Hu KIM

Tests of High Strength Steel RHS T- and Y-Joints under Brace Axial Compression

Zi-Han ZHANG, Qiu-Yun LI, Tak-Ming CHAN, Ben YOUNG

Experimental Study on 3D Printed Hybrid Endplate Connections with Rectangular Hollow Sections

Jun YE, Xiaowei DAI, Leroy GARDNER

CHS-to-CHS Welded Intersections: Dihedral Angle Properties and Directional Enhancement Factor According to EN 1993-1-8

A. MASTROPASQUA, M. MAJOWIECKI

Behaviour and Design of CHS X-Joints Stiffened with External In-Plane Stiffeners

Jiafeng LYU, Shen YAN, Xianzhong ZHAO

Fracture Prediction for Tubular Joints in High-Rise Steel Modular Buildings Based on Void-Growth Model

Yu-Hang WU, Wei PAN, Tak-Ming CHAN

Compressive Strength of Grout-Filled GFRP Tube Repaired Corroded CHS K-Joints:
Numerical Analysis

Xiaoyu YAN, Zhaowei LI, Hongfei CHANG

15:30 – 16:00

Coffee break at Salon I, II and VIII (Level 5/F)

16:00 – 17:00

Salon VI–VII (Level 5/F)

Invited Lecture

Session Chair: **Yoo Sang CHOO**

Historical Perspective of Tubular Structures (1962-2025)

Jaap WARDENIER, Delft University of Technology

17:00 – 17:30

Salon VI–VII (Level 5/F)

ISTS 19 Closing