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COPENHAGEN 2017

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DTU Civil Engineering
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PROGRAMME

Eurosteel Copenhagen 2017

The 8th European Conference on
Steel and Composite Structures

13-15 September 2017

Eurosteel 2017, Copenhagen
The 8th European Conference on Steel and Composite Structures
13-15 September 2017

Conference Programme
Edited by Jeppe Jönsson

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Denmark

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STEP

A prizewinning roof structure
Ramboll has designed all structures and civil works of the Copenhagen Opera, including the extremely slim cantilevered roof, which stretches 43m over the front plaza.
Measuring 158 m x 90 m the Opera roof is one of the largest roof constructions in the world.
The Copenhagen Opera won "The 2008 IABSE Outstanding Structure Award" because of the innovative design of the roof, which Ramboll has designed in cooperation with Henning Larsen Architects.

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The 8th European Conference on
Steel and Composite Structures

13-15 September 2017

PROGRAMME

Welcome to Eurosteel 2017 Copenhagen

The 8th European Conference on Steel and Composite Structures
13-15 September 2017

The Technical University of Denmark, DTU Civil Engineering and the Danish Steel Institute welcome all delegates to Copenhagen to one of the most important events for steel researchers and professionals. We hope that you will all enjoy the whole conference with all the special events that we have arranged for you. You must enjoy the welcome reception at Copenhagen City Hall, the presentation of the ECCS Steel Design Awards, the Gala dinner including spectacular entertainment. Internationally well-known researchers and practitioners contribute with the following keynote lectures and fantastic papers on the recent and future developments in Australia, United States and Europe:

- Future challenges and developments in the design of steel structures - an Australian perspective.
- Developments in research and assessment of steel structures - Highlights from the perspective of an American researcher.
- European research on steel structures in seismic areas.
- Structural fire design – Developments in research and assessment of fire in steel and composite structures.
- Validation and verification in design of structural steel connections.
- Advances and development needs in the structural design of steel box girders for major bridges.

Historical background

The Eurosteel conferences are organized every third year by academics of European universities on a non-commercial basis to be open and attractive to the entire structural steel community. At each conference, the Steering Committee meets to select the next organizing university and conference chair, improve and upgrade the Eurosteel conference idea, and stress the co-operation with structural steel industry and ECCS. The focus of the Eurosteel conference is on the behaviour of steel and composite structures in the field of civil engineering design and construction. It involves the scientific research community, the professional domain of engineering and architecture, as well as the entrepreneurial world of builders and producers. The previous Eurosteel conferences have been held in Athens (Greece, 1995), Prague (Czech Republic, 1999), Coimbra (Portugal, 2002), Maastricht (Holland, 2005), Graz (Austria, 2008), Budapest (Hungary, 2011) and Naples (Italy, 2014).

This international conference series offers a very important platform to present and discuss a wide range of topics related to a great variety of research, design and construction activities. With more than 500 participants at the conference, we can confidently state that the Eurosteel conference is one of the most important events for European steel researchers, PhD-students, engineers and designers, attracting international delegates from all over the world. Young researchers present their new ideas and research. The conference has an indisputable success with a wide participation from all corners of the world.

Eurosteel 2017

At Eurosteel 2017 keynote lectures and papers are presented in oral parallel sessions and in a parallel poster session. About 500 papers and 14 posters from 48 countries have been accepted for presentation and e-publication.

The European Steel Design Awards presented by the ECCS every second year are awarded at this Eurosteel 2017 conference to encourage the creative and outstanding use of steel in architecture and construction. Outstanding design in steel construction emphasizes the many advantages of steel in construction, production, economy and architecture.

Editor's note

Since knowledge dissemination is important for researchers, the proceedings of Eurosteel 2017 is published, indexed and made available online by Ernst & Sohn in *The online collection for conference papers in civil engineering,* CE/papers, Volume 1, Issue 2+3, September 2017, (Ernst & Sohn Verlag, Berlin). Furthermore, 10 of the best papers have been chosen for special publication in the journal of *Steel Construction –Design and Research*, Vol. 10, 2017, No. 3, August (Ernst & Sohn Verlag, Berlin).

The financial support of funds and other stakeholders is gratefully acknowledged and appreciated. It has enabled us to treat all delegates appropriately during the conference and to publish the electronic proceedings.

The Editor wishes a tremendous success to the conference, for enhancing a fruitful cooperation among all involved stakeholders, like researchers, professionals, associations, companies, operating in the field of the development, promotion, diffusion of the metallic construction culture, with the consciousness that only through this synergy it is possible to face such an enthusiastic challenge. A very special thank you and appraisal goes to the Scientific Committee, without which the whole review process of the papers would have been an impossible task. Special thanks are also addressed to the support staff of DTU Civil Engineering for outstanding assistance with the conference program and e-publication preparations.

Jeppe Jönsson
Editor

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A private fund sponsered the conference with 200.000kr

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- Czech Republic
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- Egypt
- Finland
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- Hungary
- India
- Iran
- Ireland
- Italy
- Japan
- Liechtenstein
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- Romania
- Russia
- Serbia
- Singapore
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Switzerland
- Taiwan
- Turkey
- United Kingdom
- USA
- Vietnam

General information

Conference dates

13 September – 15 September 2017
Copenhagen, Denmark

Conference venue

Scandic Copenhagen Hotel
Vester Soegade 6
1601 Copenhagen
Denmark

On-site Registration & Hospitality desk

Opening hours:

Wednesday, 13 September 2017	07:00 - 16:00 hrs.
Thursday, 14 September 2017	07:30 – 13:15 hrs.
Friday, 15 September 2017	08:00 - 10:00 hrs.

Speakers Lounge

Speakers have to upload and check their presentation as soon as possible in the speakers lounge and at least one break before their session begins.

Opening hours:

Wednesday, 13 September 2017	07:30 - 16:00 hrs.
Thursday, 14 September 2017	08:00 - 16:00 hrs.
Friday, 15 September 2017	08:30 - 13:15 hrs.

Conference badge

To identify all conference participants please wear your badge during the conference.

Access to Programme & Papers

For smartphones, tablets and laptops, online access to the scientific programme and papers is available online during the conference at the password-protected web page:
http://eurosteel.dtu.dk
Username: ******** (See your printed programme)
Password: ******** (See your printed programme)

For laptops, the conference bag contains a USB-stick for direct access to the programme and papers.
Insert the USB-stick, start your file browser (File Explorer), choose the USB-stick and in the root folder click or double click the file:
Eurosteel_2017_Program_as_PDF.pdf
This should start your PDF-viewer.

WIFI

Free wireless internet access is available at the conference venue.

Poster Session

The poster session is on Thursday 14 September from 16.00 – 16.45. The posters should be mounted as soon as possible in the poster session room and in due time before the session begins.

Lunches and coffee breaks

Lunches and coffees are included in your fee and will be available according to the schedule.

Exhibitions

Opening hours for exhibitors: 09.30-16.00

Exhibitors

Exhibitor	Contact	e-mail
AGC Chemicals Europe	Karolina Zielony	Karolina.Zielony@agcce.com
ArcelorMittal	Renaud Barthelemy	renaud.barthelemy@arcelormittal.com
Bladt	Tenna Hørby	tho@bladt.dk
Diamant	Johanna Weitz	johanna@diamant-polymer.de
EDR Medeso	Eivind Berg	eivind.berg@edrmedeso.com
Fatzer	Alexander Strauch	Alexander.Strauch@fatzer.com
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Peikko	Lisa Nielsen	Lisa.Nielsen@peikko.com
Promat	Henrik Fanø	henrik.fano@etexgroup.com
SSAB	Jan Meier	jan.meier@ssab.com
STRAINS	Luciano Tosini	luciano.tosini@strains.fr
Wiley	Nadine Riedel	nriedel@wiley.com


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Social programme

We are delighted to invite you to participate in our social events during the conference.

On Wednesday evening 13 September at 19.00, the Copenhagen City Council is hosting a welcoming reception at Copenhagen City Hall. Entrance to the City Hall is through the Main Entrance facing Rådhusp-ladsen (City Hall Square). It is an easy 10 minutes walk from the Venue. *If you have not booked a ticket when you registered on-line, please ask at the registration & hospitality desk if we have extra tickets.*

On Thursday afternoon 14 September at 17.00, you are invited to participate in the ECCS Steel Design Awards Ceremony where the Eurpean Steel Design Awards 2017 are presented.

On Thursday evening 14 September, the Gala dinner takes place at the Langelinie Pavillonen. It is located on the waterfront promenade with the unrivalled views of The Little Mermaid, the fortress Kastellet and the historical Copenhagen harbour. There will be bus transportation from the conference venue to the Gala dinner after the European Steel Design Awards Ceremony.
It is important to bring your ticket for the dinner. Ask at the registration desk for an available ticket in case you have not yet made the purchase.

On Friday afternoon 15 September 16.30, the next conference and conference organizer will be announced and followed by farewell drinks at the Venue.

ECCS Steel Design Awards Ceremony

European Steel Design Awards 2017

The European Steel Design Awards are presented by ECCS every two years to encourage creative and outstanding use of steel in architecture and construction in Europe.
The Awards are open to steel works designed or produced in the ECCS Full Member countries. The awards are dedicated to the owner, the general contractor, the architects, the engineers and the steelwork contractors of each project in order to esteem the excellence of their work.

European Student Awards for Steel Design

The Student Awards for Steel Design are subcategory awards to outstanding student projects in architectural design using structural steel as a prominent architectural feature. The Awards are open to all ECCS Full Member Associations, which organize a contest for architectural students in their respective country.

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Points of interest

Gala dinner
– Langelinie Pavillonen

Welcome reception
– Copenhagen City Hall

Conference venue
– Scandic Copenhagen Hotel

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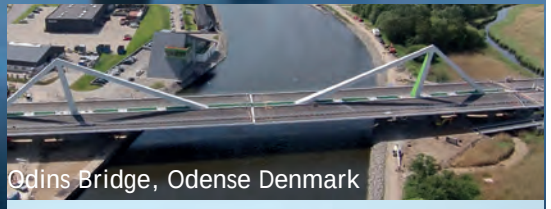
Bridge over Sundsvallfjärden, Sweden



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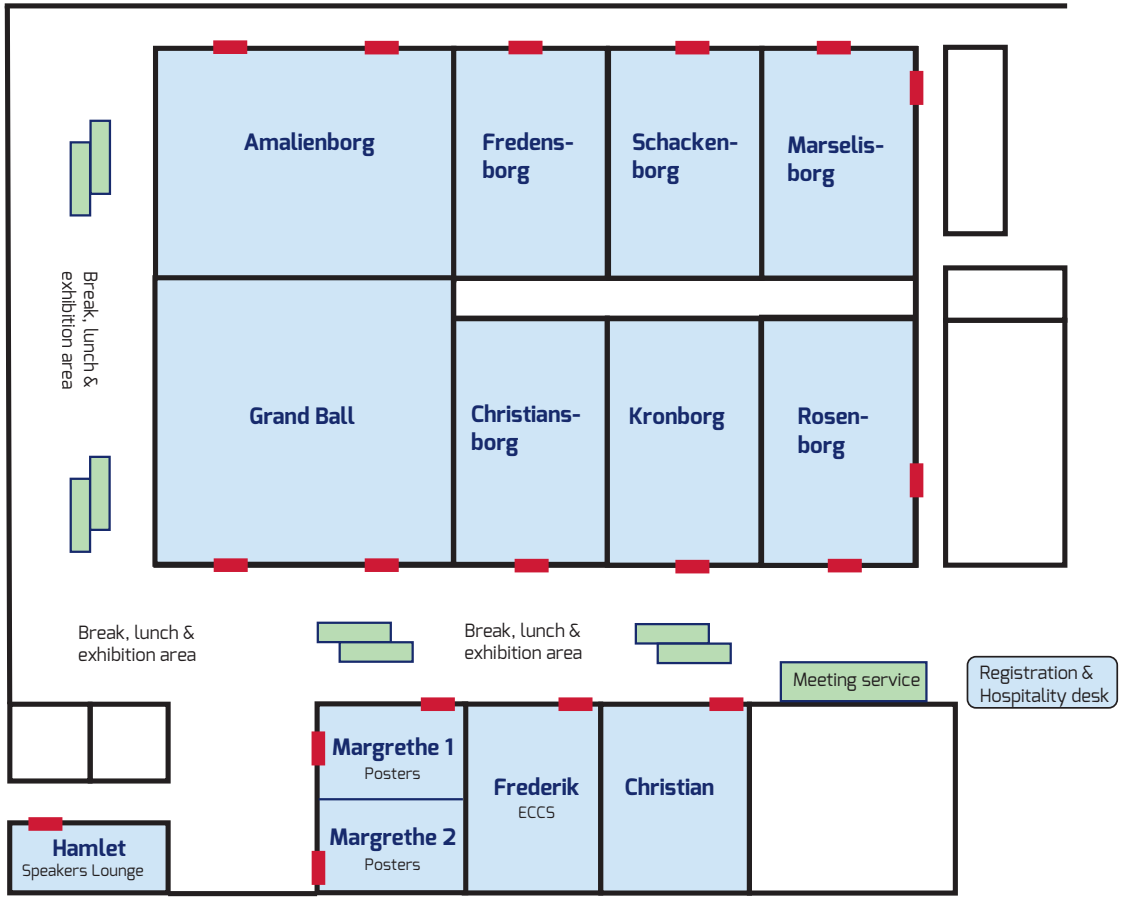
Amalienborg
Fredens-borg
Schacken-borg
Marselis-borg
Break, lunch & exhibition area
Grand Ball
Christians-borg
Kronborg
Rosen-borg
Break, lunch & exhibition area
Break, lunch & exhibition area
Meeting service
Registration & Hospitality desk
Margrethe 1
Posters
Margrethe 2
Posters
Frederik
ECCS
Christian
Hamlet
Speakers Lounge

Programme

Time	Wednesday 13/9 – 2017	Thursday 14/9 – 2017	Friday 15/9 – 2017
	Registration		
08.30 – 08.40	Opening/Welcome	Good morning	Good morning
08.40 – 09.30	Keynote speakers	Keynote speakers	Keynote speakers
09.30 – 10.00	Coffee Break		
10.00 – 12.15	Parallel sessions	Parallel sessions + Steering Committee meeting	Parallel sessions
12.15 – 13.15	Lunch Break		
13.15 – 15.30	Parallel sessions	Parallel sessions	Parallel sessions
15.30 – 16.00	Coffee Break		
16.00 – 17.45	Parallel sessions	Parallel session + Poster session	Presentation of next conference Closure and farewell drinks
17.00		**Steel Design Awards**	
19.00	**Reception at Copenhagen City Hall**		
		Gala dinner	

The ECCS meetings will take place on 12th September in Schackenborg and on 13th and 14th September in Frederik

Programme for Wednesday 13 September

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	**Opening** **Welcome**								
08.40 – 09.05	**Keynote speaker:** Kim Rasmussen Future challenges and developments in the design of steel structures – an Australian perspective								
09.05 – 09.30	**Keynote Speaker:** Benjamin Schafer Developments in research and assessment of steel structures - Highlights from the perspective of an American researcher								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Bolted Connections A	Seismic Resistance A	Composite Structures A	Bridge Structures A	Stability A	High Strength Steel & other Steels A	Fatigue & Fracture A	Eurocode & Codification A	Steel Buildings A
12-15 – 13-15	Lunch								
13.15 – 15.30	Bolted Connections B	Seismic Resistance B	Composite Structures B	Bridge Structures B	Stability B	High Strength Steel & other Steels B	Fatigue & Fracture B	Eurocode & Codification B	Steel Buildings B Innovative Structures A
15.30 – 16.00	Coffee break								
16.00 – 17.45	Bolted Connections C	Seismic Resistance C	Composite Structures C	Bridge Structures C	Stability C	High Strength Steel & other Steels C			Innovative Structures B
19.00 – 20.00	Reception at Copenhagen City Hall								

Programme for Thursday 14 September

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	Good morning								
08.40 – 09.05	**Keynote speaker:** Federico M. Mazzolani European research on steel structures in seismic areas								
09.05 – 09.30	**Keynote speaker:** Markus Knobloch Structural fire design – Developments in research and assessment of fire in steel and composite structures								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Connections A	Seismic Resistance D	Composite Structures D	Bridge Structures D	Stability D	Cold-Formed Structures A	Fire A	Plate & Shells A	Masts &Towers A
12-15 – 13-15	Lunch								
13.15 – 15.30	Connections B	Seismic Resistance E	Composite Structures E	Bolted Connections D	Stability E	Cold-Formed Structures B	Fire B	Plate & Shells B	Steering Committee meeting
15.30 – 16.00	Coffee break								
Schedule/Rooms	Margrethe 1 and Margrethe 2					Cold-Formed Structures C	Fire C	Plate & Shells C	
16.00 – 16.45	Poster Session								
Schedule/Rooms	Grand Ball	Amalienborg	Christiansborg	Fredensborg					
17.00	Steel Design Awards								
	Gala dinner								

Programme for Friday 15 September

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	Good morning								
08.40 – 09.05	**Keynote speaker:** František Wald Validation and verification in design of structural steel connections								
09.05 – 09.30	**Keynote speaker:** Henrik Polk Advances and development needs in the structural design of steel box girders for major bridges								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Connections C	Seismic Resistance F	Composite Structures F	Offshore Structures A	Dynamics & Vibration A	Cold-Formed Structures D	Fire D	Retrofitting Refurbishm. & Sustainability A	Robustness A
12-15 – 13-15	Lunch								
13.15 – 15.30	Connections D	Seismic Resistance G	Composite Structures G	Welded Connections A	Seismic Resistance INNOSEIS Session	Cold-Formed Structures E	Fire E	Retrofitting Refurbishm. & Sustainability B	Architectural Design & Case Studies A
15.30 – 16.00	Coffee break								
16.00 – 16.30	Presentation of next conference Closure and farewell drinks								

Morning sessions Wednesday 13 September from 10.00-12.15

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	**Opening Welcome**								
08.40 – 09.05	**Keynote speaker:** Kim Rasmussen Future challenges and developments in the design of steel structures – an Australian perspective								
09.05 – 09.30	**Keynote Speaker:** Benjamin Schafer Developments in research and assessment of steel structures - Highlights from the perspective of an American researcher								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Bolted Connections A	Seismic Resistance A	Composite Structures A	Bridge Structures A	Stability A	High Strength Steel & other Steels A	Fatigue & Fracture A	Eurocode & Codification A	Steel Buildings A
12-15 – 13-15	Lunch								
13.15 – 15.30	Bolted Connections B	Seismic Resistance B	Composite Structures B	Bridge Structures B	Stability B	High Strength Steel & other Steels B	Fatigue & Fracture B	Eurocode & Codification B	Steel Buildings B Innovative Structures A
15.30 – 16.00	Coffee break								
16.00 – 17.45	Bolted Connections C	Seismic Resistance C	Composite Structures C	Bridge Structures C	Stability C	High Strength Steel & other Steels C			Innovative Structures B

Grand Ball - Bolted Connections – Session A: Wednesday 10.00 – 12.15

Chairman: Prof. František Wald

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	01.01	Erik L. Grimsmo, Arne Aalberg*, Magnus Langseth, Arild H. Clausen	Placement of nut determining failure mode of bolt and nut assemblies
10.15 – 10.30	01.02	Mohammad Reza Shah Mohammadi, Rui Matos*, Carlos Rebelo	**Bobtail® bolt preload loss in wind turbine tower prototype** - Hammerstein-Wiener identification model
10.30 – 10.45	01.03	M. Couchaux*, Anthony Rodier	Behaviour of bolted endplate connections of beams subjected to biaxial bending moments and axial forces
10.45 – 11.00	01.04	Guiomar Vicente*, Rui Simões, Carlos Rebelo	Joints between open section beams and tubular columns - New configuration for semi-rigid and moment resistant bolted joint
11.00 – 11.15	01.05	Rimon A. Samaan*, Ahmed A. I. El-Serwi, Riham A. El-Hadary	Experimental and theoretical study of large capacity extended end-plate moment connection
11.15 – 11.30	01.07	Mohammad Jobaer Hasan, Mahmud Ashraf*, Brian Uy	Numerical investigation on the semi-rigid behaviour of austenitic stainless steel connections
11.30 – 11.45	01.17	Wioleta Barcewicz*	Photogrammetric analysis of thin end-plate deformations in steel and composite joints
11.45 – 12.00	01.09	Yancheng Cai, Ben Young*	Transient state tests of cold-formed stainless steel bolted connections

Amalienborg - Seismic Resistance - Session A: Wednesday 10.00 – 12.15

Chairman: Prof. Federico M. Mazzolani

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	11.01	Vincenzo Macillo, Bianca Bucciero, Maria Teresa Terracciano, Tatiana Pali, Luigi Fiorino*, Raffaele Landolfo	Shaking table tests on cold-formed steel building sheathed with gypsum panels
10.15 – 10.30	11.02	Tatiana Pali, Bianca Bucciero, Maria Teresa Terracciano, Vincenzo Macillo, Luigi Fiorino*, Raffaele Landolfo	In-plane quasi-static cyclic tests on lightweight steel drywall non-structural partition walls
10.30 – 10.45	11.63	Jose Henriques*, Francesco Morelli, Walter Salvatore, Hervé Degée	Seismic protection of gas tanks
10.45 – 11.00	11.04	Nicolas Breton, Robert Tremblay*	Examination of the Canadian provisions for the seismic stability of steel structures
11.00 – 11.15	Short break		
11.15 – 11.30	11.64	Beatrice Faggiano*, Antonio Formisano, Carmine Castaldo, Luca Canicattì, Raffaele Landolfo, Federico Massimo Mazzolani	Seismic behaviour of steel Chevron bracing systems by non-linear dynamic analyses
11.30 – 11.45	11.06	Ali Imanpour, Martin Leclerc, Romain Siguier, Robert Tremblay*	Application of Hybrid Simulation for the Evaluation of the Buckling Response of Steel Braced Frame Columns
11.45 – 12.00	11.65	Ran Li*, Ganping Shu, Zhen Liu, Xiao Lyu, Meihe Chen	An axial type self-centering energy dissipation device with shape memory alloy for seismic mitigation
12.00 – 12.15	11.08	Corrado Chisari, Antonella B. Francavilla, Massimo Latour, Vincenzo Piluso, Gianvittorio Rizzano*, Claudio Amadio	Reliable calibration of cyclic models for steel members

Christiansborg - Composite Structures - Session A: Wednesday 10.00 – 12.00

Chairman: Prof. Dennis Lam

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	08.01	Matthias Braun*, Renata Obiala, Christoph Odenbreit	Numerical simulation of the load bearing behaviour of concrete dowels in slim-floor construction – CoSFB
10.15 – 10.30	08.02	C. Neto, L. F. Costa-Neves *, P. C. G. da S. Vellasco, S. Jordão, A. N. T. Ihaddoudene	Experimental research of multiple perfobond connectors for composite girders
10.30 – 10.45	08.03	Christoph Odenbreit*, Sebastian Nellinger	Mechanical model to predict the resistance of the shear connection in composite beams with deep steel decking
10.45 – 11.00	08.12	Dürr*, FY. Gong, J. Bartenbach	Mega composite columns in plant construction
11.00 – 11.15	Short break		
11.15 – 11.30	08.05	J Y Richard Liew, Mingxiang Xiong, Yan-Bo Wang*	Design of high strength concrete filled tubular columns
11.30 – 11.45	08.07	Teodora Bogdan*, Jean–Claude Gerardy, Donald W. Davies, Nicoleta Popa	Performance and capacity of composite “mega columns” with encased hot rolled steel sections
11.45 – 12.00	08.08	Marko Pavlović*, Milan Veljković	Prefabricated demountable concrete and FRP decks in composite structures
12.00 – 12.15	08.09	Pinelopi Kyvelou*, Leroy Gardner, David A. Nethercot	Design of cold-formed steel composite flooring systems with partial shear connection

Fredensborg - Bridge Structures - Session A: Wednesday 10.00 – 12.15

Chairman: Prof. Ulrike Kuhlmann

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	16.01	Jesper Sørensen*	Bjørnafjorden Suspension Bridge TLP Concept
10.15 – 10.30	16.02	Frédéric Gens, Vincent Servais*	"La Belle Liégeoise", the new footbridge in Liège
10.30 – 10.45	16.03	Balázs Kövesdi*, Péter Dunai, László Dunai	Structural analysis of the historical Széchenyi chain bridge in Budapest
10.45 – 11.00	16.04	José J. Oliveira Pedro*, António J. Reis, Cláudio Baptista	**High Strength Steel (HSS) S690 in highway bridges** - Comparative design
11.00 – 11.15	Short break		
11.15 – 11.30	16.05	Georg Brandstetter*, Felix Schobesberger, Josef Fink	**Evaluation of Simplified Models for Short Span Bridges** - Based on a measured train crossing and included substructure
11.30 – 11.45	16.06	Emanuele Maiorana*, Lorenzo Sartori, Massimiliano Lazzari, Luca Pellizzer	Realization and launching of the Adda-Bitto Viaduct in Italy
11.45 – 12.00	16.09	Hans De Backer, Amelie Outtier, Evy Van Puymbroeck, Philippe Van Bogaert*	Influence of arch bridge skewness
12.00 – 12.15	16.10	Jakob Laigaard Jensen*, Jens Lambertsen, Morten Zinck, Einar Stefansson	Challenges with water ingress in bridge cable systems

Kronborg - Stability - Session A: Wednesday 10.00 – 12.15

Chairman: Prof. Bert H.H. Snijder

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	05.01	Harald Unterweger, Andreas Kampleitner*	**Lattice girders with I-sections and slotted gusset plates -** Load carrying behaviour and ultimate capacity of compression members based on full scale girder tests
10.15 – 10.30	05.02	Matthias Kraus, Silvio Mämpel*, Andrei Crisan	Influence of rails on the stability of crane runway girders
10.30 – 10.45	05.03	Benjamin Launert*, Hartmut Pasternak	**Weld residual stresses effects in the design of welded plate girders** - Simulation and Implementation
10.45 – 11.00	05.04	Břetislav Židlický*, Michal Jandera	Combined loading of slender stainless steel SHS/RHS members
11.00 – 11.15	05.05	Zuo-Lei Du*, Yao-Peng Liu, Siu-Lai Chan, Wei-Qi Tan	A flexibility-based element for second-order inelastic analysis using plastic hinge method
11.15 – 11.30	05.06	Merih Kucukler*, Leroy Gardner, Lorenzo Macorini	Design of web-tapered steel members through a stiffness reduction method
11.30 – 11.45	05.07	Adrian Walter*, Julia Herbersagen, Rebekka Winkler, Markus Knobloch	Structural behaviour of simple steel beams subject to axial compression, biaxial bending moments and torsion
11.45 – 12.00	05.11	Wada Naohiro*, Ikarashi Kikuo, Okada Tadayoshi, Kawabata Yosuke	Local buckling behavior of octagonal hollow cross-section member under axial compression or bending shear
12.00 – 12.15	05.09	Masahiro Aoyama*, Kazuya Mitsui, Atsushi Sato	**Experiment study on square steel tubular columns** - Under compressive axial force with monotonic antisymmetric bending moment

Schackenborg - High Strength Steels & other Steels - Session A: Wednesday 10.00 – 12.15

Chairman: Prof. Kim Rasmussen

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	12.01	Itsaso Arrayago, Esther Real*, Enrique Mirambell, Rolando Chacón	Global plastic design of stainless steel frames
10.15 – 10.30	12.02	Yong-Lin Pi*, Mark Andrew Bradford, Airong Liu	**High Strength Steel I-Section Arches** Inelastic Lateral Buckling and Moment Capacity
10.30 – 10.45	12.03	Sheida Afshan*, Ou Zhao, Leroy Gardner	Buckling curves for stainless steel tubular columns
10.45 – 11.00	12.04	Tian-Yu Ma*, Guo-Qiang Li, Kwok-Fai Chung	Experimental and numerical investigation on the Q690 high strength steel slender columns of welded H-sections under compression
11.00 – 11.15	Short break		
11.15 – 11.30	12.06	Raphaella Oliveira de Araújo, Luciano Rodrigues Ornelas de Lima*, Pedro Colmar Gonçalves da Silva Vellasco and André Tenchini da Silva	Numerical analysis of stainless steel, concrete encased and carbon steel double skin tubular stub columns
11.30 – 11.45	12.07	Danielle M. Ribeiro, Pedro C. G. da S. Vellasco*, Ricardo R. de Araujo, Luciano R. O. de Lima and André T. da Silva	Numerical assessment of stayed austenitic steel columns
11.45 – 12.00	12.08	Yating Liang, Ou Zhao*, Yue-ling Long, Leroy Gardner	Cross-section stability of stainless steel channel sections subjected to combined loading
12.00 – 12.15	12.09	Peter Holmstrøm*, Mogens G. Nielsen, Dritan Cero	Weathering steel – 30 years of experience in Banedanmark

Rosenborg - Fatigue & Fracture - Session A: Wednesday 10.00 – 12.15

Chairman: Dr. Isaac Farreras-Alcover

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	09.01	Andreas Taras*, Harald Unterweger	**Numerical methods for the fatigue assessment of welded joints -** influence of misalignment and geometric weld imperfections
10.15 – 10.30	09.02	Gabriele Zanon*, Oreste S. Bursi, Paolo Scardi, Mirco D'incau, Sergio Raso	Effects of laser cutting on the cut-edge properties of structural steel S355N subjected to high-cycle fatigue
10.30 – 10.45	09.03	André Dürr, Ömer Bucak, Jakob Roth*	Size effect of as-welded and post-weld treated construction details under fatigue loading
10.45 – 11.00	09.04	Weijian Wu*, Henk Kolstein, Milan Veljković, Richard Pijpers and Jos Vorstenbosch-Krabbe	Fatigue behaviour of the closed rib to deck and crossbeam joint in a newly designed orthotropic bridge deck
11.00 – 11.15	09.05	Paul Kugler*, Harald Unterweger	**Remaining fatigue life of steel railway bridges -** Improved models for considering realistic behaviour
11.15 – 11.30	09.06	Yuki Ono*, Koji kinoshita, Sean Ceballos	Continuous fatigue test of welded joint taken from SBHS700 girder specimen
11.30 – 11.45	09.07	Cao Hung Pham*, Daniel Dias-Da-Costa, Tien Dat Pham, John Tu, Gregory J. Hancock, Gwenaelle Proust	**Observations on Fracture Toughness Measurement -** at the corners of G450 cold-formed steel channel sections subjected to tension
11.45 – 12.00	09.08	Theocharis Papatheocharis, Giannoula Chatzopoulou, Spyros A. Karamanos*, Philip C. Perdikaris	Structural behaviour of steel seismic links under strong cyclic loading
12.00 – 12.15	09.09	Balázs József Mecséri*, Balázs Kövesdi	Experimental fatigue analysis of high strength steel structures

Marselisborg - Eurocode & Codification – Session A: Wednesday 10.00 – 12.15

Chairman: Prof. Luis Simoes da Silva

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	13.10	Primož Može*	Angles connected by one leg in tension
10.15 – 10.30	13.02	Luís Simões da Silva*, Trayana Tankova, Liliana Marques, Ulrike Kuhlmann, Andreas Kleiner, Jennifer Spiegler, H.H. Snijder, Rianne Dekker, Andreas Taras, Nicoleta Popa	Safety assessment across modes driven by plasticity, stability and fracture
10.30 – 10.45	13.03	R.W.A. (Rianne) Dekker*, H.H. (Bert) Snijder, J. (Johan) Maljaars	**Bending-shear interaction of steel I-shaped cross-sections** - Statistical investigation
10.45 – 11.00	13.04	Mike Banfi*	The next generation of Eurocode 4
11.00 – 11.15	13.05	Dariusz Czepiżak*, Antoni Biegus	Imperfection force of members under longitudinal action having a variable sign
11.15 – 11.30	13.06	Dirk Jan Peters*, Adam Sadowski, Michael Rotter, Andreas Taras	Calibration of Eurocode design models of thin-walled cylinder under bending with full scale tests
11.30 – 11.45	13.07	Kim Wallin*, Päivi Karjalainen-Roikonen, Pasi Suikkanen	**Extension of EN 1993-1-10 and EN 1993-1-12** - To higher strengths and thinner sections
11.45 – 12.00	13.08	André Beyer*, Abdelouahab Khelil, Nicolas Boissonnade, Alain Bureau	Plastic resistance of U sections under major-axis bending, shear force and bi-moments
12.00 – 12.15	13.09	Tudor-Cristian Stan*, Jeppe Jönsson	Yield stress independent column buckling curves

Christian - Steel Buildings – Session A: Wednesday 10.00 – 12.15

Chairman: Prof. Ivan Baláz

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	15.02	Rui Bai*, Si-Wei Liu and Siu-Lai Chan	Direct analysis of steel frames with non-prismatic sections via tapered beam-column elements
10.15 – 10.30	15.04	Hao Wang, Kang Hai Tan, Bo Yang*, Jing Peng	Parametric study on steel beams with fin-plate joints under falling floor impact
10.30 – 10.45	15.05	Tatsuhiko Sano*, Kikuo Ikarashi, Yuki Ohnishi, Daigo Shirai	The experiment of H-shaped beams with continuous restraint on upper flange
10.45 – 11.00	15.07	Yao-Peng Liu, Siu-Lai Chan, Zuo-Lei Du[a] and Jian-Wei He*	Second-order direct analysis of long-span roof structures
11.00 – 11.15	Short break		
11.15 – 11.30	15.08	M. Bravo-Haro, A.Tsitos, A.Y.Elghazouli*	Influence of deterioration modelling on local deformation demands in steel moment frames
11.30 – 11.45	15.09	Bala A.V. Surampudi, Martin A Butler, James A. Swanson*, Gian Andrea Rassati	High-resolution modelling and design of steel structures
11.45 – 12.00	15.15	Fernanda Fernandes Campista, José Guilherme Santos da Silva*	Dynamic Analysis of Steel-Concrete Composite Building Floors Subjected to Human Rhythmic Activities
12.00 – 12.15	15.16	José Guilherme Santos da Silva*, Rafael Rangel Barboza	Vibration Analysis and Human Comfort Investigation of a Steel-Concrete Composite Building under Nondeterministic Wind Loadings

Afternoon sessions Wednesday 13 September from 13.15 -15.30

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	**Opening Welcome**								
08.40 – 09.05	**Keynote speaker:** Kim Rasmussen Future challenges and developments in the design of steel structures – an Australian perspective								
09.05 – 09.30	**Keynote Speaker:** Benjamin Schafer Developments in research and assessment of steel structures - Highlights from the perspective of an American researcher								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Bolted Connections A	Seismic Resistance A	Composite Structures A	Bridge Structures A	Stability A	High Strength Steel & other Steels A	Fatigue & Fracture A	Eurocode & Codification A	Steel Buildings A
12-15 – 13-15	Lunch								
13.15 – 15.30	Bolted Connections B	Seismic Resistance B	Composite Structures B	Bridge Structures B	Stability B	High Strength Steel & other Steels B	Fatigue & Fracture B	Eurocode & Codification B	Steel Buildings B / Innovative Structures A
15.30 – 16.00	Coffee break								
16.00 – 17.45	Bolted Connections C	Seismic Resistance C	Composite Structures C	Bridge Structures C	Stability C	High Strength Steel & other Steels C			Innovative Structures B

Grand Ball - Bolted Connections – Session B: Wednesday 13.15 – 15.30

Chairman: Prof. Arne Aalberg

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	01.10	Bojan Jakše, Primož Može*	Different approaches towards numerical modelling of bolt bearing
13.30 – 13.45	01.11	Damjan Lisea, Primož Može*	Numerical analysis of full strength heavy beam-to-column bolted connection
13.45 – 14.00	01.12	Mario D'Aniello, Mariana Zimbru*, Massimo Latour, Antonella Francavilla, Raffaele Landolfo, Vincenzo Piluso, Gianvittorio Rizzano	Development and validation of design criteria for free from damage steel joints
14.00 – 14.15	01.13	Edouard Cavène, Sébastien Durif*, Abdelhamid Bouchaïr, Evelyne Toussaint	Experimental study of cover-plate bolted joints with large or slotted holes
14.15 – 14.30	01.14	Szymon Swierczyna*, Walter Wuwer	Tests of alternately loaded single-cut joints with blind bolts
14.30 – 14.45	01.15	Slobodanka Jovašević*, Carlos Rebelo, Marko Pavlović, Milan Veljković	Numerical investigation of preloaded gusset plate connections between polygonal built-up members
14.45 – 15.00	01.16	Fabienne Pennec*, Sébastien Durif, Aliou Badara Camara, Jean-Louis Robert, Abdelhamid Bouchaïr	Fatigue behaviour analysis of bolts in tee-stub steel connections
15.00 – 15.15	01.08	Yan-Bo Wang*, Yi-Fan Lyu and Guo-Qiang Li	Bolted bearing connection with high strength steel and grade 12.9 bolt
15.15 – 15.30	01.18	Giovanni Ferrante Cavallaro, Antonella Bianca Francavilla, Massimo Latour*, Vincenzo Piluso, Gianvittorio Rizzano	Optimization of the pre-loading procedure for high-strength bolts of FREEDAM connections

Amalienborg - Seismic Resistance - Session B: Wednesday 13.15 – 15.30

Chairman: Prof. Aurel Stratan

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	11.09	Paolo Castaldo*, Elide Nastri, Vincenzo Piluso , Alessandro Pisapia	Validation of Probabilistic Theory of Plastic Mechanism Control by Means of Monte Carlo Simulations
13.30 – 13.45	11.10	Paolo Castaldo, Elide Nastri, Vincenzo Piluso*, Alessandro Pisapia	Probabilistic theory of plastic mechanism control
13.45 – 14.00	11.11	Christoforos A. Dimopoulos*, Fabio Freddi, Theodore Karavasilis	Rocking damage-free steel column base with friction devices: Development of advanced 3D finite element models in Abaqus
14.00 – 14.15	11.12	Hugo Augusto*, José Miguel Castro, Carlos Rebelo, Luís Simões da Silva	Derivation of the cyclic behaviour of components in bolted end-plate beam-to-column joints using FEM
14.15 – 14.30	Short break		
14.30 – 14.45	11.13	Cristian Vulcu, Dan Dubină*, Nicolae Popa, Ladislau Vekas, Gheorghe Ghiță, Tudor Sireteanu, Istvan Borbath, Radu Oprescu	Hybrid seismic protection system: Buckling restrained brace of nano-micro composite magneto rheological damper
14.45 – 15.00	11.14	Ke Ke*, Yiyi Chen, Michael C.H. Yam	Seismic performance of high-strength-steel frame with buckling hinge beams in energy dissipation bays
15.00 – 15.15	11.15	Francisco Cedrón, Ahmed Y. Elghazouli*	Seismic behaviour of single layer cylindrical lattice steel shells
15.15 – 15.30	11.16	Li Yan-wen*, Li Guo-qiang, Sun Fei-fei	Seismic performance evaluation of MRFS with dissipative continuous columns

Christiansborg – Composite Structures - Session B: Wednesday 13.15 – 15.30

Chairman: Prof. Enrique Mirambell

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	08.10	Kathleen Lauwens*, Jonas Douchy, Maarten Fortan, Itsaso Arrayago, Enrique Mirambell, Ann Van Gysel, Barbara Rossi	Experimental study of ferritic stainless steel composite slabs
13.30 – 13.45	08.11	André Plumier, Hervé Degée*	The SMARTCOCO project: A research push for hybrid structures
13.45 – 14.00	08.04	Markus Schäfer*	**Limits of plastic design for composite beams -**Requirements for slim and compact composite sections
14.00 – 14.15	08.13	Tzanetis Vogiatzis*, Aris Avdelas	Structural performance assessment of steel frames with reinforced concrete walls
14.15 – 14.30	Short break		
14.30 – 14.45	08.14	Harshad Varsani, Ee Loon Tan*, Balbir Singh	Behaviour of innovative demountable shear connectors subjected to combined shear and axial tension
14.45 – 15.00	08.15	Dennis Lam*, Jie Yang, Asif Mohammed	Axial behaviour of concrete filled lean duplex stainless steel square hollow sections
15.00 – 15.15	08.16	Kevin Wolters*, Maik Kopp, Markus Feldmann, Martin Claßen, Johannes Schäfer	Static shear capacity of small-scaled pin shear connectors
15.15 – 15.30	08.17	Gavin Lume*, Kim J. R. Rasmussen, Zhong Tao, Lin-Hai Han	Experimental behaviour of high-strength thin-walled concrete filled steel tubular stub columns

Fredensborg – Bridge Structures - Session B: Wednesday 13.15 – 15.30

Chairman: Techn. Dir. Henrik Polk

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	16.08	Vincent de Ville de Goyet*, Yves Duchêne, Arnaud Propson	The dynamic behaviour of the third Bosporus Bridge
13.30 – 13.45	16.11	Stephanie Breunig*, Ulrike Kuhlmann	Experimental tests on the fatigue behaviour of thick-plate trough railway bridges
13.45 – 14.00	16.12	Riccardo Stroscio*	Winning steel solution for flat arch bridge
14.00 – 14.15	16.13	Jens Christian Kærn*, John Elnegaard Hansen	Queensferry crossing cable-stayed composite bridge
14.15 – 14.30	Short break		
14.30 – 14.45	16.15	Ahmed S. H. Suwaed, Theodore L. Karavasilis*	Experimental evaluation of a novel demountable shear connector for accelerated repair or replacement of precast steel-concrete composite bridges
14.45 – 15.00	16.16	Riccardo Stroscio*	Medium span steel-concrete composite bridges: plate girders or box girders
15.00 – 15.15	16.17	Bungo Nishioka*, Yusuke Imagawa, Osamu Ohyama	N-M-Q interaction of cross sections in steel-concrete double composite girder bridges
15.15 – 15.30	16.18	Jannik Gawlista, Marcel Kasper, Marcus Schraml*, Werner Brand	**DYNA® link anchor box** - Innovative structure for anchoring stay cables

Kronborg – Stability - Session B: Wednesday 13.15 – 15.30

Chairman: Prof. Ahmer Wadee

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	05.10	Trayana Tankova*, João Pedro Martins, Luís Simões da Silva, Liliana Marques	Numerical model for the buckling behaviour of tapered steel members based on experimental tests
13.30 – 13.45	05.08	Ivan Balázs*, Jindřich Melcher	**Lateral-torsional buckling of beams of monosymmetrical cross-sections loaded perpendicularly to the axis of symmetry -** - Theoretical analysis
13.45 – 14.00	05.12	Kazuya Mitsui* Atsushi Satob, Masahiro Aoyamac	Effect of initial imperfection on elasto-plastic behavior of SHS columns under axial force with bending moment
14.00 – 14.15	05.13	Si-Wei Liu, Yao-Peng Liu*, Liang Chen, Siu-Lai Chan	Efficient static and dynamic analysis of steel frames by one-element-per-member models
14.15 – 14.30	05.14	Harald Unterweger*, Markus Kettler, Sarah Loschan	**Lateral torsional buckling of steel beams** - Effect of discrete flexible intermediate supports at the upper flange
14.30 – 14.45	05.15	John Michael Rotter*, Adam Jan Sadowski	Development of circular tube slenderness classifications under axial and bending actions
14.45 – 15.00	05.16	Sara Pourkhorshidi, Karim Abedi*	Stability behavior of graded dented cylindrical steel shells under the action of combined external and axial pressure
15.00 – 15.15	05.17	Barry Rosson*	Modeling the stiffness reduction conditions of steel beam-columns
15.15 – 15.30	05.18	Jelena Dobrić*, Zlatko Marković, Dragan Budjevac, Milan Spremić	Maximum chord slenderness ratio of compressed stainless steel closely spaced built-up members

Schackenborg – High Strength Steel and other Steels - Session B: Wednesday 13.15 – 15.30

Chairman: Prof. Leroy Gardner

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	12.10	Michaela Gkantou*, Marios Theofanous, Charalampos Baniotopoulos	Structural response of high strength steel hollow sections under combined biaxial bending and compression
13.30 – 13.45	12.11	Chen Suwen*,Chen Xing, Wang Yan-Bo, Lu Zhili, Li Guo-qiang	Experimental and numerical studies on Q690D welded Box-section columns under cyclic loading
13.45 – 14.00	12.12	Cheng Chen*, Ming-Shan Zhao, Tat-Ching Fung, Sing-Ping Chiew, Chi-King Lee	Influence of welding on mechanical properties of high strength steel butt joints
14.00 – 14.15	12.13	Adam Jan Sadowski*, J. Michael Rotter, Thomas Ummenhofer	On recent characterisations of the post-yield properties of structural carbon steels
14.15 – 14.30	Short break		
14.30 – 14.45	12.14	Georgios Kokosis, Michaela Gkantou , Marios Theofanous*, Samir Dirar	Ultimate response and design of stainless steel continuous beams
14.45 – 15.00	12.15	Raphael Freire, Pedro C. G. da Silva Vellasco, André Tenchini da Silva*, Luciano Rodrigues Ornelas de Lima	Structural performance of stainless lap bolted joints
15.00 – 15.15	12.17	Kristo Mela*, Teemu Tiainen, Markku Heinisuo	Economical design of high strength steel trusses using multi-criteria optimization
15.15 – 15.30	12.18	Jia-Lin M, Tak-Ming Chan, Ben Young*	Experimental investigation on cold-formed high strength steel circular hollow sections under combined compression and bending

Rosenborg – Fatigue & Fracture - Session B: Wednesday 13.15 – 15.30

Chairman: Dr. Jakob Laigaard Jensen

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	09.10	João Ribeiro*, Aldina Santiago, Constança Rigueiro	Shear damage evaluation of bolted steel joints
13.30 – 13.45	09.11	Feifei Sun, Ben Xiao*, Yunfeng Zhang	Acoustic emission signal characteristics of damage accumulation in non-buckling steel plate shear wall
13.45 – 14.00	09.12	Lars Sieber*, Richard Stroetmann	Assessment of old mild steel structures related to brittle fracture
14.00 – 14.15	09.13	Mike Tibolt*, Bertram Kühn, Marc May	**The right choice of steel** - Towards an optimized choice of the steel grade for toughness assessment
14.15 – 14.30	Short break		
14.30 – 14.45	09.15	Isaac Farreras Alcover*, Paw Lee Sørensen, Niels Bitsch	**Fatigue life prediction of New Little Belt Bridge steel deck under a cracked pavement section** - Comparison between a monitoring-based and a FE modelling approaches
14.45 – 15.00	09.16	Philippe Van Bogaert*	Edge clamping effect on the fatigue resistance of an orthotropic steel bridge deck
15.00 – 15.15	09.17	Dominik Jungbluth*, Natalie Stranghöner	Fatigue life of marked steel components
15.15 – 15.30	09.18	Patrik Takacs*, Josef Fink	Innovative composite deck slab for railway bridges - Analysis of the fatigue behaviour of the shear connectors using the strain-life method

Marselisborg - Eurocode & Codification - Session B: Wednesday 13.15 – 15.30

Chairman: Dr. Rianne Dekker

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	13.01	H.H. Snijder*, R.W.A. Dekker, P.A. Teeuwen	**Net cross-section failure of steel plates at bolt holes** - Numerical work and statistical assessment of design rules
13.30 – 13.45	13.11	Pedro Borges Dinis, Dinar Camotim*, Luís Vieira	DSM design approach for hot-rolled steel angle columns
13.45 – 14.00	13.12	I. Baláž*, Y. Koleková	**Resistances of I- and U-sections** - Combined bending and torsion internal forces
14.00 – 14.15	13.13	Luís Macedo*, José Miguel Castro	Earthquake loss assessment of steel moment-resisting frames designed according to EC8
14.15 – 14.30	13.14	José Miguel Castro*, Miguel Araújo, Luís Macedo	Seismic assessment and strengthening of existing steel moment-resisting frame buildings: the European EC8-3 and current challenges
14.30 – 14.45	13.15	Dimitris G. Loulelis, George A. Papagiannopoulos, Dimitri E. Beskos*	**Seismic design of steel moment resisting frames** - Modal strength reduction factors including strength deterioration and panel zone effects
14.45 – 15.00	13.16	Rachid Annan, Martin Bechtold, Heinz Friedrich, Roman Kemmler, Thomas Misiek*, Veikko Numminen, Daniel C. Ruff	**Design of tension components** - Revision and further development of EN 1993-1-11
15.00 – 15.15	13.17	Pedro C. G. da S Vellasco*, Luciano R. O. de Lima, Luís Simões da Silva, Rui Simões, Helena Gervásio	A comprehensive assessment of eurocode 3 pt. 1.1 & NBR 8800 steel design codes
15.15 – 15.30	13.18	Marian Antoni Giżejowski*, Anna Maria Barszcz	**Advanced analysis of braced steel frames** - Modelling accounting for the post-limit behaviour of compressed angle braces

Christian - Steel Buildings - Session B: Wednesday 13.15 – 14.30

Chairman: Dr. Thomas Hansen

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	15.10	Vasilis Karlos*, George Solomos, Martin Larcher	Probabilistic analysis of steel columns under blast induced loads
13.30 – 13.45	15.11	Scott Hamel*, Kara Peterman	**Lab testing and modelling of thermal break assemblies** - Mitigating structural penetrations in building envelopes
13.45 – 14.00	15.12	Mehrdad Lotfollahi*, Mohamad Mehdi Alinia, Ertugrul Taciroglu	On imperfection-sensitivity evaluation of BMRF systems: Buckling and post-buckling responses
14.00 – 14.15	15.13	Roxane Van Mellaert*, Kristo Mela, Teemu Tiainen, Markku Heinisuo, Geert Lombaert, Mattias Schevenels	Discrete sizing optimization of trussed steel portal frames according to Eurocode 3
14.15 – 14.30	15.17	Yevgen Goli-Oglu*, Zibrandt Greisen	**Progress in the development of production of heavy plates.** **-** S355-S460ML till 100 mm at NLMK DanSteel

Christian – Innovative Structures - Session A: Wednesday 14.45 – 15.30

Chairman: Techn. Dir. Ulrik Støttrup-Andersen

Schedule	ID	Authors and presenters*	Title
14.45 – 15.00	19.01	Thomas Krausche*, Benjamin Launert, Hartmut Pasternak	A study on the prediction of welding effects in steel box girders
15.00 – 15.15	19.02	Diana Faiella, Simona Viscovo, Elena Mele*	Exploring the potentials of metal foams in structural elements for civil/building applications
15.15 – 15.30	19.03	Peter Madsen Nordestgaard*, Casper Højgaard Arndt, Patrik Rizvan, Jens Husbjerg[a]	**Amager bakke** - Design challenges for a steel building with a recreational roof

Afternoon sessions Wednesday 13 September from 16.00 – 17.45

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	**Opening Welcome**								
08.40 – 09.05	**Keynote speaker:** Kim Rasmussen Future challenges and developments in the design of steel structures – an Australian perspective								
09.05 – 09.30	**Keynote Speaker:** Benjamin Schafer Developments in research and assessment of steel structures - Highlights from the perspective of an American researcher								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Bolted Connections A	Seismic Resistance A	Composite Structures A	Bridge Structures A	Stability A	High Strength Steel & other Steels A	Fatigue & Fracture A	Eurocode & Codification A	Steel Buildings A
12-15 – 13-15	Lunch								
13.15 – 15.30	Bolted Connections B	Seismic Resistance B	Composite Structures B	Bridge Structures B	Stability B	High Strength Steel & other Steels B	Fatigue & Fracture B	Eurocode & Codification B	Steel Buildings B Innovative Structures A
15.30 – 16.00	Coffee break								
16.00 – 17.45	Bolted Connections C	Seismic Resistance C	Composite Structures C	Bridge Structures C	Stability C	High Strength Steel & other Steels C			Innovative Structures B

Grand Ball - Bolted Connections – Session C: Wednesday 16.00 – 17.45

Chairman: Dr. ir. Assoc. Prof Jean-François Demonceau

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	01.19	Giovanni Ferrante Cavallaro, Antonella Bianca Francavilla, Massimo Latour*, Vincenzo Piluso, Gianvittorio Rizzano	Cyclic behaviour of friction materials for FREEDAM connections
16.15 – 16.30	01.20	Natalie Stranghöner, Dominik Jungbluth*, Nariman Afzali	Preloading of stainless steel bolting assemblies
16.30 – 16.45	01.21	M. Couchaux*, P.O. Martin, A. Rodier	Static and cyclic behaviour of bolted gusset plate connections: Numerical and analytical modelling
16.45 – 17.00	01.23	Antonella B. Francavilla*, Massimo Latour, Vincenzo Piluso, Gianvittorio Rizzano	Seismic design of full-strength full-ductility extended endplate beam-to-column joints
17.00 – 17.15			
17.15 – 17.30			
17.30 – 17.45			

Amalienborg - Seismic Resistance - Session C: Wednesday 16.00 – 17.45

Chairman: Prof. Ioannis Vayas

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	11.17	Francesca Barbagallo, Melina Bosco*, Edoardo M. Marino, Pier Paolo Rossi	Seismic retrofitting of concentrically braced frames by rocking walls and viscous dampers
16.15 – 16.30	11.18	Alessandro Zona*, Graziano Leoni, Andrea Dall'Asta	Seismic analysis of innovative hybrid steel concrete coupled walls
16.30 – 16.45	11.19	Máté Hazay*, László Gergely Vigh	**Seismic fragility assessment of steel frames** - Application of advanced reliability analysis
16.45 – 17.00	11.21	Marco Baiguera, George Vasdravellis*, Theodore L. Karavasilis	Experimental evaluation and explicit fracture simulations of stainless steel seismic dampers
17.00 – 17.15	11.23	Melina Bosco*, Aurelio Ghersi, Edoardo M. Marino, Pier Paolo Rossi	Influence of the uniaxial material model of steel on the seismic response of steel structures
17.15 – 17.30	11.24	Ivan Curkovic*, Davor Skejic, Ivica Dzeba	Impact of column flexural stiffness on behaviour of steel plate shear walls
17.30 – 17.45	11.57	Pierre-Olivier Martin*, Anthony Rodier, Maël Couchaux, Alper Kanyilmaz, Hervé Degée	Assessment of the ductile behaviour of CBF structures considering energy dissipation in bolted joints

Christiansborg – Composite Structures - Session C: Wednesday 16.00 – 17.45

Chairman: Prof. Marian Antoni Giżejowski

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	08.18	Adina Vătăman, Adrian Ciutina*, Daniel Grecea	Influence of composite beams on the seismic behaviour of EBF
16.15 – 16.30	08.19	Fangying Wang*, Ben Young, Leroy Gardner	Tests on concrete-filled double skin tubular beams with circular stainless steel outer tubes
16.30 – 16.45	08.20	Vincent Kvočák, Daniel Dubecký, Viktória Kožlejová*	Experimental verification of composite using push-out tests
16.45 – 17.00	08.21	Chihiro Hirama*, Takashige Ishikawa, Akie Hisagi	**Shear strength of headed stud push-out tests** - Comprehensive literature review focusing on slab type, failure mode, and large-diameter headed stud
17.00 – 17.15	08.22	Bo Wu, Chengwei Peng*	Axially compressive behaviours of steel tubes filled with post-pouring concrete and precast segments containing DCLs and FC
17.15 – 17.30	08.23	Moustafa I. Moharram*, Dan V. Bompa*, Ahmed Y. Elghazouli	Performance and design of shear-keys in hybid RC beam and steel column systems
17.30 – 17.45	08.25	Marco Fasan, Chiara Bedon, Claudio Amadio*	The influence of the concrete slab on the behaviour of steel-concrete composite joints for braced frames

Fredensborg – Bridge Structures - Session C: Wednesday 16.00 – 17.45

Chairman: Prof. Harald Unterweger

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	16.14	Tim Zinke*, Thomas Ummenhofer, Katrin Lenz, Sarah Schneider, Tabea Beck	Operational, ecological and economical assessment of steel railway bridges
16.15 – 16.30	16.20	Nelson Loaiza, Carlos Graciano*, Rolando Chacón, Euro Casanova	Influence of bearing length on the patch loading resistance of multiple longitudinally stiffened webs
16.30 – 16.45	16.21	Jan Bujnak*, Jozef Gocála, Richard Hlinka	Evaluation of existing railway bridges
16.45 – 17.00	16.22	Janusz Hołowaty*, Bernard Wichtowski	**Remarks on the material testing of historical railway bridges** - Steelworks built from 1873 to 1950
17.00 – 17.15	16.23	Nelson Loaiza, Carlos Graciano*, Rolando Chacón, Euro Casanova	A comparative analysis of longitudinal stiffener cross-section for slender I-girders subjected to patch loading
17.15 – 17.30	16.31	Nikolaos Karamichalis*, Simon Benfield, Hussain Rafiu	Use of API specified steel tubes for infrastructure applications in Europe
17.30 – 17.45			

Kronborg – Stability - Session C: Wednesday 16.00 – 17.45

Chairman: Prof. Zlatko Markovic

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	05.19	Juliusz Kuś*	Lateral-torsional buckling of steel beams with tapered flanges and web
16.15 – 16.30	05.20	Balázs Kövesdi, Balázs Somodi*	Modified Ayrton-Perry formula for flexural buckling of HSS welded box sections
16.30 – 16.45	05.21	Markus Kettler*, Harald Unterweger	**Bolted steel angles in compression** - Influence of realistic end supports
16.45 – 17.00	05.22	Josef Machacek, Radek Pichal*	Stainless steel prestressed stayed columns
17.00 – 17.15	05.23	Jialiang Yu, M. Ahmer Wadee*	Optimal prestressing of triple-bay prestressed stayed columns
17.15 – 17.30	05.24	Charlotte Mercier*, Abdelouahab Khelil, Alain Pamies	New interaction formulae for sensitive structures to the second order effects
17.30 – 17.45	05.28	Atsushi Sato*, Tetsuro Ono	**Deformation capacity of steel column under combined loading** - Compressive axial force with double curvature bending moment

Schackenborg – High Strength Steel and other Steels - Session C: Wednesday 16.00 – 17.45

Chairman: Dr. Kristo Mela

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	12.05	Xiong Zhou, Shao-Bo Kang, Bo Yang*, Shi-Dong Nie	**Global buckling behaviour of welded Q460GJ steel box columns:** Experimental Study and Numerical Simulations
16.15 – 16.30	12.16	Andrea Toffolon*, Andreas Taras	Numerical investigation of the local buckling behaviour of high strength steel circular hollow sections
16.30 – 16.45	12.19	Qian Zhu, Shidong Nie, Bo Yang*, Gang Xiong, Guoxin Dai	Experimental investigation on residual stresses in welded thick-walled I-shaped sections fabricated from Q460GJ structural steel plates
16.45 – 17.00	12.20	Jan Mařík, Michal Jandera*	Mechanical properties of cold-formed stainless steel
17.00 – 17.15	12.21	Rolando Chacón*, Itsaso Arrayago, Enrique Mirambell, Esther Real	Cyclic loading in stainless steel links under lateral loads
17.15 – 17.30	12.22	Fatemeh Javidan*, Amin Heidarpour, Xiao-Ling Zhao, Riadh Al-Mahaidi	**Seismic performance of high capacity hybrid beam columns** - Comprising of high strength steel tubes subjected to lateral cyclic loading
17.30 – 17.45	12.23	Gang Shi*, Xun Wang, Yong Zhang	Research on low-yield-point steels in Tsinghua University

Christian – Innovative Structures - Session B: Wednesday 16.00 – 17.45

Chairman: Techn. Dir. Ulrik Støttrup-Andersen

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	19.06	Peter Madsen Nordestgaard, Mikkel Wyrtz*, Henrik Tinning	**The Blue Planet** - A simple building concept for spectacular geometry
16.15 – 16.30	19.04	Elena Mele*	**Diagrid: the renaissance of steel structures for tall buildings** - geometry, design, behaviour
16.30 – 16.45	19.05	Kwesi Okutu, Buick Davison*, Jon Carr	CLT-steel composite slimfloor construction: An investigation of mechanical behaviour using finite element software
16.45 – 17.00	19.07	Vincent de Ville de Goyet*, Yves Duchene, Frédéric Gens, Sébastien Seret	**The steel roof of the new Lille Stadium** - Its mechanical scheme, its assembly and erection sequences
17.00 – 17.15	19.08	Ole Vanggaard*, Hans Chr. Weidemann, Peter Madsen Nordestgaard	**College of Falkonergården, Frederiksberg, Denmark** - Structural and architecturally innovative multifunctional steel hall
17.15 – 17.30	19.10	Thomas Simoni, Peter Madsen Nordestgaard, Hans Chr. Weidemann*	**Hyperbolic paraboloid shape shell structure** - As roof for an outdoor music stage
17.30 – 17.45			

Morning sessions Thursday 14 September from 10.00-12.15

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	Good morning								
08.40 – 09.05	**Keynote speaker:** Federico M. Mazzolani European research on steel structures in seismic areas								
09.05 – 09.30	**Keynote speaker:** Markus Knobloch Structural fire design – Developments in research and assessment of fire in steel and composite structures								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Connections A	Seismic Resistance D	Composite Structures D	Bridge Structures D	Stability D	Cold-Formed Structures A	Fire A	Plate & Shells A	Masts &Towers A
12-15 – 13-15	Lunch								
13.15 – 15.30	Connections B	Seismic Resistance E	Composite Structures E	Bolted Connections D	Stability E	Cold-Formed Structures B	Fire B	Plate & Shells B	Steering Committee meeting
15.30 – 16.00	Coffee break								
Schedule/Rooms	Margrethe 1 and Margrethe 2					Cold-Formed Structures C	Fire C	Plate & Shells C	
16.00 – 16.45	Poster Session								
Schedule/Rooms	Grand Ball	Amalienborg	Christiansborg	Fredensborg					
17.00	Steel Design Awards								
	Gala dinner								

Grand Ball - Connections – Session A: Thursday 10.00 – 12.15

Chairman: Prof. Cem Topkaya

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	03.01	Yvonne Ciupack*, Lukáš Ledecký , Hartmut Pasternak, Vitali Fischer, Elisabeth Stammen, Klaus Dilger	**Bonded steel joints under cyclic loading** - Study on structural behaviour und fatigue
10.15 – 10.30	03.02	Pedro Andrade*, Ove Lagerqvist, Rui Simões, Milan Veljkovic	**Structural assessment of a column splice with opened slotted holes** - Finger Connection
10.30 – 10.45	03.03	Konstantinos A. Skalomenos*, Hironari Shimada, Masahiro Kurata, Masayoshi Nakashima	Feasibility of hybrid simulation for testing steel connections of braces with intentional eccentricity
10.45 – 11.00	03.05	Job Duarte da Costa*, Renata Obiala, Christoph Odenbreit	Experimental investigations on semi-continuous encased composite joints
11.00 – 11.15	Short break		
11.15 – 11.30	03.06	Frida Pettersson, Gian A. Rassati*, James A. Swanson, Thomas M. Burns	A study on the behaviour of steel beam-column connections to deep wide flange columns for seismic applications
11.30 – 11.45	03.07	Michał Malendowski*, Ian Burgess, Adam Glema	Robustness in fire of a new type of beam-to-column connection
11.45 – 12.00	03.09	Mariana Zimbru*, Mario D'Aniello, Eliana Inca Cabrera, Raffaele Landolfo, Attilio De Martino	Performance assessment and design methodology of free from damage moment resisting frames
12.00 – 12.15	03.10	Roberto Tartaglia, Mario D'Aniello*, Silvia Costanzo, Raffaele Landolfo, Attilio De Martino	Seismic design and performance of extended stiffened end-plate joints

Amalienborg - Seismic Resistance - Session D: Thursday 10.00 – 12.15

Chairman: Prof. Vincenzo Piluso

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	11.25	Fabio Freddi*, Christoforos A. Dimopoulos, Theodore L. Karavasilis	Rocking damage-free steel column base with friction devices: Design procedure and global seismic response of buildings
10.15 – 10.30	11.26	Ion Vlad*, Mirela Nausica Vlada	The seismic design of a building having a dual type structural system in Romania
10.30 – 10.45	11.27	Bo-li Zhu*, Yan-Lin Guo	Elastic buckling load and load resistance of core-separated assembled BRB confined by two concrete-infilled tubes
10.45 – 11.00	11.28	Gaetano Della Corte*, Gaetano Cantisani, Raffaele Landolfo	**Seismic response of built-up steel columns with semi-continuous base-plate connections** - Experimental results vs. theoretical predictions
11.00 – 11.15	11.29	Alexander Hartloper*, Dimitrios Lignos	Updates to the ASCE-41-13 provisions for the nonlinear modeling of steel wide-flange columns for performance-based earthquake engineering
11.15 – 11.30	11.30	A. Santiago, L. Simoes da Silva, L.C. Fernandes da Silva, Ferrante Cavallaro G. A.Francavilla, M. Latour, V. Piluso, G. Rizzano*	Experimental behaviour of base plate joints equipped with self-centering system and friction dampers
11.30 – 11.45	11.62	Chavdar Penelov, Irena Hadzhiyaneva, Borislav Belev*	A numerical study on the seismic performance of experimentally-tested steel single-storey concentrically braced frames
11.45 – 12.00	11.32	Georgi Bonchev, Borislav Belev*, Imad Mualla	Linked columns with friction dampers as a technique for seismic retrofit of steel moment resisting frames
12.00 – 12.15	11.33	Rajarshi Das*, Alessandro Zona, Bram Vandoren, Hervé Degée	Performance evaluation of an innovative HCW system - With shear dissipative links

Christiansborg - Composite Structures - Session D: Thursday 10.00 – 12.15

Chairman: Dr. ir. Assoc. Prof Jean-François Demonceau

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	08.27	Alireza A. Chiniforush, Hamid Valipour*, Ali Akbarnezhad, Mark Bradford	**Steel-timber composite (STC) beams** - Numerical simulation of long-term behaviour
10.15 – 10.30	08.28	Eliza Feidaki, George Vasdravellis*	Push out tests of a novel shear connection mechanism for use in demountable precast composite beams
10.30 – 10.45	08.29	Fangying Wang*, Ben Young, Leroy Gardner	Experimental investigation of concrete-filled double skin tubular stub columns with ferritic stainless steel outer tubes
10.45 – 11.00	08.30	Nina Gluhović*, Zlatko Marković, Milan Spremić, Marko Pavlović	**Experimental investigation and specific behaviour** - of X-HVB shear connectors in prefabricated composite decks
11.00 – 11.15	Short break		
11.15 – 11.30	08.31	Bartosz Grzeszykowski*, Elżbieta Danuta Szmigieraa	Analysis of the load transfer between materials in composite concrete encased steel columns loaded axially
11.30 – 11.45	08.33	Nauzika Kovács*, Balázs Kövesdi, Mansour Kachichian, Máté Ferenc Frank	**Full scale test on steel-concrete composite beams** - Investigation of innovative shear connectors
11.45 – 12.00	08.34	Haiying Wan*, Ran Feng, Tangying Li	Influence of profiled steel sheet on the load-carrying capacity of concrete composite slabs with rebar truss
12.00 – 12.15	08.35	Mojtaba Farahi*, Amin Heidarpour, Xiao-Ling Zhao, Riadh Al-Mahaidi	Compressive behavior of concrete filled double skin sections consisting of corrugated plates and ultra-high strength steel corner tubes

Fredensborg - Bridge Structures - Session D: Thursday 10.00 – 12.15

Chairman: PhD Jens Christian Kærn

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	16.07	Bence Jáger*, Balázs Kövesdi, László Dunai	**Flange buckling resistance of trapezoidal web girders** - Experimental and numerical study
10.15 – 10.30	16.24	Eiki Yamaguchi*, Hiroyuki Tsuji, Yukito Tanaka	Load-carrying capacity of steel girder damaged by collision
10.30 – 10.45	16.25	Dieter Ungermann, Svenja Holtkamp*, Markus Feldmann, Ronny Kühne, Dennis Rademacher	**Hot-dip galvanized composite dowel strips in bridge construction** - The combination of two advantageous developments
10.45 – 11.00	16.26	Jens Brolev Marcussen*	Design and construction of composite bridges
11.00 – 11.15	Short break		
11.15 – 11.30	16.27	Carmine Molinaro*, Roberto Sorge, Gennaro Fiscina*	Fabrication activities and quality aspects of the Third Bosphorus Bridge orthotropic steel deck
11.30 – 11.45	16.28	Kjeld Thomsen* Christian Riis Petersen	**High speed railway bridge - Copenhagen and Ringsted – TP 30** - The longest composite railway girder bridge in Denmark
11.45 – 12.00	16.29	Evy Van Puymbroeck*, Wim Nagy, Ken Schotte, Zain Ul-Abdin, Hans De Backer	Determination of the residual stress distribution of steel bridge components by modelling the welding process
12.00 – 12.15	16.30	Yushu Liu*, Guobiao Lou, Xiaochen Ju, Xiaoguang Liu	Safety evaluation of a large-span double-deck cable-stayed steel bridge under fire

Kronborg - Stability - Session D: Thursday 10.00 – 12.15

Chairman: Assoc. Prof. Michael Joachim Andreassen

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	05.26	Nicole Schillo, Andreas Taras*, Markus Feldmann	Reliability assessment for local buckling of plates
10.15 – 10.30	05.27	Marian Antoni Giżejowski*, Radosław Bronisław Szczerbaa, Marcin Daniel Gajewskib	**Resistance of mono-axially bent beams of welded I-sections** - FEM verification of Eurocode's buckling curve formulation
10.30 – 10.45	05.25	Yue Zhang, Bo Yang*, Gang Xiong, Mohamed Elchalakani, Shidong Nie	Lateral torsional buckling investigation on welded Q460GJ structural steel unrestrained singly-symmetric beams under a point load
10.45 – 11.00	05.29	Morgan A. Rendall, Gregory J. Hancock, Kim J.R. Rasmussen*	Interaction curves for local and distortional buckling of polygonal tubes in combined torsion and axial loading
11.00 – 11.15	05.30	Marcin Krajewski*, Piotr Iwicki	Stability and load bearing capacity of a braced truss under upward wind loading
11.15 – 11.30	05.31	Jort Winkel*, Nikolaos Kostis, Dirk Jan Peters, Sjors Harry Jan van Es	Experiments and fem-simulations of local buckling of sand-filled tubular piles
11.30 – 11.45	05.32	Maryam Poursharifi, Karim Abedi*, Mohammadreza Chenaghloua	Experimental and Numerical Study on the Collapse Behavior of an All-Steel Accordion Force Limiting Device
11.45 – 12.00	05.33	Marian Antoni Giżejowski*, Radosław Bronisław Szczerba, Marcin Daniel Gajewski	**LTB resistance of rolled I-section beams** - FEM verification of Eurocode's buckling curve formulation
12.00 – 12.15	05.37	Przemysław Krystosik*	On stability of unbraced steel frames with semi-rigid joints

Schackenborg – Cold-formed Structures - Session A: Thursday 10.00 – 12.15

Chairman: Prof. Dan Dubina

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	07.01	Van Vinh Nguyen, Gregory J. Hancock, Cao Hung Pham*	**New developments in the Direct Strength Method (DSM)** - for design of cold-formed steel sections under localised loading
10.15 – 10.30	07.02	André Dias Martins*, Dinar Camotim, Rodrigo Gonçalves, Pedro Borges Dinis	**Distortional-global interaction in lipped channel Beams** - Part I: Mechanics and elastic behaviour
10.30 – 10.45	07.03	André Dias Martins*, Dinar Camotim, Pedro Borges Dinis	**Distortional-global interaction in lipped channel beams** - Part II: Strength, relevance and DSM design
10.45 – 11.00	07.04	Edward Steau*, Poologanathan Keerthan, Mahen Mahendran	Web crippling design of hollow flange channel beams under one flange load cases
11.00 – 11.15	07.05	Myuran Kathekeyan*, Mahen Mahendran	Fatigue life assessment of cold-formed steel roof battens
11.15 – 11.30	07.06	Gabriel B. dos Santos*, Leroy Gardner, Merih Kucukler	Numerical determination of plastic collapse loads for sections under concentrated transverse forces
11.30 – 11.45	07.07	Smail Kechidi*, David C. Fratamico, Nouredine Bourahla, José M. Castro, and Benjamin W. Schafer	Numerical study of screw fasteners in built-up CFS chord studs
11.45 – 12.00	07.08	Christian Merkl, Andrea Toffolon, Andreas Taras*	**Experimental and numerical study of the behaviour of eccentrically loaded cold-formed channel sections** – determination of an optimal load eccentricity
12.00 – 12.15	07.09	Marek Šorf*, Michal Jandera	Trapezoidal sheet hangers and concentrated or linear load distribution in profiled sheeting

Rosenborg – Fire - Session A: Thursday 10.00 – 12.15

Chairman: Prof. Ian Burgess

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	10.01	François Hanus*, Dario Zaganelli, Louis-Guy Cajot, Matthias Braun	Analytical methods for the prediction of fire resistance of “reinforced” slim floor beams
10.15 – 10.30	10.02	Kamila Cábová*, Nikola Lišková, Martin Benýšek, Filip Zeman, František Wald	Numerical simulation of fire-resistance test of steel beam
10.30 – 10.45	10.03	Gisèle Bihina*, Bin Zhao	Numerical investigation on the fire behaviour of steel beams with local fire protection damages
10.45 – 11.00	10.04	Saani Shakil*, Wei Lu, Jari Puttonen	Behaviour of plane frames of high strength steel in fire
11.00 – 11.15	10.05	Wing Kei Ho*, Yuner Huang	Experimental investigation on ferritic stainless steel post-fire mechanical properties
11.15 – 11.30	10.06	Lei Xu*, Shijun Yang, Jia Cui	**Fire performance of CFS walls with web-perforated studs** – A numerical investigation
11.30 – 11.45	10.07	Nicola Tondini*, Jean-François Demonceau	Numerical analysis of the fire resistance of high-strength steel circular columns
11.45 – 12.00	10.08	Ana Espinós, Vicente Albero, Manuel L.* Kamila Cábová, Antonio Hospitaler, Carmen Ibáñez	Application of advanced materials for enhancing the fire performance of slim-floors
12.00 – 12.15	10.09	Élio Maia*, Carlos Couto, Paulo Vila Real, Nuno Lopes	Critical temperatures of members with class 4 cross-section

Marselisborg – Plate & Shells - Session A: Thursday 10.00 – 12.15

Chairman: Prof. J. Michael Rotter

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	04.01	Adam J. Sadowski, Oluwole Kunle Fajuyitan*, M. Ahmer Wadee	Buckling of very short elastic cylinders with weld imperfections under uniform bending
10.15 – 10.30	04.02	Katharina Rohr*, Peter Knoedel, Thomas Ummenhofer	Plastic behaviour of polygonal hollow sections in bending
10.30 – 10.45	04.03	Anna Gorbachov*, Natalie Stranghöner, J. Michael Rotter	Buckling behaviour of axially compressed cylindrical shells made of stainless steel
10.45 – 11.00	04.04	Jie Wang*, Adam J. Sadowski	Buckling of elastic cylindrical shells under symmetric but non-uniform bending moment distributions
11.00 – 11.15	04.05	Mariusz Maslak*, Michal Pazdanowski, Janusz Siudut, Krzysztof Tarsa	Analysis type influence on the durability prognosis for a steel tank corroded shell
11.15 – 11.30	04.06	Thomas Hansen*	**Post-buckling strength of plate girders subjected to shear** - Experimental verification
11.30 – 11.45	04.07	Andreas Jäger-Ca*ñás*, Hartmut Pasternak	On the axial buckling of very thin-walled cylindrical shells
11.45 – 12.00	04.08	Vahid Pourostad*, Antonio Zizza, Ulrike Kuhlmann	Investigations on the buckling behaviour of slender high strength steel plates under multiaxial stresses
12.00 – 12.15	04.09	Filip Ljubinković*, João Pedro Martinsa, Luís Simões da Silvaa	**Cylindrically curved steel panels in bridge design** - Buckling and post-buckling behaviour under shear stresses

Christian – Masts & Towers - Session A: Thursday 10.00 – 12.15

Chairman: Dr. Jurgen Becque

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	18.01	Rasmus Magdal Christensen*, Mogens Gunhard Nielsen, Ulrik Støttrup-Andersen	**Effective vibration dampers** - Mast, towers and chimneys
10.15 – 10.30	18.02	Ulrik Støttrup-Andersen*, Mogens Gunhard Nielsen, Thomas Brink Laursen	Optimisation of masts and towers
10.30 – 10.45	18.03	Serap Ciliz*, Bahadir Tunc, Saziye Gulden Guler	**Comparative analysis of steel telecommunication tower** - By using V shaped & L shaped hot rolled steel profiles under design & fabrication stage
10.45 – 11.00	18.04	Andreas Spiliopoulos, Maria-Eleni Dasiou, Ioannis Vayas*	Experimental investigations of members from angle sections
11.00 – 11.15	Short break		
11.15 – 11.30	18.05	Mahmoud Alhalaby*, Yong Wang	Second-order effects of cantilever concrete filled double skin tube (CFDST) transmission towers
11.30 – 11.45	18.06	Mohammad Reza Shah Mohammadi*, Muhammad Farhan, Carlos Rebelo, Milan Veljković	Preliminary transition piece design for an onshore wind turbine
11.45 – 12.00			
12.00 – 12.15			

Afternoon sessions Thursday 14 September from 13.15 - 15.30

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	Good morning								
08.40 – 09.05	**Keynote speaker:** Federico M. Mazzolani European research on steel structures in seismic areas								
09.05 – 09.30	**Keynote speaker:** Markus Knobloch Structural fire design – Developments in research and assessment of fire in steel and composite structures								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Connections A	Seismic Resistance D	Composite Structures D	Bridge Structures D	Stability D	Cold-Formed Structures A	Fire A	Plate & Shells A	Masts &Towers A
12-15 – 13-15	Lunch								
13.15 – 15.30	Connections B	Seismic Resistance E	Composite Structures E	Bolted Connections D	Stability E	Cold-Formed Structures B	Fire B	Plate & Shells B	Steering Committee meeting
15.30 – 16.00	Coffee break								
Schedule/Rooms	Margrethe 1 and Margrethe 2					Cold-Formed Structures C	Fire C	Plate & Shells C	
16.00 – 16.45	Poster Session								
Schedule/Rooms	Grand Ball	Amalienborg	Christiansborg	Fredensborg					
17.00	Steel Design Awards								
	Gala dinner								

Grand Ball – Connections - Session B: Thursday 13.15 – 15.30

Chairman: Prof. Marian Antoni Gizejowski

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	03.11	Marina D'Antimo*, Jean-François Demonceau, Massimo Latour, Gianvittorio Rizzano, Jean-Pierre Jaspart	Experimental investigation of the creep effect on prestressed bolts used in innovative friction connections
13.30 – 13.45	03.12	Tobias Mähr*, Miguel Espinha, René Ziegler	**Global structural modelling of space frame structures with consideration of joint behaviour** - An integral analysis approach
13.45 – 14.00	03.13	Viktor Budaházy*, László Dunai	Experimental study on cyclic plastic behaviour of steel joint components
14.00 – 14.15	03.14	A. Ben Larbi, M. Couchaux*, A. Bouchaïr	Steel connections with thermal barrier for nearly zero-energy buildings (NZEB)
14.15 – 14.30	Short break		
14.30 – 14.45	03.15	Marcin Gryniewicz, Jerzy Kazimierz Szlendak*	Experimental tests and model study on self-drilling screws connections subjected to shear
14.45 – 15.00	03.16	Panagiotis Manoleas*, Efthymios Koltsakis, Milan Veljkovic	**Multiplanar K-joints on cold-formed open sections** - An experimental study with high strength steels
15.00 – 15.15	03.17	Marta Kurejková*, František Wald, Lubomír Šabatka, Jaromír Kabeláč	Design of haunches in structural steel joints
15.15 – 15.30	03.18	Rafael Scudelari de Macedo*, Luiz Francisco Scudelari de Macedo	Anchor bolt tensile load distribution: Effects of the column base-plate design - Wide flange column bases - loading on additional line of bolts

Amalienborg – Seismic Resistance - Session E: Thursday 13.15 – 15.30

Chairman: Prof. Dan Dubina

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	11.34	Mahmoud S.A. Shaheen*, Kim J.R. Rasmussen	Cross-aisle seismic behaviour of drive-in rack systems
13.30 – 13.45	11.35	Beatrice Faggiano*, Antonio Formisano, Generoso Vaiano, Raffaele Landolfo, Federico Massimo Mazzolani	Numerical study on steel braces under reversed cyclic loads
13.45 – 14.00	11.36	Ahmad Fayeq Ghowsi*, Dipti Ranjan Sahoo	Influence of type of loading protocols and restraining parameters on cyclic response of steel BRB
14.00 – 14.15	11.37	An-Chien Wu*, Keh-Chyuan Tsai	Hybrid tests of a full-scale two-story buckling-restrained braced RC frame
14.15 – 14.30	Short break		
14.30 – 14.45	11.38	T.Y. Yang*, Omid Sargazi, Lisa Tobber	Investigation of innovative steel concentrically braced frame connections using advanced analytical models
14.45 – 15.00	11.67	Gulen Ozkula*, John Harris, Chia-Ming Uang	Cyclic backbone curves for steel wide-flange columns: A numerical study
15.00 – 15.15	11.40	Abdelkarim Dib*, László Gergely Vigh	**Cyclic bending of multi-stiffened plate girders** - Numerical model development and analysis
15.15 – 15.30	11.42	Ioan Both*, Ciprian Zub, Aurel Stratan, Dan Dubina	Cyclic behaviour of European carbon steels

Christiansborg – Composite Structures - Session E: Thursday 13.15 – 15.30

Chairman: Prof. Zlatko Markovic

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	08.36	Yadong Jiang*, Bledar Kalemi, António Silva, José Miguel Castro, Ricardo Monteiro	Numerical modelling of circular CFST members and assessment of multi-axial stress state effects
13.30 – 13.45	08.37	Carmen Ibañez, Ana Piquer, David Hernández-Figueirido*, Óscar Martínez-Ramos	Experimental analysis of concrete-filled double skin tubular columns subjected to eccentric loads
13.45 – 14.00	08.38	António Silva, Yadong Jiang*, José Miguel Castro, Ricardo Monteiro	Experimental characterisation of the flexural behaviour of rubberized concrete-filled steel tubular members
14.00 – 14.15	08.39	Daniel Dan*, Valeriu Stoian, Sorin-Codrut Florut, Alexandru Fabian, Emanuela Boita	Experimental investigations on performance enhancement of composite steel concrete shear walls by using steel fibre reinforced concrete
14.15 – 14.30	Short break		
14.30 – 14.45	08.40	Juan Chen*, Jianguo Nie, Chengye Zhou	Numerical investigation of mechanical properties of multi-planar concrete-filled steel tubular joints
14.45 – 15.00	08.41	Nozomu Taniguchi*, Shinya Satake, Weiwei Lin, Masaaki Hiroe, Takeaki Kubo	Renewal method for aged steel bridges with polymer cement mortar
15.00 – 15.15	08.42	Luke Denoord, Harshad Varsani, Ee Loon Tan, Balbir Singh*	Composite behaviour of headed stud shear connectors with BubbleDeck flooring
15.15 – 15.30	08.43	Ji-Su Kang*, Jeong-Su Ju, Seul-Ki Hwang, Yong-Pil Park, Kyong-Soo Yom, Sung-Mo Choi	Composite effect of binding frames installed inside composite mega column (more than 1m in width)

Fredensborg – Bolted Connections - Session D: Thursday 13.15 – 15.30

Chairman: Prof. Buick Davison

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	01.24	Recep Aydın*, Ercan Yüksel, Nesrin Yardımcı	Moment-resisting beam-to-column connections of corrugated web I sections
13.30 – 13.45	01.25	Aleksander Kozłowski*, Krzysztof Ostrowski	The influence of end–plate joints stiffening on the rotation capacity
13.45 – 14.00	01.26	Davor Skejic*, Gianvittorio Rizzano, Ivan Curkovic	Reliability assessment of flange cleat beam-to-column joints
14.00 – 14.15	01.27	M. Lopez*, A. Loureiro, R. Gutierrez, J. M. Reinosa	Numerical analysis E-stubs with four bolts per row.
14.15 – 14.30	Short break		
14.30 – 14.45	01.28	Paula Moura Leite Vilela*, Hermes Carvalho, Gílson Queiroz	Modelling of bolted connections by the finite element method
14.45 – 15.00	01.29	Aurel Stratan*, Cosmin Maris, Dan Dubina, Calin Neagu	Experimental prequalification of bolted extended end plate beam to column connections with haunches
15.00 – 15.15	01.30	Hwan-Seon Nah*, Sung-Mo Choi	Evaluation on clamping load of high strength bolts under ambient environment
15.15 – 15.30			

Kronborg – Stability - Session E: Thursday 13.15 – 15.30

Chairman: Prof. Benjamin William Schafer

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	05.34	Hans De Backer, Jan Mys, Evy Van Puymbroeck*	Influence of temporary bridge decks on continuously welded rails
13.30 – 13.45	05.35	B.W.E.M. (Dianne) van Hove*, H.H. (Bert) Snijder, Herm Hofmeyer, Noud Altinga	Extended design method for in-plane stability of haunched sway portal frames
13.45 – 14.00	05.36	Ígor José Mendes Lemes, Rafael Cesário Barros, Everton André Pimentel Batelo, Ricardo Azoubel da Mota Silveira*	An efficient approach to limiting the elastic range in advanced analysis of steel structures via RPHM
14.00 – 14.15	05.38	Shun Yoshimoto*, Atsushi Sato	**Design procedure development of light gauge built-up beam to ensuer yield bending strength** - Antisymmetric bending moment
14.15 – 14.30	05.39	Mihai Nedelcu*, Adina-Ana Mureșan	GBT-based Finite Element formulation for elastic buckling analysis of conical shells
14.30 – 14.45	05.40	Ailin Zhang*, Qingfang Zhang, Ziqin Jiang	Warping constant equations for hot rolled steel channel sections
14.45 – 15.00	05.41	Vasiliki S. Pantazi, Dimitrios S. Sophianopoulos*	A unified catastrophe theory approach for the in-plane buckling of steel arches under point gravitational loading
15.00 – 15.15	05.42	Kosuke Sato*, Kikuo Ikarashi	Evaluation of ultimate strength and plastic deformation capacity of square hollow section members under bending shear
15.15 – 15.30	05.43	Martin Horáček*, Jindřich Melcher	**Lateral-torsional buckling of beams of double symmetrical and mono-symmetrical cross-sections loaded perpendicularly to the axis of symmetry** - Experimental verification

Schackenborg – Cold Formed Structures - Session B: Thursday 13.15 – 15.30

Chairman: Prof. Dinar Camotim

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	07.10	Daimu Takahashi*, Kikuo Ikarashi, Tomoki Kobashi	Elastic buckling strength of light-gauge built-up member from lipped C-section under compression
13.30 – 13.45	07.11	Vijayakumar Natesan*, Mahendrakumar Madhavan	Rotational behavior of cold formed steel beams connected through clip angles
13.45 – 14.00	07.12	Song Hong Pham*, Cao Hung Pham, Gregory J. Hancock	On the design of cold-formed steel beams with holes in shear using the direct strength method
14.00 – 14.15	07.13	Mandana Abbasi*, Mani Khezri, Kim J. R. Rasmussen	On extending the direct strength method to the design of cold-formed steel built-up columns
14.15 – 14.30	07.14	Ma Magdalena Pastor, Jordi Bonada, Francesc Roure*, Miquel Casafont, Ma Rosa Somalo	**Rack uprights under combined compression and bi-axial bending** - Experimental testing, numerical analysis and European standard approach
14.30 – 14.45	07.15	Francisco Meza, Jurgen Becque*	Experimental and numerical investigation of cold-formed steel built-up stub columns
14.45 – 15.00	07.16	Andrei Crisan*, Matthias Kraus, Andreea Handabut	On the distortional buckling capacity of pallet rack uprights
15.00 – 15.15	07.17	Mahmoud S.A. Shaheen*, Kim J.R. Rasmussen	Design methods for drive-in steel storage racks
15.15 – 15.30	07.18	Péter Hegyi*, László Dunai	**Cold-formed C-sections encased in ultra-lightweight concrete** - Development of a Eurocode-based design method

Rosenborg – Fire - Session B: Thursday 13.15 – 15.30

Chairman: Prof. Markus Knobloch

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	10.10	Guan Quan, Shan-Shan Huang, Ian Burgess*	Influence of beam-end buckling on adjacent beam-column connections in fire
13.30 – 13.45	10.11	Jolanta Bączkiewicz*, Mikko Malaska, Sami Pajunen, Markku Heinisuo	Fire design of rectangular hollow section joints
13.45 – 14.00	10.12	Yomal Dias*, Poologanathan Keerthan, Mahen Mahendran	Numerical modelling of steel sheathed LSF walls under fire conditions
14.00 – 14.15	10.13	Matti V. Leskela*	Bending resistance evaluation of shallow floor beams exposed to fire
14.15 – 14.30	10.14	Ana Espinós*, Vicente Albero, Carmen Ibáñez, Manuel L. Romero, Antonio Hospitaler	Fire design method for eccentrically loaded concrete-filled steel tubular columns based on interaction diagrams
14.30 – 14.45	10.15	Edward Steau*, Poologanathan Keerthan, Mahen Mahendran	Thermal modelling of LSF floor systems made of lipped channel and hollow flange channel section joists
14.45 – 15.00	10.16	Mina Seif*, Jonathan Weigand, Rafaela Peixoto, Luiz Vieira	**Behaviour of high-strength bolts at elevated temperatures** - under double-shear loading
15.00 – 15.15	10.17	Weiyong Wang*, Linbo Zhang	Mechanical properties of high strength Q690 steel at elevated temperatures
15.15 – 15.30	10.18	Dorothy A. Winful*, Katherine A. Cashell, Sheida Afshan, Adrienne M. Barnes, Richard J. Pargeter	Material properties of high strength steel under fire conditions

Marselisborg – Plate & Shells - Session B: Thursday 13.15 – 15.30

Chairman: Prof. Karoly Jarmai

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	04.10	Sara Piculin*, Franc Sinur, Primož Može	**Analysis of stiffened curved panels in compression** - A preliminary numerical study for experimental tests
13.30 – 13.45	04.11	J. Michael Rotter*, Hussain Al Lawati	Strength enhancement in axially compressed cylinders with stepped walls
13.45 – 14.00	04.12	Özer Zeybek, Cem Topkaya*, J. Michael Rotter	**Analysis of silo supporting ring beams** - Resting on discrete supports
14.00 – 14.15	04.13	Andreas Jäger-Ca*ñás**, Hartmut Pasternak	Influence of closely spaced ring-stiffeners on the axial buckling behavior of cylindrical shells
14.15 – 14.30	Short break		
14.30 – 14.45	04.14	Alexander Ecker*, Harald Unterweger	Transfer of axial loads in penstocks **Load carrying behaviour with and without thrust rings**
14.45 – 15.00	04.15	Nol Gresnigt*, Sjors van Es, Spyros Karamanos, Daniel Vasilikis	New design rules for tubes in combined walls in EN1993-5
15.00 – 15.15	04.16	Peter Knoedel*, Thomas Ummenhofer, J. Michael Rotter	Rethinking imperfections in tanks and silos
15.15 – 15.30	04.17	Gabriel Sabau*, Efthymios Koltsakis, Ove Lagerqvist	**Cylindrical shell buckling under a hydraulic constraint** - Numerical study

Afternoon sessions Thursday 14 September from 16.00 – 16.45

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	Good morning								
08.40 – 09.05	**Keynote speaker:** Federico M. Mazzolani European research on steel structures in seismic areas								
09.05 – 09.30	**Keynote speaker:** Markus Knobloch Structural fire design – Developments in research and assessment of fire in steel and composite structures								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Connections A	Seismic Resistance D	Composite Structures D	Bridge Structures D	Stability D	Cold-Formed Structures A	Fire A	Plate & Shells A	Masts &Towers A
12-15 – 13-15	Lunch								
13.15 – 15.30	Connections B	Seismic Resistance E	Composite Structures E	Bolted Connections D	Stability E	Cold-Formed Structures B	Fire B	Plate & Shells B	Steering Committee meeting
15.30 – 16.00	Coffee break								
Schedule/Rooms	Margrethe 1 and Margrethe 2								
16.00 – 16.45	Poster Session					Cold-Formed Structures C	Fire C	Plate & Shells C	
Schedule/Rooms	Grand Ball	Amalienborg	Christiansborg	Fredensborg					
17.00	Steel Design Awards								
	Gala dinner								

Schackenborg – Cold Formed Structures - Session C: Thursday 16.00 – 16.45

Chairman: Prof. Hamid Bouchair

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	07.19	Sivaganesh Selvaraj, Mahendrakumar Madhavan*	**Geometric imperfection measurements on cold-formed steel channels** - An approach using 3D non-contact laser scanner
16.15 – 16.30	07.20	Mani Khezri*, Mandana Abbasi, Kim J. R. Rasmussen	Application of the compound strip method in buckling analysis of cold-formed steel built-up sections
16.30 – 16.45	07.21	Ivan Balázs, Jindřich Melcher, Andrej Belica*, René Oly, Thomas Misiek	Experimental setups for the measurement of the rotational restraint provided to cold-formed Z-purlins by sandwich panels

Rosenborg – Fire - Session C: Thursday 16.00 – 16.45

Chairman: Prof. Dennis Lam

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	10.19	Illia Tkalenko, Alexey Tretyakov *, František Wald, Josef Novak, Radek Stefan, Alena Kohoutková	The steel and fibre-reinforced concrete circular hollow section composite column exposed to fire
16.15 – 16.30	10.20	Kalliopi Zografopoulou, Euripidis Mistakidis*	Numerical simulation of the behaviour of steel members with damaged SFRM fire protection coatings at elevated temperatures
16.30 – 16.45	10.21	Carmen Ibañez*, Vicente Albero, Ana Espinos, Manuel L. Romero, Antonio Hospitaler	Post-fire response of slender concrete-filled steel tubular columns

Marselisborg – Plate & Shells - Session C: Thursday 16.00 – 17.00

Chairman: Prof. Harald Unterweger

Schedule	ID	Authors and presenters*	Title
16.00 – 16.15	04.18	Kamil Słowiński*, Marek Piekarczyk	Determination of the plastic limit load for a cylindrical shell under general loading conditions using FEA
16.15 – 16.30	04.19	Károly Jármai* József Farkas†	Cost comparison of welded cellular plated square box and cellular shell column structures
16.30 – 16.45	04.20	C.J. Brown*, R.J. Goodey, J. Michael Rotter	Bending of rectangular plates subject to non-uniform pressure distributions relevant to containment structures
16.45 – 17.00	04.21	Jakub Marcinowski*, Paweł Błażejewski, Michael Rotter	**Buckling of externally pressurised spherical shells** - Experimental results compared with recent design recommendations

Margrethe 1 and 2 – Poster Session: Thursday 16.00 – 16.45

Poster	Paper	Topic	Authors and presenters*	Title
P02.02 Poster		Welded Connections	M.R.A. Rikken*, R.J.M. Pijpers, H.M. Slota, J. Maljaars	The Influence of a Residual Stress Distribution on the Fatigue Crack Growth Rate
P03.01 Poster	P03.01	Connections	Cristina Campian, Maria Pop*, Nicolae Chira	The influence of the connections between concrete and steel on the joints modelling
P04.01 Poster	P04.01	Plate & Shells	Jakub Dolejš*, Radek Pošta	Failures of stiffened ducts stressed by temperature
P05.01 Poster	P05.01	Stability	Jakub Dolejš*, Jiří Ilčík	Simulation of the spatial behaviour of tubular façade scaffolding
P05.02 Poster	P05.02	Stability	Miroslav Bajer, Jan Barnat*, Martin Vild, Jindřich Melcher, Marcela Karmazínová, Jiri Piják	Different cross-section in lateral-torsional buckling
P08.np2 Poster		Composite Structures	Maciej Chrzanowski*, Christoph Odenbreit, Teodora Bogdan	Development of an innovative type of shear connection dedicated to the composite columns application
P10.01 Poster	P10.01	Fire	Jelena Dobrić*, Milan Spremić, Zlatko Marković, Bojana Ninić, Jovana Milovanović	Comparative numerical buckling analysis Of compressed carbon and stainless steel members at elevated temperatures
P11.01 Poster	P11.01	Seismic Resistance	Massimiliano Ferraioli, Angelo Lavino, Alberto Mandara*	A multi-mode pushover analysis procedure to estimate seismic demands for steel moment-resisting frames
P11.02 Poster	P11.02	Seismic Resistance	Kazuya Mitsui, Atsushi Sato, Massimo Latour*, Vincenzo Piluso, Gianvittorio Rizzano	Experimental analysis and FE modeling of square hollow sections under combined axial and bending loads
P15.np1 Poster		Steel Buildings	Morales-Rodríguez, P.A*., López-Perales, J.A., Serna Moreno, M.C.	Recommendations for the Design of Mansard Steel Portal Frames
P15.np2 Poster		Steel Buildings	Torben Rasmussen*, Peter Madsen Nordestgaard, Michael Krarup	Bio4 Making a Façade with Hanging Tree Logs Possible
P16.01 Poster	P16.01	Bridge Structures	Eric Gogny*, Svein Erik Jakobsen, Aymen Cheikh Mhamed	Brief survey of the Chacao bridge girder design
P16.02 Poster	P16.02	Bridge Structures	Wouter Visser*, Fabio Amico, Rob Torsing, Reinald Top, Kay Oosterman, Anurag Bhattacharya, Frans S.K. Bijlaard, Christine Yip	**Sognefjord buoyancy bridge** - Feasibility and sensitivity analysis
P22.np Poster		Architectural Design & Case Studies	Henrik Tinning, Peter Madsen Nordestgaard*	First and Tallest Steel High-Rise Building in Denmark Flexible and Transparent Compared to Concrete

Morning sessions Friday 15 September from 10.00-12.15

Schedule/Rooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	Good morning								
08.40 – 09.05	**Keynote speaker:** František Wald Validation and verification in design of structural steel connections								
09.05 – 09.30	**Keynote speaker:** Henrik Polk Advances and development needs in the structural design of steel box girders for major bridges								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Connections C	Seismic Resistance F	Composite Structures F	Offshore Structures A	Dynamics & Vibration A	Cold-Formed Structures D	Fire D	Retrofitting Refurbishm. & Sustainability A	Robustness A
12-15 – 13-15	Lunch								
13.15 – 15.30	Connections D	Seismic Resistance G	Composite Structures G	Welded Connections A	Seismic Resistance INNOSEIS Session	Cold-Formed Structures E	Fire E	Retrofitting Refurbishm. & Sustainability B	Architectural Design & Case Studies A
15.30 – 16.00	Coffee break								
16.00 – 16.30	Presentation of next conference Closure and farewell drinks								

Grand Ball - Connections – Session C: Friday 10.00 – 12.15

Chairman: Dr. Kristo Mela

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	03.19	Roberto Tartaglia, Mario D'Aniello*, Gian A. Rassati, James A. Swanson, Raffaele Landolfo	Seismic performance of full strength extended stiffened joint: American vs New European approach
10.15 – 10.30	03.20	Saverio Giordano, Federico Gusella*, Giovanni Lavacchini, Maurizio Orlando, Paolo Spinelli	Experimental tests on beam-end connectors of cold-formed steel storage pallet racks
10.30 – 10.45	03.21	Klára Machalická*, Martina Eliášová, Miroslav Vokáč	Structural glued connections with different metal substrates
10.45 – 11.00	03.22	Shi Cao*, Ganping Shu, Kunhong Lin, Ying Qin, Shenggang Fan	Calculation model for moment -rotation relationship of bottom-through-diaphragm top-ring connection between SST columns and HSS beams
11.00 – 11.15	03.24	Luis Miguel Zapata*, Carlos Graciano	Compressive strength of transverse and longitudinal T-type branch plate-to-circular hollow section connections
11.15 – 11.30	03.25	Hesam Bafandeh Nobari, Arash Akbari Hamed*	On the seismic behavior of the HBS and RBS moment connections
11.30 – 11.45	03.26	Ana Francisca Santos*, Aldina Santiago, Luís Simões da Silva, Massimo Latour, Gianvittorio Rizzano	Experimental assessment of friction dampers under impact loading
11.45 – 12.00	03.27	Junlong Yu*, Yongchang Wang	Punching shear behaviour of an innovative connection between steel tubular coluimn to flat concrete slab
12.00 – 12.15	03.33	Alper Kanyilmaz*, Carlo Andrea Castiglioni, Giovanni Brambilla, Kristian Gjoka, Andrea Galazzi, Sergio Raso, Alberto Valli, Marco Brugnolli, Ralf Hojda	Experimental assessment of tolerances for the fabrication of laser-cut steel joints

Amalienborg – Seismic Resistance – Session F: Friday 10.00 – 12.15

Chairman: Prof. Hamid Bouchair

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	11.43	Abhishek Verma*, Dipti Ranjan Sahoo	Seismic performance of staggered steel plate shear wall systems in high rise buildings
10.15 – 10.30	11.44	Terence Ryan*, Brian Broderick, Suhaib Salawdeh, John Hickey	An integrated experimental and numerical assessment of force-based design for concentrically braced steel frames
10.30 – 10.45	11.45	Muhmaed Safeer Pandikkadavath, Dipti Ranjan Sahoo*	Cyclic testing on hybrid buckling-restrained Braces (HBRBs)
10.45 – 11.00	11.46	Melina Bosco, Aurelio Ghersi, Giuseppe Quaceci, Pier Paolo Rossi*	The design of suspended zipper braced frames in the framework of eurocode 8
11.00 – 11.15	Short break		
11.15 – 11.30	11.48	Mehmet Bakır Bozkurt, Cem Topkaya*	**An experimental study on welded overlap core** - Steel encased buckling-restrained braces
11.30 – 11.45	11.49	John Hickey*, Brian Broderick	Lifetime seismic performance assessment of steel frame structures
11.45 – 12.00	11.50	Kurtulus Atasever*, Oguz C. Celik, Ercan Yuksel	Modelling hysteretic behaviour of U-shaped steel dampers
12.00 – 12.15	11.51	Mladen Bulic*, Mehmed Causevic	Numerical investigation of short seismic links in shear

Christiansborg – Composite Structures – Session F: Friday 10.00 – 12.15

Chairman: Prof. Ioannis Vayas

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	08.44	Moe Yamanaka*, Kikuo Ikarashi, Toru Inaba	Elastic buckling behavior of the surface material in sandwich structure
10.15 – 10.30	08.46	Albert Albareda-Valls*, Jordi Maristany Carreras, David Garcia Carrera	Local buckling of thin-walled tubes encased in concrete.
10.30 – 10.45	08.47	David Hernández-Figueirid, Carmen Ibañez*, Ana Piquer, Óscar Martínez-Ramos	Experimental study of cross-section shape and infill influence on CFST stub columns subjected to axial load
10.45 – 11.00	08.48	Michaela Elmatzoglou, Aris Avdelas*	**Double-steel plate composite shear walls** - In-plane seismic behaviour
11.00 – 11.15	Short break		
11.15 – 11.30	08.49	Milan Spremić*, Nina Gluhović, Zlatko Marković, Jelena Dobrić, Aljosa Filipović	Comparison of headed studs with perfobond shear connectors - experimental and numerical analysis
11.30 – 11.45	08.50	Mohammad M. Rana*, Chi King Lee, Safat Al-Deen	A study on the bond stress-slip behavior between engineered cementitious composites and structural steel sections
11.45 – 12.00	08.51	Kang Chen*, Kang Hai Tan, Bo Yang	An experimental study of composite beam-column joints subject to impact loads
12.00 – 12.15	08.52	Ju-young Hwang*, Hyo-Gyoung Kwak	Numerical modeling of circular CFT columns with experimental verification

Fredensborg – Offshore Structures – Session A: Friday 10.00 – 12.15

Chairman: Prof. Luis Simoes da Silva

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	17.02	Paw Lee Sørensen*, Ove Sørensen, Poul Linneberg	**Strengthening of oil platform with submerged cables** - Strengthening of offshore oil production platform with prefabricated submerged cables
10.15 – 10.30	17.03	Mahmoud R. Maheri*, M. E. Karbaschi	Dynamic properties of unanchored circular ground-based steel tanks
10.30 – 10.45	17.04	Dawid Augustyn*, Martin Bjerre Nielsen, Ronnie Refstrup Pedersen	**Design of offshore wind turbine jacket foundations** - On the influence of subsequent modifications on fatigue performance
10.45 – 11.00	17.05	Henrik Bisgaard Clausen*, Ronnie Refstrup Pedersen	Advanced framework for suction bucket jacket design
11.00 – 11.15	17.06	Damjan Čekerevac*, Constança Rigueiro, Eduardo Pereira	Characterization of accidental scenarios for offshore structures
11.15 – 11.30			
11.30 – 11.45			
11.45 – 12.00			
12.00 – 12.15			

Kronborg – Dynamics & Vibration – Session A: Friday 10.00 – 12.15

Chairman: Assoc. Prof.Laszlo Gergely Vigh

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	06.01	Harald Unterweger, Andreas Schörghofer*, Andreas Taras	**Critical bridges in high-speed railway lines** - Systematic identification for specific trains
10.15 – 10.30	06.03	Massimiliano Ferraioli, Angelo Lavino, Alberto Mandara*	Dynamic increase factor for nonlinear static alternate path analysis of steel moment-resisting frames against progressive collapse
10.30 – 10.45	06.05	M. Gabriella Castellano*, Rudy Borella, Aikaterini E. Pigouni, Samuele Infanti	Wind and Earthquake Damping System for the Isozaki/Allianz Tower in Milan, Italy
10.45 – 11.00	06.06	Airong Liu, Chun-Hui Liu, Yong-Lin Pi*, Yong-Hui Huang	**Vibration reduction of steel girder bridges** - Using shape memory alloy cables
11.00 – 11.15	Short break		
11.15 – 11.30	06.07	Bulent Erkmen*	Comparison of Blast Performance of Steel Modular Buildings with Anchored and Sliding Foundations
11.30 – 11.45	06.08	Imad Mualla*, Holger Koss	Vibration Control of Novel Passive Multi-joints Rotational Friction Dampers
11.45 – 12.00			
12.00 – 12.15			

Schackenborg – Cold-Formed Structures – Session D: Friday 10.00 – 12.15

Chairman: Prof. Ivan Baláz

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	07.22	Trung Hoang, Sándor Ádány*	On the use of constrained finite element method in the design of cold-formed steel Z purlins
10.15 – 10.30	07.23	Myuran Kathekeyan*, Mahen Mahendran, Mayooran Sivapathasundaram	Effect of loading rate on the pull-through capacities of cold-formed steel roof battens
10.30 – 10.45	07.24	Sivaganesh Selvaraj, Mahendrakumar Madhavan*	Behaviour of gypsum sheathed Cold-Formed steel stud walls under lateral loadings
10.45 – 11.00	07.25	Aaron von der Heyden*, Jörg Lange	Assessment of the Utilisation of Corrugated Cardboard as a Core Material for Sandwich Panels
11.00 – 11.15	Short break		
11.15 – 11.30	07.26	Helder Craveiro*, João Ribeiro, Ricardo Breda	Structural analysis of C and I shaped cold-formed steel columns
11.30 – 11.45	07.27	Mircea Georgescu*, Viorel Ungureanu, Aurelian Gruin, Andra Floricel	Experimental and theoretical investigation on the local collapse of liner trays
11.45 – 12.00	07.28	Thomas Misiek*, Saskia Käpplein	Fastening to face sheets of sandwich panels
12.00 – 12.15	07.29	Muhammad Shariq Hassan*, Suhaib Salawdeh, Jamie Goggins	**A unified methodology for the modelling of steel behaviour** - An application-oriented methodology

Rosenborg – Fire – Session D: Friday 10.00 – 12.15

Chairman: Prof. Euripidis Mistakidis

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	10.22	Aline L. Camargo*, João Paulo C. Rodrigues, Ricardo H. Fakury, Ruben Lopes	Comparing the fire behaviour of composite columns made with concrete filled double-skin and double-tube steel sections
10.15 – 10.30	10.23	António Moura Correia, João Paulo C. Rodrigues*, Venkatesh Kodur, José Pedro Correia	Parametric study on the fire resistance of steel columns with thermal gradients
10.30 – 10.45	10.25	Fabio M. Rocha, Gabriela L. Albuquerque, João Paulo C. Rodrigues*, Luis Laim	Numerical fire tests on the columns of the Cardington steel-framed building
10.45 – 11.00	10.26	Luís Laím, João Paulo C. Rodrigues*	Parametric numerical analysis of cold-formed steel ∑-shaped beams under fire
11.00 – 11.15	Short break		
11.15 – 11.30	10.27	André Reis, Nuno Lopes*, Paulo Vila Real	Contribution from the flanges to the shear buckling resistance of steel plate girders at normal and elevated temperatures
11.30 – 11.45	10.28	Bo Wu, Jian-Bo Zang*, Qiang Zhang	Fire performance of concrete filled steel tubular columns with built-in stirrups
11.45 – 12.00	10.29	Ioan Both*, Petr Kyzlik, Jaroslav Vacha, Frantisek Wald, Raul Zaharia	The thermal response of corrugated web beams subjected to fire
12.00 – 12.15	10.30	Urška Dolinar*, Anita Ogrin, Igor Planinc, Tomaž Hozjan	**Mechanical response of steel structures in fire** - Influence of different material and creep models

Marselisborg – Retrofitting, Refurbishment & Sustainability – Session A: Friday 10.00 – 12.15

Chairman: Dr. Bernhard Hauke

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	21.01	Luiza Hiroko Ichinose*, Masahiro Koyama, Masahiro Sakano	Fatigue prevention retrofit for connections of main girder to transverse beam or sway bracing in steel bridges
10.15 – 10.30	21.02	Harald Unterweger, Friedrich Novak*	**Strengthening of orthotropic steel decks using UHPC** - UHPC-concrete instead of asphalt layer for additional at least 50 years in service
10.30 – 10.45	21.04	Lucia Tirca*, Laura Manolache, Yudong Wang, Ashutosh Bagchi	Vibration characteristics of an existing high-rise building in Montreal and the effects of retrofit
10.45 – 11.00	21.05	Paulina Siwowska*, Tomasz Siwowski	Strength evaluation of steel beams prestressed with CFRP plates
11.00 – 11.15	Short break		
11.15 – 11.30	21.06	Juan C. Reyes*, Luis E. Yamin, Cristian D. Gonzalez, Juan David Sandoval	Seismic retrofit of historical earthen buildings using steel
11.30 – 11.45	21.07	László. Horváth, Zsuzsa B. Pap*, Balázs Kövesdi	Refurbishment of the historical Eiffel-hall in Budapest
11.45 – 12.00	21.08	Christian Fox*, Markus Doktor, Wolfgang Kurz	Evaluation of steel buildings by means of non-destructive testing methods
12.00 – 12.15	21.11	Philippe Van Bogaert*	Asymmetrical cross sections in historic riveted bridges

Christian – Robustness – Session A: Friday 10.00 – 12.15

Chairman: Prof. Andreas Taras

Schedule	ID	Authors and presenters*	Title
10.00 – 10.15	14.01	Antonella B. Francavilla*, Massimo Latour, Gianvittorio Rizzano, Jean-François Demonceau, Jean-Pierre Jaspart	Influence of beam-to-column joints on the robustness of earthquake-resistant moment-resistant frames
10.15 – 10.30	14.04	Doncho Partov*, Milen Petkov, Vladimir Matuski, Dimo Zhelev	**Temporary steel structures** - for strengthening of a large excavation for new metro in Sofia
10.30 – 10.45	14.05	Qiu Ni FU*, Kang Hai TAN, Bo Yang	A mehcanical model of composite floor systems under internal column-removal scenarios
10.45 – 11.00	14.06	Jean-François Demonceau*, Hélène Vanvinckenroye, Marina D'Antimo, Vincent Denoel, Jean-Pierre Jaspart	Beam-to-column joints, column bases and joint components under impact loading
11.00 – 11.15			
11.15 – 11.30			
11.30 – 11.45			
11.45 – 12.00			
12.00 – 12.15			

Afternoon sessions Friday 15 September from 13.15 – 15.30

ScheduleRooms	Grand Ball	Amalien-borg	Christians-borg	Fredens-borg	Kronborg	Schacken-borg	Rosen-borg	Marselis-borg	Christian
08.30 – 08.40	Good morning								
08.40 – 09.05	**Keynote speaker:** František Wald Validation and verification in design of structural steel connections								
09.05 – 09.30	**Keynote speaker:** Henrik Polk Advances and development needs in the structural design of steel box girders for major bridges								
09.30 – 10.00	Coffee break								
10.00 – 12.15	Connections C	Seismic Resistance F	Composite Structures F	Offshore Structures A	Dynamics & Vibration A	Cold-Formed Structures D	Fire D	Retrofitting Refurbishm. & Sustainability A	Robustness A
12-15 – 13-15	Lunch								
13.15 – 15.30	Connections D	Seismic Resistance G	Composite Structures G	Welded Connections A	Seismic Resistance INNOSEIS Session	Cold-Formed Structures E	Fire E	Retrofitting Refurbishm. & Sustainability B	Architectural Design & Case Studies A
15.30 – 16.00	Coffee break								
16.00 – 16.30	Presentation of next conference Closure and farewell drinks								

Grand Ball – Connections - Session D: Friday 13.15 – 15.30

Chairman: Prof. Ahmed Elghazouli

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	03.28	Eduardo Bayo*, Alfonso Loureiro, Manuel Lopez	Performance of cruciform finite elements that model 2D steel joints with beams of unequal depth in frame analysis
13.30 – 13.45	03.29	Jan Bujnak*, Jan Bujnak jr, Matus Farbak	Behaviour of the short headed anchors with supplementary reinforcement
13.45 – 14.00	03.30	Mohammad Reza Chenaghlou*, Arash Akbari Hamed	Connection classification for a space structure jointing system
14.00 – 14.15	03.31	Yanxia Zhang*, Anran. Liu, Dinan. Shao, Xuechun. Liu	Influence of design parameters on mechanic behavior of prefabircated self-centering beam-column connection with a bolted web friction device
14.15 – 14.30	Short break		
14.30 – 14.45	03.32	Mohammad Jobaer Hasan, Mahmud Ashraf*, Brian Uy	Analytical prediction of moment-rotation behaviour of austenitic stainless steel bolted connections
14.45 – 15.00	03.34	José M. Reinosa*, A. Loureiro, R. Gutiérrez, M. López	European stiffened angle connections: Numerical study
15.00 – 15.15	03.35	Raymond H.R. Tide*	Rivet shear strength in long connections
15.15 – 15.30	03.36	Mustafa Mahamid*, Mutaz Al Hijaj, Adeeb Rahman, Faris Malhas	Skewed extended shear tab connections: Behavior, analysis and parametric study

Amalienborg – Seismic Resistance - Session G: Friday 13.15 – 15.30

Chairman: Prof. dr. ir. Philippe Van Bogaert

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	11.52	Atsushi Suzuki*, Yoshihiro Kimura, Kazuhiko Kasai	Local buckling behavior and plastic deformation capacity of H-shaped beams under reversed axial forces
13.30 – 13.45	11.53	Helmuth Köber*, Marina Stoian	Reduced cross-sections in seismic resistant steel structures
13.45 – 14.00	11.54	Helmuth Köber*, Marina Stoian	A proposal to improve the seismic behaviour of eccentrically braced structures
14.00 – 14.15	11.55	Maria Ntina, Dimitrios S. Sophianopoulos*, Panos Tsopelas	Development of a 2-dof model simulating the dynamic response of special truss moment frames with shape memory alloy bars as dissipation devices in the special segment
14.15 – 14.30	Short break		
14.30 – 14.45	11.41	Omid Moammer, Ardeshir Deylami*, Khashayar Jafari, Amir Hossein Raisszadeh	Numerical investigation of influence of plate yield point on performance of steel plate shear wall
14.45 – 15.00	11.56	Mahmoud S.A. Shaheen*, Kim J.R. Rasmussen	Test rig for seismic experiments of drive-in racks
15.00 – 15.15	11.59	Xuchuan Lin*, Yangyang Hu, Taichiro Okazaki	Study on highly elastic seismic structural system based on very-high strength steel and damage-control fuses
15.15 – 15.30	11.60	Magdalini D. Titirla*, Konstantinos V. Katakalos, Panikos K. Papadopoulos	Experimental investigation under cyclic loadings of an innovative passive mitigation device

Christiansborg – Composite Structures - Session G: Friday 13.15 – 15.30

Chairman: Prof. Paulo Vila Real

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	08.53	Doncho Partov*, Vesselin Kantchev	**Integral analysis of steel concrete beams,** - Regarding creep of concrete according EC2, versus (AAEMM) of bažant
13.30 – 13.45	08.54	Bruno Jurkiewiez*, Sebastien Durif, Abdelhamid Bouchair	Behaviour of steel-timber beam in bending
13.45 – 14.00	08.56	Roland Abspoel*, Jan Stark, Henk Prins	Horizontal distribution of concentrated loads in ComFlor210 composite slabs
14.00 – 14.15	08.57	Burak Evirgen*, Mustafa Tuncan, Ahmet Tuncan	The friction investigation of CFRP confined CFST specimens with modified concrete
14.15 – 14.30	Short break		
14.30 – 14.45	08.58	Dan V. Bompa*, Ahmed Y. Elghazouli	Ultimate behaviour and design of hybrid flat slabs with steel shear heads
14.45 – 15.00	08.59	Dan Dragan*, Andre Plumier, Hervé Degée	**Shear behavior of concrete walls reinforced by multiple steel profiles** - Calibration of numerical model
15.00 – 15.15	08.60	Martin Classen*, Georgios Christou, Josef Hegger	**Composite dowels in cracked concrete** - Experimental investigation
15.15 – 15.30	08.61	Gianluca Ranzi*	A new approach for the serviceability limit state design of composite steel-concrete slabs

Fredensborg – Welded Connections - Session A: Friday 13.15 – 15.30

Chairman: Prof. Vincenzo Piluso

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	02.01	Richard Stroetmann, Thoralf Kästner*, Lars Werner	Development of a new design approach for weldings
13.30 – 13.45	02.02	Stefanos Gkatzogiannis*, Peter Knoedel, Thomas Ummenhofer	**FE welding residual stress simulation** -Influence of boundary conditions and material models
13.45 – 14.00	02.03	Hadi Soltanzadeh*, Jörg Hildebrand, Matthias Kraus	A reliable modelling of thermal, microstructure, and stress in arc stud welding joints and effect on fatigue strength
14.00 – 14.15	02.04	Idna Wudtke*, Christin Sirtl, Matthias Kraus	Experimental and numerical analyses of butt-welded S460 joints
14.15 – 14.30	Short break		
14.30 – 14.45	02.05	Ju Chen*, Ji-hua Zhu, Fei Xu, Wen Xue	Design of concrete-filled steel tubular longitudinal gusset plate connections
14.45 – 15.00	02.06	Lars Sieber*, Andrè Kilian, Holger Flederer, Gunther Göbel, Marco Steinhauser	Weldability of old mild steels within the rehabilitation of historical steel structures
15.00 – 15.15	02.07	Peter Nilsson*, Mohammad Al-Emrani, Seyed Rasoul Atashipour	A numerical approach to the rotational stiffness of stake welds
15.15 – 15.30	02.08	Michael Joachim Andreassen*, Zhenzhen Yu, Stephen Liu, Jens Henrik Nielsen	The influence of plate thickness on the welding residual stresses from submerged arc welding in offshore steel structures

Kronborg – Seismic Resistance – INNOSEIS Session: Friday 13.15 – 15.30

Chairman: Prof. Aurel Stratan

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	I.11.00	Ioannis Vayas*, Dimitrios Vamvatsikos, Pavlos Thanopoulos	**Innovative systems for seismic resistance** - The INNOSEIS Project
13.30 – 13.45	I.11.03	Tzvetan Georgiev*, Lora Raycheva	Influence of splitting beam and column stiffness on CBFs ductile behaviour
13:45 – 14.00	I.11.05	Mariana Zimbru*, Mario D'Aniello, Aurel Stratan, Raffaele Landolfo, Dan Dubina	Parametric finite element analyses of detachable short links
14.00 – 14.15	I.11.07	Ciprian Ionut Zub*, Adrian Dogariu, Aurel Stratan, Dan Dubina	Pre-test numerical simulations for development of prequalified buckling restrained braces
14.15 – 14.30	I.11.20	Dan Dubina*, Aurel Stratan, Adriana Chesoan	Design recommendations for dual moment - eccentric braced frames with replaceable links
14.30 – 14.45	I.11.39	Amin Alavi*, Carlo Andrea Castiglioni, Giovanni Brambilla	Behaviour factor evaluation of moment resisting frames having dissipative elements
14.45 – 15.00	I.11.47	Dimitrios Vamvatsikos*, Carlo Castiglioni, Konstantinos Bakalis, Luis Calado, Mario D' Aniello, Hervé Degee, Benno Hoffmeister, Marius Pinkawa, Jorge Miguel Proenca, Alper Kanyilmaz, Francesco Morelli, Aurel Stratan, Ioannis Vayas	A risk-consistent approach to determine behavior factors for innovative steel lateral load resisting systems
15.00 – 15.15	I.11.61	Stella Avgerinou*, Xenofon Lignos, PavlosThanopoulos, Ioannis Vayas	Full scale tests on moment-resistant-frames under cyclic loading
15.15 – 15.30	I.11.68	A. Kanyilmaz*, C.A. Castiglioni, H. Degée	Seismic behaviour of concentrically braced frames in the moderate seismicity context

Schackenborg – Cold-Formed Structures - Session E: Friday 13.15 – 15.30

Chairman: Prof. Ben Young

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	07.30	Grigoriy Belyy, Aleksei Kuznetsov*	Ways of improving the stability design calculations of cold-formed columns
13.30 – 13.45	07.31	Yomal Dias*, Pologanathan Keerthan, Mahen Mahendran	Fire performance of LSF walls with web stiffened channel sections using finite element analysis
13.45 – 14.00	07.32	Senthil Kumar Govindan*, Mahendrakumar Madhavan	**The flexural strength behavior of profiled steel sheet** - with hot rolled plate panel system with bolted connection
14.00 – 14.15	07.34	R. Gutiérrez*, A. Loureiro, J.M. Reinosa and M. López	Influence of semi-rigid sleeve joints on the multi-span purlin design
14.15 – 14.30	Short break		
14.30 – 14.45	07.36	M. El. Aghoury, M.T. Hanna*, E.A.Amoush	Strength of combined sigma cold formed section columns
14.45 – 15.00	07.37	Anita Lendvai*, Attila László Joó	Development in calculation of stressed skin effect upon experimental and numerical research results
15.00 – 15.15	07.38	Anders Bau Hansen*, Jeppe Jönsson	A GBT-framework towards modal modelling of steel structures
15.15 – 15.30			

Rosenborg – Fire - Session E: Friday 13.15 – 15.30

Chairman: Prof. František Wald

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	10.31	Matthias Braun*, Dario Zaganelli, Francois Hanus, Renata Obiala, Louis-Guy Cajot, Anthony Peirce	Simplified analytical determination of the temperature distribution and the load bearing resistance of slim-floor beams
13.30 – 13.45	10.32	Guo-Qiang Li*, Lei Huang, Chao Zhang	Experimental study on high temperature elastic modulus of China made high strength structural steel
13.45 – 14.00	10.33	Dorothy A. Winful, Sheida Afshan, Katherine A. Cashell*, Adrienne M. Barnes, Richard J. Pargeter	Flexural buckling behaviour of high strength steel columns under fire conditions
14.00 – 14.15	10.34	Neno Torić, Josip Brnić, Ivica Boko, Marko Čanađija, Goran Turkalj, Domagoj Lanc, Marino Brčić, Ian W. Burgess, Alen Harapin, Vladimir Divić*, Ivana Uzelac	Creep properties of grade S275JF steel at high temperature
14.15 – 14.30	Short break		
14.30 – 14.45	10.35	Mariusz Maslak*, Michal Pazdanowski, Piotr Wozniczka	Influence of joint stiffness on the behaviour of steel bearing frame under fire conditions
14.45 – 15.00	10.36	Dalilah Pires, Rafael Cesário Barros, Ígor José Mendes Lemes, Paulo Anderson Santana Rocha, Ricardo Azoubel da Mota Silveira*	Advanced numerical analysis of steel, concrete and composite structures under fire conditions
15.00 – 15.15	10.37	Mei-Ni Su*, Ben Young	Mechanical properties of high strength aluminium alloy at elevated temperatures
15.15 – 15.30	10.38	Yong Du*, J. Y. Richard Liew, Ming-Xiang Xiong	Effects of heat-treatment methods on mechanical performance of high-tensile strength steel subject to elevated temperatures

Marselisborg – Retrofitting, Refurbishment & Sustainability - Session B: Friday 13.15 – 15.30

Chairman: Dr.Dunia László

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	21.09	Yoshiaki Mizokami, Masafumi Kamata*, Yuki Kishi, Masahiro Sakano	A study on repair method using TRS for fatigue cracks in orthotropic steel deck
13.30 – 13.45	21.10	Janusz Hołowaty*	**Upgrading of a riveted railway bridge** - Retrofitting of corroded plate girder steelwork
13.45 – 14.00	21.12	Sivaganesh Selvaraj, Mahendrakumar Madhavan*, Anadh Gopal Venu Gopalan, Aswin Kumar Jayabalan, Pavan Kumar Arumugam	Behaviour of CFS strengthened hot-rolled structural steel beams under flexure
14.00 – 14.15	21.13	Chihiro Sakamoto, Masahiro Sakano*, Hideyuki Konishi, Masahiro Koyama	Experimental study on retrofitting method against fatigue cracking at the upper end of vertical stiffeners
14.15 – 14.30	Short break		
14.30 – 14.45	21.03	Petr Hradil, Asko Talja, Viorel Ungureanu, Heli Koukkari , Ludovic Fülöp*	Reusability indicator for steel-framed buildings and application for an industrial hall
14.45 – 15.00	21.14	Bernhard Hauke*, Markus Kuhnhenne, Johannes Kreissig	**Life cycle analysis of steel structures** - Why the recycling potential must be considered
15.00 – 15.15	21.15	Helena Gervásio*, Silvia Dimova, Artur Pinto	**Resource efficiency in the building sector** - Application to steel buildings
15.15 – 15.30	21.16	Raban Siebers*, Bernhard Hauke, Manfred Helmus, Anica Meins-Becker	Sustainability considerations for the construction phase of steel structures

Christian – Architectural Design & Case Studies - Session A: Friday 13.15 – 15.30

Chairman: Prof Charalampos Baniotopoulos

Schedule	ID	Authors and presenters*	Title
13.15 – 13.30	22.01	Donatella de Silva, Iolanda Nuzzo, Antonio Bilotta, Daniele Losanno, Emidio Nigro*, Giorgio Serino	Fire and seismic assessment of an existing steel-concrete composite structure
13.30 – 13.45	22.02	Jaap Aanhaanen*	**The music square canopy** - An outdoor stage for Amager Kulturpunkt
13.45 – 14.00	22.03	Stefan Karlsson*, Espen Eidet, Peter Holmstrøm, Jens Christian Kærn	**Acoustic ceiling designed for trains passing at 250km/h** - Holmestrand – The first station in the world inside a mountain entrance hall
14.00 – 14.15	22.04	Martin Gludsted*, Mogens G. Nielsen, Henrik Skouboe, Karl Emil Steenholt-Eliasson	New design for transmission line towers in Denmark
14.15 – 14.30	Short break		
14.30 – 14.45			
14.45 – 15.00			
15.00 – 15.15			
15.15 – 15.30			

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