

# PROGRAMME - OVERVIEW

Time	Wednesday 26 June 2024	Time	Thursday 27 June 2024	Time	Friday 28 June 2024	
09:30 – 10:30	Registration	09:00 – 10:30	Keynote speakers	Technical Tour	09:00 – 11:00	Parallell sessions 5
10:30 – 12:00	Keynote speakers	10:30 – 11:00	Coffee		10:30 – 12:30	Coffee
12:00 – 13:00	Lunch	11:00 – 13:00	Parallell sessions 3		Slot 1	11:20 – 12:50
13:00 – 15:00	Parallell sessions 1	12:00 – 14:00	Lunch	Slot 2	12:50 – 13:45	Keynote speakers
15:15 – 15:45	Coffee	14:00 – 15:15	Parallell sessions 4	Slot 3		Conclusion
15:30 – 17:15	Parallell sessions 2	15:15 – 15:45	Coffee	14:30 – 16:30	13:45 – 14:30	Lunch
18:30 -	Get-together event	15:45 – 17:00	Parallell sessions 4			
		17:15 – 18:00	Keynote speakers			
		19:00 -	Conference Dinner			

## Sessions

Subject		Session place	
Steel structures	General	Parallell session 1	
	Cold-formed and thin walled structures	Parallell session 4	
	Connections	Fatigue	Parallell session 2 and 5
		General	Parallell session 1 and 3
	Members	Parallell session 4	
	High strength steel	Parallell session 1	
Stainless steel		Parallell session 2	

Subject	Session place	
Composite structures	Parallell session 3	
Sandwich panels	Parallell session 6	
Fire	Parallell session 6	
Digital design tools	Parallell session 2	
Bridge structures	Bridge engineering	Parallell session 3
	Steel bridges	Parallell session 6
	Composite bridges	Parallell session 4
	Assessment and technical life extension	Parallell session 5

Session no.	Subject
1	<b>Steel Structures</b> – General
1	<b>Steel Structures</b> – High strength steel
1	<b>Steel Structures</b> – Connections – General (part 1)
2	<b>Stainless Steel</b>
2	<b>Digital design tools</b>
2	<b>Steel Structures</b> – Connections – Fatigue (part 1)
3	<b>Composite Structures</b>
3	<b>Bridge Structures</b> – Bridge Engineering
3	<b>Steel Structures</b> – Connections – General (part 2)

Session no.	Subject
4	<b>Steel Structures</b> – Cold-formed and thin walled structures
4	<b>Steel Structures</b> – Members
4	<b>Bridge Structures</b> – Composite bridges
5	<b>Bridge Structures</b> – Assessment and technical life extension
5	<b>Steel Structures</b> – Connections – Fatigue (part 2)
6	<b>Sandwich panels</b>
6	<b>Fire</b>
6	<b>Bridge Structures</b> – Steel bridges

# SCIENTIFIC PROGRAMME – WEDNESDAY, 26 JUNE

Schedule / Room	A - Lilla Salen	B - Värdsarvet	C - Olga Bardh
09:30 – 10:30	Registration		
10:30 – 12:00	Keynote speakers		
12:00 – 13:00	Lunch		
13:00 – 15:00	Session A1 <i>Steel structures - General</i>	Session B1 <i>Steel structures – Connection General</i>	Session C1 <i>Steel structures – High strength steel</i>
15:15 – 15:45	Coffee		
15:45 – 17:15	Sessions A2 (15:30-17:15) <i>Steel structures – Connection Fatigue</i>	Sessions B2 <i>Steinless steel</i>	Session C2 <i>Digital design tools</i>
18:30 -	Get-together event		

## Keynote speakers

10:45	<b>Roger Tuomas</b> , Luleå Municipality <i>Welcome to Luleå and north of Sweden</i>
11:00	<b>Roine Viklund</b> , LTU <i>The Swedish West-indies – land of the future</i>
11:20	<b>Markus Komulainen</b> , SSAB <i>Forging Sustainability: Unveiling the Power of Weathering Steel</i>
11:40	<b>Johan Pilhagen</b> , Outokumpu <i>Smart (or Stupid?) Structural Stainless Steel Solutions!</i>

# SESSIONS – WEDNESDAY, 26 JUNE

Session A1	A	Steel structures: General	Wednesday 13:00 - 15:15	Chairman: Univ.-Prof. Dr. Markus Knobloch
Schedule	Paper	Title	Authors	Presenter
13:00 - 13:15	63	Additive manufacturing of 3D connecting elements in the building industry	Kuhnhenne, Markus Lüdecke, Marvin* Voelkel, Justus Bernsmann, Jan Schulte, Joanna	Marvin Lüdecke
13:15 - 13:30	59	On the Development of European Design Rules for Re-Used Steel Components	Bartsch, Helen* Eyben, Felix Feldmann, Markus	Helen Bartsch
13:30 - 13:45	225	Reuse / CEN/TS 1090-201	Husson, Wylliam	Wylliam Husson
13:45 - 14:00	162	Application of a system-level approach to the design of steel structures	Hietikko-Kaukola, Henna* Jaamala, Lauri Mela, Kristo	Henna Hietikko-Kaukola
14:00 - 14:15	121	The Effect of Sun Radiation in Open Steel Structures	Romo-Leroux, Ivan	Ivan Romo-Leroux
14:15 - 14:30	112	Investigation of The Effect of Multiple Tuned Mass Dampers on Wind-Induced Vibrations in Steel Tall Buildings	Gunasekaran, R. Arul Jayachandran, S.	Gunasekaran R
14:30 - 14:45	98	Effect of damping ratio and hardening on the Dynamic Increase Factor for a column loss hazard	Dimopoulos, Christoforos	Christoforos Dimopoulos
14:45 - 15:00	185	Robot supported Wire Arc Additive Manufacturing - Parameter studies on dot-by-dot printed structures using carbon steel and different shielding gases	Waldschmitt, Benedikt* Lange, Jörg	Benedikt Waldschmitt
15:00 - 15:15	194	Steel Structures in Times of Great Challenges	Vanggaard, Ole Wedeburnn, Ola	Ola Wedeburnn?

# SESSIONS – WEDNESDAY, 26 JUNE

Session B1	B	Steel structures: Connections - General	Wednesday 13:00 - 15:15	Chairman: Dr. Ana Girao-Coelho
Schedule	Paper	Title	Authors	Presenter
13:00 - 13:15	80	I beam-to-RHS column joints with threaded welded studs. An analytical model for the joint resistance.	Serrano, Miguel A. (1)* López-Colina, Carlos (1) Garcia, Ismael (2)*	Miguel Serrano
13:15 - 13:30	28	Slotted-Hidden-Gap (SHG) connection for SHS bracing members under cyclic loading	Luu, Joëlle (1) Lignos, Dimitrios (1) Rogers, Colin A. (2)*	Colin Rogers
13:30 - 13:45	77	Polygonal endplate connections in circular hollow section members – Verification and design proposal using discontinuity layout optimization	Timmers, Ralph Lang, Robert	Ralph Timmers
13:45 - 14:00	154	Derivation of a plastic strain limit for the finite element analysis of DHY and fillet welds in normal strength steel connections	Kuntsche, Ina* Lange, Jörg	Ina Kuntsche
14:00 - 14:15	64	Undercuts: A Critical Factor Affecting the Integrity and Reliability of Structures with Butt-Welded Joints	Voelkel, Justus* Bartsch, Helen Feldmann, Markus	Justus Voelkel
14:15 - 14:30	139	Load bearing capacity of lockbolt systems made from carbon steel subjected to combined tension and shear loading	Holch, A. (1)* Glienke, R. (1, 2) Dörre, M. (1) Henkel, K-M. (1, 3)	Alexander Holch
14:30 - 14:45	142	Influence of weathering impacts on the tightening behaviour of HV and HR bolting assemblies	Paluska, Denis* Jungbluth, Dominik Stranghöner, Natalie	Denis Paluska
14:45 - 15:00	192	Static tests on welded connections with imperfections	Mouradian, Kevin (1, 2)* Beyer, André (1) Couchaux, Maël (2)	Kevin Mouradian

# SESSIONS – WEDNESDAY, 26 JUNE

Session C1	C	Steel structures: High strength steel	Wednesday 12:45 - 15:15	Chairman: Prof. Dr.-Ing. Markus Feldmann
Schedule	Paper	Title	Authors	Presenter
12:45 - 13:00	6	Limit Strain in the elastic-plastic the Analysis in Steel	Golubiatnikov, Kirill Ghimire, Abhishek* Wald, František Vild, Martin	František Wald
13:00 - 13:15	200	Toughness-dependent net-section resistance and ductility behaviour of high strength structural steel S700 to S960	Meissner, Mirco* Bartsch, Helen Feldmann, Markus	Mirco Meissner
13:15 - 13:30	79	On lapped splices in high-strength steels - Experimental investigations and damage-mechanical simulations	Eyben, Felix* Bartsch, Helen Feldmann, Markus	Felix Eyben
13:30 - 13:45	58	Ultra high strength fillet and butt welded joints made of S960 - Load-carrying capacity and deformation behaviour	von Arnim, Mareike* Eichler, Stefan Brätz, Oliver Kuhlmann, Ulrike	Gloria Hofmann
13:45 - 14:00	44	Local buckling of cold-formed high-strength steel circular hollow sections Analysis & Validation using analytical and numerical approaches	Gubetini, Drilon* Mensinger, Martin	Drilon Gubetini
14:00 - 14:15	218	Tests on S960 steel lap joints with M12 bolts	Primož Može* Anita Ogrin	Primož Može
14:15 - 14:30	102	Compressive Resistance Tests on Welded High-Strength Steel Columns	Sabau, Gabriel (1)* Lagerqvist, Ove (2)	Gabriel Sabau
14:30 - 14:45	67	Effects of enhanced strength from cold forming on the behaviour of a scaled HSS truss joint	Saremi, Pooya Lu, Wei* Puttonen, Jari	Pooya Saremi
14:45 - 15:00	190	Welded hybrid steel box-section girders subjected to pure bending and bending-shear interaction	Somodi, Balázs* Wassfee, Dhiaa Kovesdi, Balázs	Balázs Somodi
15:00 - 15:15	203	Numerical investigations on slender concrete-filled double-skin steel tubular columns using high-strength steels in fire	Vigneri, Valentino* Gobbato, Alessandro Taras, Andreas	Alessandro Gobbato

# SESSIONS – WEDNESDAY, 26 JUNE

Session A2	A	Steel structures: Connections - Fatigue	Wednesday 15:30 - 17:15	Chairman: Professor Mohammad Al-Emrani
Schedule	Paper	Title	Authors	Presenter
15:30 - 15:45	140	Fatigue strength of non-welded constructional details using the nominal stress concept based on synthetic S-N curves from FKM approach	Glienke, R. (1, 2) Schröder, M. (1)* Schwerdt, D. (1) Flügge, W. (2) Kalkowsky, F. (2) Dörre, M. (2) Stranghöner, N. (3) Ehrhardt, L. (3)	Markus Schröder
15:45 - 16:00	61	Local stresses in crane runway girders near transverse stiffeners: Experimental and numerical investigations	Kettler, Markus* Zauchner, Paul Unterweger, Harald	Markus Kettler
16:00 - 16:15	65	Local vertical stresses in web plates of crane runway girders near transverse stiffeners	Zauchner, Paul* Kettler, Markus Unterweger, Harald	Paul Zauchner
16:15 - 16:30	193	Statistical evaluation of fatigue test results of welded connections with imperfections	Mouradian, Kevin (1, 2)* Beyer, André (1) Couchaux, Maël (2) Lukić, Mladen (1)	Kevin Mouradian
16:30 - 16:45	81	Corrosion fatigue model development for tailor-made S-N curves for offshore wind turbine foundations	Rodenburg, J. D.* Pijpers, R. J. M. Slot, H. M.	Jorrit Rodenburg
16:45 - 17:00	171	Disc Springs – A useful utility in cyclic stressed steel connections	Sdorra, Armin* Dürr, André Kretschmar, Peter Bartenbach, Jochen	Armin Sdorra
17:00 - 17:15	75	The influence of high preloading forces on the behaviour of the bolt in ring flange connection	El Bamby, Hagar* Tankova, Trayana Veljkovic, Milan	Hagar El Bamby

# SESSIONS – WEDNESDAY, 26 JUNE

Session B2	B	Stainless steel	Wednesday 15:45 - 17:15	Chairman: M.Sc. + IWE Paul Janiak
Schedule	Paper	Title	Authors	Presenter
15:45 - 16:00	136	Fatigue strength of stainless steel bolting assemblies under axial loads	Glienke, Ralf (1, 2) Hagemann, Melanie (1)* Denkert, Christian (3) Hanebeck, Robin (1) Schwerdt, Daniela (1)	Ralf Glienke
16:00 - 16:15	205	Web crippling design of stainless-steel sigma sections - One flange load cases	Thirunavukkarasu, Kajaharan (1)* Thushanthan, Kannan (1) Poologanathan, Keerthan (1) Kanthasamy, Elilarasi (1) Gray, Drew (1) Rajanayagam, Heshachanaa (1)	Kajaharan Thirunavukkarasu
16:15 - 16:30	141	Limiting surface pressures for preloaded bolted connections made of duplex and lean-duplex stainless steel	Ehrhardt, Lukas* Stranghöner, Natalie	Lukas Ehrhardt
16:30 - 16:45	153	Comparison of Numerical and Experimental Data of Cylindrical Shells Subjected to External Pressure	Azizi, Esmaeil* Afzali, Nariman Stranghöner, Natalie	Esmaeil Azizi
16:45 - 17:00	16	Shear behaviour of cold-formed stainless-steel lipped channel sections with web holes	Gatheeshgar, Perampalam (1)* Umoh, Idongesit (1) Bockb, Marina (2) Dimopoulou, Christoforos (1) Simwandac, Lenganji (3)	Gatheeshgar Perampalam
17:00 - 17:15	224	Patch loading resistance of stainless-steel plate girders with corrugated webs	Graciano, Carlos* Al-Emrani, Mohammad Amani, Mozhdeh Flansbjerg, Mathias	Carlos Graciano

# SESSIONS – WEDNESDAY, 26 JUNE

Session C2	C	Digital design tools	Wednesday 15:45 - 17:15	Chairman: Dr. Gabriel Sabau
Schedule	Paper	Title	Authors	Presenter
15:45 - 16:00	124	Generic substitute imperfection patterns for the GMNIA of tanks and silos made of steel or aluminium	Knoedel, Peter* Wacker Ummenhofer	Peter Knoedel
16:00 - 16:15	216	Enabling Interoperability in Steel Industry – New Concepts for Using IFC for Steel Fabrication	Jung, Victoria (1)* Häfele, Karl-Heinz (2) Geiger, Andreas (2) Huhn, Micheal (3) Stiegeler, Stefan (4) Brell-Cokcan, Sigrid (1)	Victoria Jung
16:15 - 16:30	179	Prediction of weld load resistance using machine learning methods	Kabeláč, Jaromír Kolaja, Drahošlav Chalupa, Vojtěch* Šabatka, Lubomír	Vojtěch Chalupa
16:30 - 16:45	222	Adopting open BIM Technology for the analysis and detailing of connections in steel structures	Solak, Miguel Afonso	Alfonso Solak
16:45 - 17:00	50	Generative design of RHS/SHS profiles using conditional variational autoencoder (CVAE)	Müller, Andreas* Kraus, Michael A. Taras, Andreas	Andreas Müller



# SCIENTIFIC PROGRAMME – THURSDAY, 27 JUNE

Schedule / Room	A - Lilla Salen	B - Värdsarvet	C - Olga Bardh	Technical tour
09:00 – 10:30	Keynote speakers			
10:30 – 11:00	Coffee			
11:00 – 13:00	Session A3 <i>Steel structures – Connection General</i>	Session B3 <i>Bridge structures – Bridge engineering</i>	Sessions C3 <i>Composite structures</i>	10:30 – 12:30 <i>Slot 1</i>
12:00 – 14:00	Lunch			
14:00 – 15:15	Sessions A4 (13:45-15:15) <i>Steel structures – Members</i>	Sessions B4 <i>Bridges structures – Composite bridges</i>	Sessions C4 (13:45-15:15) <i>Steelstructures – Cold formed and thin walled structures</i>	12:30 – 14:30 <i>Slot 2</i>
15:15 – 15:45	Coffee			
15:45 – 17:00	Sessions A4 <i>Steel structures – Members</i>	Sessions B4 <i>Bridges structures – Composite bridges</i>	Sessions C4 <i>Steelstructures – Cold formed and thin walled structures</i>	14:30 – 16:30 <i>Slot 3</i>
17:00 – 18:00	Keynote speakers			
19:00 –	Conference dinner			

## Keynote speakers

09:00	<b>Markus Knobloch</b> , Ruhr-Universität Bochum <i>Approaching the Finish Line – Development of the 2nd Gen Eurocode 3 and What's Next?</i>
09:30	<b>Stephen Hicks</b> , University of Warwick <i>Second-generation of Eurocode 4 - Current innovations and future tasks</i>
10:00	<b>Martin Pei</b> , SSAB <i>SAB's Transformation to Fossil-Free Steel with HYBRIT Technology</i>
17:00	<b>Maciej Chrzanowski</b> , Arcelor Mittal <i>Decarbonization journey of steel towards modern construction market</i>
17.20	<b>Pasi Turpeenniemi</b> , Ruukki <i>Sustainable construction in Ruukki</i>
17:40	<b>Bernhard Hauke / Peter Collin</b> <i>Bernt Johansson Outstanding Paper Award</i>

# SESSIONS – THURSDAY, 27 JUNE

Session A3	A	Steel structures: Connections - General	Thursday 11:00 - 13:00	Chairman: Dr. Ana Girao-Coelho
Schedule	Paper	Title	Authors	Presenter
11:00 - 11:15	209	Load transfer mechanism of pretension injectioned bolts	Chen, Yu (1, 2)* Veljkovic, Milan (2) Yamaguchi, Takashi (1)	Hagar el Bamby
11:15 - 11:30	52	Experimental and numerical investigation of T-stub plastic resistance	Neutelters, Arnaud* Corman, Adrien Demonicéau, Jean-François	Arnaud Neutelters
11:30 - 11:45	181	Numerical investigations on innovative hollow section column-splice connections resorting to laser cutting	Das, Rajarshi (1)* Dragan, Dan (1) Kanyilmaz, Alper (2) Degee, Herve (1)	Rajarshi Das
11:45 - 12:00	221	Experimental study on a fin-plate connection under a column-loss event	Obkircher, Debora* Holm Clausen, Arild Costas, Miguel Langseth, Magnus	Debora Obkircher
12:00 - 12:15	219	Prediction model for preloaded injected bolts in double-lapped connections	Derks, Ivo* (1, 3) Nijgh, M. (2) van Es, S. (3) de Vries, P. (1) Veljkovic, M. (1)	Ivo Derks
12:15 - 12:30	129	Experimental investigations on the rotational stiffness of single-sided fillet welds	Ltaief, Malik* Mensingher, Martin	Malik Ltaief
12:30 - 12:45	25	Performance of a Novel Semi Rigid Joist to Stud Web Connection for Light Steel Framed Structures	Shakeel, Sarmad (1)* Mohammad Mojtabaei, Seyed (2) Davison, Buick (1) Bagheri Sabbagh, Alireza (3)	Sarmad Shakeel
12:45 - 13:00	92	Partially stiffened web panel in compressed zone of steel connections	Bougoffa, Sabra (1, 2)* Durif, Sébastien (1) Mezghanni, Omar (3) Bouchair, Abdelhamid (1) Daoud, Atef (3)	AbdelHamid Bouchair

# SESSIONS – THURSDAY, 27 JUNE

Session B3	B	Bridge structures: Bridge engineering	Thursday 11:00 - 13:00	Chairman: Dr. Katrin Habel
Schedule	Paper	Title	Authors	Presenter
11:00 - 11:15	132	Soil steel composite bridges - Low carbon solution for short-span bridges	Ehrenberg, Jonas* Czerepak, Adam	Adam Czerepak
11:15 - 11:30	168	Sufficient Choice of Steel Material for Bridge Bearings to Avoid Brittle Fracture	Hoyer, Natalie	Natalie Hoyer
11:30 - 11:45	175	74% CO2 reduction using optimised steel	Nielsen, Mogens G.* Petersen, Morten Pagh	Mogens G. Nielsen Morten Pagh Petersen
11:45 - 12:00	215	Nordec - Kruunuvuoren Silta (Crown Bridge)	Westö, Victor	Victor Westö John Sundblom
12:00 - 12:15	7	The first network-arch railway bridge using cold bend HD profiles	Pilujski, B. Sobala, D. Sęk, R. Kožuch, M. Lorenc, W.*	Wojciech Lorenc
12:15 - 12:30	89	Simplified Analysis of Cable-Stayed and Extradosed Bridges	Upadhyay, Akhil* Sai Patha, Adith	Akhil Upadhyay
12:30 - 12:45	208	Design and Construction of the Stridsberg Bridge	Gren, Simon Mathias* Gíslason, Óskar V.	Simon Mathias Gren Óskar V. Gíslason

# SESSIONS – THURSDAY, 27 JUNE

Session C3	C	Composite structures	Thursday 11:00 - 13:00	Chairman: Professor Stephen Hicks
Schedule	Paper	Title	Authors	Presenter
11:00 - 11:15	99	Extreme gradient boosting tree-based prediction of the torsional capacity of CFDST steel columns and SHAP interpretation	Simwanda, Lenganji (1)* Ikotun, Bolante Deborah (1) Onyari, Ednah (1) Ilunga, Masengo (1) Perampalam, Gatheeshgar (2)	Lenganji Simwanda
11:15 - 11:30	30	Design of concrete encased composite columns (CEC) according to general method (prEN1994-1-1)	Zogu, Pellumb* Schäfer, Markus	Pellumb Zogu
11:30 - 11:45	125	Experimental and numerical studies of novel demountable shear connections	Király, K. (1, 2)* Borsi, L. (1) Kocsis, A.B (2) Dunai, L (1) Calado, L. (3)	Krisztián Király
11:45 - 12:00	122	Experimental investigations on load redistribution in composite beams with web openings	Janiak, Till* Classen, Martin	Till Janiak
12:00 - 12:15	29	Corner bolted steel-to-concrete end-plate connections - Experimental and numerical investigations under biaxial bending	Sonna Donko, Maël (1, 2)* Couchaux, Maël (2) Boudot, Jean-Pierre (1) Boulle, Nicolas (1)	Jean-Pierre Boudot Maël Sonna Donko
12:15 - 12:30	172	Bending behaviour of non-rigid connected steel-timber composite beams – An experimental and numerical parameter study	Böhm, Noah* Kühn, Bertram Vogelsberg, Achim	Noah Böhm
12:30 - 12:45	173	Steel-timber composite structures with semi-rigid beam-to-column joints: Overview and perspectives towards a design for disassembly & reusability	Turgut, Alper* Hervé, Degée Henriques, José	Alper Turgut
12:45 - 13:00	15	Derivation of Cross-Sectional Properties of a Two-Layered 3D Composite Beam Element with Partial Connection	Wardi, Yassir* Keo, Pisey Hjiyaj, Mohammed	Yassir Wardi

# SESSIONS – THURSDAY, 27 JUNE

Session A4	A	Members	Thursday 13:45 - 17:00	Chairman: Professon Arne Aalberg
Schedule	Paper	Title	Authors	Presenter
13:45 - 14:00	78	Flexural Buckling of Mild and High-Strength Steel Hot-Rolled Sections – Numerical Investigations	Saufnay, Loris Demoncea, Jean-François	Loris Saufnay
14:00 - 14:15	174	The limit between plated and shell behaviour on polygonal cross sections	Manoleas, Panagiotis (1)* Andrade, Pedro (2) Koltsakis, Efthymios (3) Lagerqvist, Ove (4)	Panagiotis Manoleas
14:15 - 14:30	195	Structural analysis and design of steel bridge deck	Kleppe, Svein-Rune (1, 2) Aalberg, Arne (2)	Svein-Rune Kleppe
14:30 - 14:45	72	Lateral-torsional buckling of mono-symmetric tapered beams: extension of the new Eurocode 3 design method	Lebastard, Maxime (1, 2)* Couchaux, Maël (2) Bureau, Alain (1) Hjjaj, Mohammed (2)	Maxime Lebastard
14:45 - 15:00	131	Simplified Interaction Formulae and their Accuracy in Hollow Sections	Ludwig, Christian	Christian Ludwig
15:00 - 15:15	161	Effect of joints on the buckling resistance of angle members made of S460 steel – Experimental investigations	Antonodimitraki, Sofia (1, 2)* Bezias, Marios-Zois (1) Maesschalck, Jan (3) Anwaar, Muhammad-Omer (4) Vayas, Ioannis (2) Demonceau, Jean-François (1)	Sofia Antonodimitraki
<b>Coffee</b>				
15:45 - 16:00	87	Shear resistance of plate girders with trapezoidally corrugated webs and reinforced web openings	Wang, Jian (1)* Li, Zheng (2) Euler, Mathias (1)	Jian Wang
16:00 - 16:15	196	Batten plates effectiveness on the flexural and lateral – torsional buckling of steel I members	Subotić, Petar* Lučić, Duško	Petar Subotić
16:15 - 16:30	109	Extension of the direct strength method to fabricated I-profiles under compression	Langone, Gregory* Shamlooeei, Majid Rossi, Barbara	Gregory Langone
16:30 - 16:45	135	Elastic buckling of slender steel plates with perforations	Naraidoo, Elenor	Elenor Naraidoo
16:45 - 17:00	120	The Stabilizing Effect of Pipe Shoes on Steel Beams	Romo-Leroux, Ivan (1)* Montenegro, Lance (1) Tankova, Trayana (2)	Ivan Romo-Leroux

# SESSIONS – THURSDAY, 27 JUNE

Session B4	B	Bridge structures: Composite bridges	Thursday 14:00 - 17:00	Chairman: Professor Peter Collin
Schedule	Paper	Title	Authors	Presenter
14:00 - 14:15	123	Experimental analysis of a perforated-rib-type shear connector with circular holes and centered rebar under static and cyclic loading	Kneidinger, Lisa* Suppanz, Florian Fink, Josef	Lisa Kneidinger
14:15 - 14:30	85	Development of a design model for perforated-rib-type shear connectors in a novel composite plate perpendicular to their axis	Suppanz, Florian* Kneidinger, Lisa Fink, Josef	Florian Suppanz
14:30 - 14:45	8	Modern solutions for middle span steel-concrete composite bridges in Poland: hybrid girders and rolled sections using high strength steel and weathering steel	Kotakowski, T. Kosecki, W. Windorpski, H. Stempniewicz, A. Bartoszek, B.	Wojciech Lorenc
14:45 - 15:00	134	Model Updating of a Composite Railway Bridge – Case study of the Bryngeå Bridge using error domain model falsification	Hofstetter, Marcel* Leander, John	Marcel Hofstetter
15:00 - 15:15	150	Welded joints in composite steel bridges – service life under variable amplitude loading and different manufacturing conditions	Erlemann, Raphael* Geißler, Karsten	Raphael Erlemann
<b>Coffee</b>				
15:45 - 16:00	12	Biaxial tests on the SCSC-plate as a deck slab of a through bridge	Takács, P.* Holyevác, Gy. Fink, J.	Patrik Takács
16:00 - 16:15	11	Finite element investigation of the biaxial tests of the SCSC plate as the deck plate of a trough bridge	Holyevác, Gy.* Takács, P. Fink, J.	Gy. Holyevác
16:15 - 16:30	151	Constant amplitude fatigue limit of shear bond with headed studs	Voß, Stephan* Geißler, Karsten	Stephan Voß
16:30 - 16:45	47	Investigation of modelling-dependent system reliability for open steel-concrete composite girder bridges	Martinolli, Stefan Taras, Andreas	Stefan Martinolli
16:45 - 17:00	21	Arkitektbron - an optimized pedestrian bridge	Mirsch, Malin (1)* Le Veau, Niklas (1) Schakel, Dennis (2) van IJselmuiden, Kees (3)	Malin Mirsch

# SESSIONS – THURSDAY, 27 JUNE

Session C4	C	Steel structures: Cold-formed and thin walled structures	Thursday 13:45 - 17:00	Chairman: D.-ing Thomas Misiek
Schedule	Paper	Title	Authors	Presenter
13:45 - 14:00	66	Reinforcing thin sheet metal using Wire Arc Additive Manufacturing for application in free-form façade construction	Grebner, Philipp* Ojeda, Juan* Lange, Jörg Knaack, Ulrich Knaack	Philipp Grebner
14:00 - 14:15	95	Effect of geometric imperfections on compression of back-to-back I-beam columns with modified cross-sectional shape - scanning and experimental tests	Pawlak, Aleksandra M.	Aleksandra Pawlak
14:15 - 14:30	31	Effect of geometric imperfections on compression of back-to-back I-beam columns with modified cross-sectional shape - numerical study	Michal, Plust	Michal Plust
14:30 - 14:45	40	Evaluation of Elastic Local Buckling Strength of Lipped Channel Section Members Considering Shear Bending Interaction	Omori, Yuta Kosuke, Sato*	Yuta Omori
14:45 - 15:00	91	Cold-Formed Steel Moment-Resisting Connection: Numerical Study	Safarani, Ward Alarab* Tondolo, Francesco	Ward Alarab Safarani
15:00 - 15:15	119	Investigations on the load-bearing behaviour of slotted steel sections as substructures in multi-shell facades	Gesa, Pauli* Kuhnhenne, Markus	Gesa Pauli
<b>Coffee</b>				
15:45 - 16:00	176	Optimized shelf uprights through the use of high-strength steels	Ungermann, Dieter (1) Lemański, Tim (1)* Brune, Bettina (1) Weiß-Borkowski, Nathalie (2) Schulz-Beenken, Anne (2)	Tim Lemański
16:00 - 16:15	18	Structural, fire, and energy performance of cold-formed steel members with of staggered slotted perforations: achievements, challenges, and opportunities	Gatheeshgar, Perampalam	Gatheeshgar Perampalam
16:15 - 16:30	128	Analytical and experimental investigations of trapezoidal sheet diaphragms: Comparative study on the shear stiffness of the analyzed configurations	Lőrincz, Barnabás A. (1)* Nagy, Zsolt (1) Kelemen, Andrea R. (1) Lőrincz-Molnár, Szabolcs B. (2)	Barnabás Attila Lorincz
16:30 - 16:45	223	Strength Reductions Due to Interaction of Buckling Modes in Equal Lipped Angle Compression Members	K.C. , Aswathy M.V. , Anil Kumar	Aswathy Kothanath Chriayilkalam
16:45 - 17:00	32	Performance of CFS floor to wall subassemblies under accidental loss of support	Raffoul, Samar (1) Li, Yi (2) Sonkar, Chanchal (1, 3) McCrum, Daniel (1)*	Daniel McCrum

# SCIENTIFIC PROGRAMME – FRIDAY, 28 JUNE

Schedule / Room	A - Lilla Salen	B - Värdsarvet	C - Olga Bardh
09:00 – 11:00	Session A5 <i>Steel structures - Connection Fatigue</i>	Session B5 <i>Bridges structures – Assessment and technical life extension</i>	
11:00 – 11:20	Coffee		
11:20 – 12:50	Session A6 <i>Bridges structures – Steel bridges</i>	Session B6 <i>Fire</i>	Session C6 (11:05-12:50) <i>Sandwich panels</i>
13:00 – 13:45	Keynote speakers – Conclusion		
13:45 – 14:30	Lunch		

## Keynote speakers

13:00	<b>Ida-Linn Näzelius</b> , H2 Green Steel <i>First new steel plant in Europe in 50 years - H2 Green Steel's mega project in Boden</i>
13:20	<b>Gert Nilsson</b> , Jernkontoret <i>Competence for transformation – a steel industry challenge</i>
13:40	<b>Ove Lagerqvist</b> <i>Conclusion</i>



# SESSIONS – FRIDAY, 28 JUNE

Session A5	A	Steel structures: Connections - Fatigue	Friday 09:00 - 11:00	Chairman: Professor Mohammad Al-Emrani
Schedule	Paper	Title	Authors	Presenter
09:00 - 09:15	158	S-N-Curve for screw fastenings of trapezoidal steel sheeting	Misiek, Thomas	Thomas Misiek
09:15 - 09:30	76	Fatigue life prediction of welded steel components based on geometric scan data	Lang, Robert	Robert Lang
09:30 - 09:45	14	Fatigue tests on tubular connections with different load ratios to quantify the mean stress effect	Winkler, Matthias* Dürr, André Kling, Maximilian	Matthias Winkler
09:45 - 10:00	115	Multi-axial stresses in intermittent rail welds	Hofmann, Gloria* Kuhlmann, Ulrike	Gloria Hofmann
10:00 - 10:15	68	Fatigue life of Girder with flange thickness transition – experiments and simulations	Röscher, Stefanie* Knobloch, Markus Rauch, Marion	Stefanie Röscher
10:15 - 10:30	127	Fatigue life extension of welded steel structures	Al-Karawi, Hassan* Hedegård, Joakim Al-Emrani, Mohammad	Mohammad Al-Emrani
10:30 - 10:45	70	Fatigue analysis of cruciform welded joints based on E-N curves using numerical methods	Li, Zheng Liu, Qiuyue Ertemann, Raphael* Geißler, Karsten	Raphael Ertemann

# SESSIONS – FRIDAY, 28 JUNE

Session B5	B	Bridge structures: Assessment and technical life extension	Friday 09:00 - 11:00	Chairman: Adj. Prof. Robert Hällmark
Schedule	Paper	Title	Authors	Presenter
09:00 - 09:15	27	Fatigue assessment based on strain measurements of two identical steel truss bridges	Häggström, Jens* Elfgren, Lennart?	Jens H
09:15 - 09:30	113	Steel bridge rehabilitaton strategies in Western Canada	Habel, Katrin* Harvey, David	Katrin Habel
09:30 - 09:45	94	A numerical analysis of a riveted lap joint partially strengthened by high strength steel bolts	Skoglund, Oskar (1, 2)* Leander, John (1)	Oskar Skoglund
09:45 - 10:00	62	Data-based condition assessment of a T-beam bridge with orthotropic plate using strain measurements	Kimpeler, Stefan Geers, Thorben Hoffmeister, Benno	Stefan Kimpeler
10:00 - 10:15	164	Unified monitoring systems for fatigue-critical details on steel bridges	Geers, Thorben Gebler, Achim Hoffmeister, Benno Kimpeler, Stefan	Thorben Geers
10:15 - 10:30	163	Non-preloaded and preloaded connections with injection bolts - Experimental and numerical investigations	Kröger, Lisa* Ungermann, Dieter	Lisa Kröger
10:30 - 10:45	42	Experimental investigation of fatigue damage in orthotropic steel deck under moving vehicles	Karimi, S.* Mirza, O. Mashiri, F. Camille, C.	Olivia Mirza

# SESSIONS – FRIDAY, 28 JUNE

Session A6	A	Bridge structures: Steel bridges	Friday 11:20 - 12:50	Chairman: Ass. Prof. John Leander
Schedule	Paper	Title	Authors	Presenter
11:20 - 11:35	90	Load effects in beams with corrugated webs	Hlal, Fatima* Al-Emrani, Mohammad	Fatima Hlal
11:35 - 11:50	110	Fatigue improvement of welded cover-plates using high-frequency mechanical impact treatment	Al-Emrani, Mohammad* Hedegård, Joakim Anttonen, Jukka-Pekka	Mohammad Al-Emrani
11:50 - 12:05	212	Hot asphaltting on orthotropic bridge decks – investigation on fatigue loading	Geßler, Achim* Händler, Damian Feldmann, Markus	Achim Geßler
12:05 - 12:20	226	Strengthening of steel-concrete bridges by creating composite action using coiled spring pins	Vestman, Victor* Hällmark, Robert Collin, Peter	Victor Vestman
12:20 - 12:35	188	Influence of Cross-Frame Layouts in Horizontally Curved Girder Systems	Thangaraj, Sakthi S.* Subramanian, Lakshmi P.	Sakthi Subbiramani Thangaraj

# SESSIONS – FRIDAY, 28 JUNE

Session B6	B	Fire	Friday 11:20 - 12:50	Chairman: Dr. Joakim Sandström
Schedule	Paper	Title	Authors	Presenter
11:20 - 11:35	5	Component-Based Finite Element Method - for Flush Endplate Connections in Fire	Der, Batuhan Wald, František* Vild, Martin	František Wald
11:35 - 11:50	138	Comparative experimental study of the post fire behaviour of mild, high-strength and ultra-high-strength steel	Uszball, Sara* Knobloch, Markus	Sara Uszball
11:50 - 12:05	82	Post-Fire Residual Stress Predictions in Steel I-Sections	Chellamuthu, Mahalingam* Subramanian, Lakshmi	Mahalingam Chellamuthu
12:05 - 12:20	133	Testing of Post-Fire Susceptibility to Brittle Cracking for X6CrNiTi18-10 Stainless Steel with Austenitic Structure	Maslak, Mariusz* Pazdanowski, Michal Stankiewicz, Marek Zajdel, Paulina	Mariusz Maslak
12:20 - 12:35	86	Experimental Investigations on the Partial Connection Theory in Composite Beams at Elevated Temperatures	Tutzer, Kurt* Mensing, Martin	Kurt Tutzer
12:35 - 12:50	17	Fire performance of a new shear transfer system for CFST columns	Ebrahimi, Mino* Ferrer, Miquel Marimon, Frederic Soltanalipour, Milad Alvarez, Felipe Alonso, Mar Enrique, Juan	Mino Ebrahimi

# SESSIONS – FRIDAY, 28 JUNE

Session C6	C	Sandwich panels	Friday 11:05 - 12:50	Chairman: Dr. Kristo Mela
Schedule	Paper	Title	Authors	Presenter
11:05 - 11:20	157	Influence of Creep on Torsional Restraint Provided to Cold-Formed Z-shaped Purlins by Sandwich Panels	Balázs, Ivan (1) Belica, Andrej (2)* Misiek, Thomas (3)	Thomas Misiek
11:20 - 11:35	143	Experimental studies on the influence of blisters on the load bearing capacity of sandwich panels	Kühn, Annalena* Lange, Jörg Haugwitz, Christoph Kupnik, Mario	Annalena Kühn
11:35 - 11:50	147	Determination of Material Models for Sandwich Panels with PIR Rigid Foam	Steineck, Sonja* Lange, Jörg	Sonja Steineck
11:50 - 12:05	2	Warping torsion in sandwich panels: A numerical parameter study regarding the rotation and stress distribution	Pradhan, Eric Man* Lange, Jörg	Eric Man Pradhan
12:05 - 12:20	169	Numerical Study on Structural Performance of Polyurethane Foam-Filled Built-Up Cold-Formed Steel Members	Vandale, Vinay* Rao, B. N.*	Vinay Sanjay Vandale
12:20 - 12:35	165	Experimental and Numerical Study of Steel-faced Profiled Sandwich Panels with PIR Core Loaded in Flexure	Silwal, Shekhar (1)* Mela, Kristho (1) Ma, Zhongcheng (2)	Shekhar Sitwal
12:35 - 12:50	60	On the global buckling of steel sandwich panels	Janczyk, Kevin* Kuhnhenne, Markus	Kevin Janczyk