



---

**EIGHTH INTERNATIONAL CONFERENCE ON**  
**ADVANCES IN**  
**STEEL STRUCTURES**

**IJSSD 2015**  
**SYMPOSIUM ON PROGRESS IN**  
**STRUCTURAL STABILITY AND DYNAMICS**

---

**PROGRAMME**

---

**21-24 JULY 2015, INSTITUTO SUPERIOR TÉCNICO, LISBOA, PORTUGAL**





---

EIGHTH INTERNATIONAL CONFERENCE ON  
**ADVANCES IN  
STEEL STRUCTURES**

**IJSSD 2015**  
SYMPOSIUM ON PROGRESS IN  
STRUCTURAL STABILITY AND DYNAMICS

---

PROGRAMME

---

21-24 JULY 2015, INSTITUTO SUPERIOR TÉCNICO, LISBOA, PORTUGAL



## Welcome Message

On behalf of the Organising Committee, we are pleased to welcome you to Lisbon to participate in the Eight International Conference on Advances in Steel Structures (ICASS'2015), held at Instituto Superior Técnico (IST) of the Universidade de Lisboa (UL).

The international conference series on Advances in Steel Structures was initiated in 1996 under the auspices of the Hong Kong Polytechnic University, which remained very active in fostering its continuation – joined a few years later by the Hong Kong Institute of Steel Construction. ICASS'2015 will be the eighth conference of the series and the first to take place outside of Asia. Indeed, the first, second, third and sixth conferences were held in Hong Kong, the fourth in Shanghai, the fifth in Singapore and the seventh in Nanjing.

As its predecessors, ICASS'2015 aims at providing a forum for the discussion and dissemination, by both researchers and designers, of the most recent theoretical, numerical and experimental advances in the analysis, behaviour, design and construction of steel, aluminium and composite steel-concrete structures. Therefore, we invite you to be an active participant in this conference, as one of its main goals is to promote an exchange of ideas that contributes to stimulate new research paths and foster new collaborative endeavours. We hope that ICASS'2015 will have a relevant impact on the future research activity in all the topics included in its programme.

Once again, the ICASS conference will be held in conjunction with the IJSSD Symposium on Progress in Structural Stability and Dynamics (IJSSD 2015), focusing on theoretical, analytical, experimental and design aspects of structural stability and dynamics. This partnership, which started in 2009, has been very successful in merging technical/scientific communities sharing a large number of research interests.

Finally, one last word to express our sincere gratitude to the members of the committees involved in the preparation of this conference, as well as their supporting staff, to the sponsors that helped financing it and, above all, to the authors and participants – their contributions are the “soul” of the conference.

**Dinar Camotim**  
**Siu-Lai Chan**





## Contents

<b>Congress Organisation</b>	<b>6</b>
Organising Committee	
Icass'2015 International Scientific Committee	
Ijssd 2015 Technical Committee	
Organising Institution	
Sponsors	
Conference Venue	
Map Of Lisbon	
<b>General Tourist Information</b>	<b>12</b>
<b>General Information</b>	<b>14</b>
Registration	
Coffee/Tea Breaks	
Lunches	
<b>Social Program</b>	<b>15</b>
Welcome Cocktail	
Congress Dinner	
<b>Conference Information</b>	<b>16</b>
Wireless Internet Access	
Instructions for Presenters	
Conference Centre Floor Plans	
<b>Technical Programme</b>	<b>19</b>
Programme-at-a-Glance	
Programme Overall View	
Detailed Programme	

# Congress Organization

## Organizing Committee

**Dinar Camotim (Chair)** - IST, Universidade de Lisboa, *Portugal*

**Siu-Lai Chan (Co-Chair)** - The Hong Kong Polytechnic University, *China*

**Chien Ming Wang** - National University of Singapore, *Singapore* (IJSSD 2015)

**Alexandre Landesmann** - Universidade Federal do Rio de Janeiro, *Brazil*

**André Martins** - IST, Universidade de Lisboa, *Portugal*

**Anísio Andrade** - FCT, Universidade de Coimbra, *Portugal*

**Cilmar Basaglia** - Universidade Estadual de Campinas, *Brazil*

**Enio Mesacasa Jr.** - EESC, Universidade de São Paulo, *Brazil*

**Luís Calado** - IST, Universidade de Lisboa, *Portugal*

**Manuel Ritto-Corrêa** - IST, Universidade de Lisboa, *Portugal*

**Nuno Silvestre** - IST, Universidade de Lisboa, *Portugal*

**Pedro Borges Dinis** - IST, Universidade de Lisboa, *Portugal*

**Rodrigo Gonçalves** - FCT, Universidade Nova de Lisboa, *Portugal*

**Rui Bebiano** - IST, Universidade de Lisboa, *Portugal*

## ICASS'2015 International Scientific Committee

**S. Ádány** (*Hungary*)

**C.M. Chan** (*HK, China*)

**F.G. Albermani** (*Australia*)

**S.L. Chan** (*HK, China*)

**G.A. Altay** (*Turkey*)

**Y. Chen** (*China*)

**I. Baláz** (*Slovakia*)

**S.P. Chiew** (*Singapore*)

**C. Basaglia** (*Brazil*)

**K.F. Chung** (*HK, China*)

**A. Bureau** (*France*)

**L. Davaine** (*France*)

**E.M. Batista** (*Brazil*)

**H. Degée** (*Belgium*)

**A.M. Baptista** (*Portugal*)

**D. Dubina** (*Romania*)

**R. Beale** (*UK*)

**L. Dunai** (*Hungary*)

**R. Bjorhovde** (*USA*)

**S. Easterling** (*USA*)

**M.A. Bradford** (*Australia*)

**M. Feldmann** (*Germany*)

**B. Brune** (*Germany*)

**M. Fontana** (*Switzerland*)

**I. Burgess** (*UK*)

**J.M. Franssen** (*Belgium*)

**L. Calado** (*Portugal*)

**T. Galambos** (*USA*)

**D. Camotim** (*Portugal*)

**L. Gardner** (*UK*)

**C. Castiglioni** (*Italy*)

**P. Gonçalves** (*Brazil*)

**N. Challamel** (*France*)

**R. Gonçalves** (*Portugal*)

**R. Greiner** (*Austria*)

**R. Landolfo** (*Italy*)

**J. Hajjar** (*USA*)

**H.H. Lau** (*Malaysia*)

**L.H. Han** (*China*)

**R. Leon** (*USA*)

**G.J. Hancock** (*Australia*)

**G.Q. Li** (*China*)

**M. Heinisuo** (*Finland*)

**J.R. Liew** (*Singapore*)

**T. Helwig** (*USA*)

**J. Lindner** (*Germany*)

**M. Hjiat** (*France*)

**S.H. Lo** (*HK, China*)

**G.V. Ho** (*HK, China*)

**J. Loughlan** (*UK*)

**J.P. Jaspert** (*Belgium*)

**A. Luongo** (*Italy*)

**J. Jönsson** (*Denmark*)

**J. Machacek** (*Czech Republic*)

**S. Kitipornchai** (*Australia*)

**M. Mahendran** (*Australia*)

**Z. Kołakowski** (*Poland*)

**M. Malite** (*Brazil*)

**M. Karmazínová** (*Czech Republic*)

**R. Maquoi** (*Belgium*)

**V. Kodur** (*USA*)

**F. Mazzolani** (*Italy*)

**M. Kotelko** (*Poland*)

**F. Mazzolani** (*Italy*)

**Y.B. Kwon** (*Korea*)

**E. Mirambell** (*Spain*)

**R. LaBoube** (*USA*)

**Y.L. Mo** (*USA*)

**D. Lam** (*UK*)

**C. Moen** (*USA*)

**M. Nedelcu** (*Romania*)

**P. Schaumann** (*Germany*)

**D. Nethercot** (*UK*)

**R. Schuster** (*Canada*)

**J. Packer** (*Canada*)

**N.E. Shanmugam** (*Malaysia*)

**H. Pasternak** (*Germany*)

**G.P. Shu** (*China*)

**T. Peköz** (*USA*)

**L.S. Silva** (*Portugal*)

**M.M. Pastor** (*Spain*)

**N. Silvestre** (*Portugal*)

**J.L. Peng** (*Taiwan*)

**M. Skaloud** (*Czech Republic*)

**W.M. Quach** (*Macao, China*)

**H. Snijder** (*Netherlands*)

**K.J.R. Rasmussen** (*Australia*)

**R. Stroetmann** (*Germany*)

**G. Ranzi** (*Australia*)

**J.G. Teng** (*HK, China*)

**E. Real** (*Spain*)

**G.S. Tong** (*China*)

**N. Rizzi** (*Italy*)

**N. Trahair** (*Australia*)

**C. Roeder** (*USA*)

**R. Tremblay** (*Canada*)

**J.M. Rotter** (*UK*)

**C.M. Uang** (*USA*)

**F. Roure** (*Spain*)

**D. Ungermann** (*Germany*)

**C.A. Rogers** (*Canada*)

**V. Ungureanu** (*Romania*)

**E. Sapountzakis** (*Greece*)

**H. Unterweger** (*Austria*)

**B.W. Schafer** (*USA*)

**B. Uy** (*Australia*)

**A. Varma** (*USA*)

**A. Zingoni** (*South Africa*)

**I. Vayas** (*Greece*)

**M. Veljkovic** (*Sweden*)

**P. Vellasco** (*Brazil*)

**P. Vila Real** (*Portugal*)

**F. Virtuoso** (*Portugal*)

**M.A. Wadee** (*UK*)

**F. Wald** (*Czech Republic*)

**C.M. Wang** (*Singapore*)

**Y.C. Wang** (*UK*)

**D. White** (*USA*)

**E. Yamaguchi** (*Japan*)

**Y.B. Yang** (*Taiwan*)

**B. Young** (*HK, China*)

**R. Zandonini** (*Italy*)

**B. Zhao** (*France*)

**X.L. Zhao** (*Australia*)

**R. Ziemian** (*USA*)



## IJSSD 2015 Technical Committee

*M. Amabili (Canada)*

*E. Rank (Germany)*

*T.M. Atanackovic (Serbia)*

*H.A. Rasheed (USA)*

*Z.P. Bazant (USA)*

*J.N. Reddy (USA)*

*M.A. Bradford (Australia)*

*A. Samartin (Spain)*

*D. Camotim (Portugal)*

*N.E. Shanmugam (Malaysia)*

*Y.H. Chai (USA)*

*H.S. Shen (China)*

*N. Challamel (France)*

*Y. Sugiyama (Japan)*

*S.L. Chan (HK, China)*

*L. Sun (China)*

*P.K. Datta (India)*

*T. Tarnai (Hungary)*

*I. Elisahkoff (USA)*

*E. Tufekci (Turkey)*

*M. Eisenberger (Israel)*

*T. Utsunomiya (Japan)*

*H. Irschick (Austria)*

*C.M. Wang (Singapore)*

*W. Kanok-Nukulchai (Thailand)*

*H. Xiang (China)*

*A.Y.T. Leung (HK, China)*

*Y. Xiang (Australia)*

*K.M. Liew (HK, China)*

*B. Yang (USA)*

*Y.Q. Long (China)*

*Y.B. Yang (Taiwan)*

*R. Motro (France)*

*J. Ye (UK)*

*D. Nethercot (UK)*

*C.B. Yun (Korea)*

*M. Papadrakakis (Greece)*

*X.L. Zhao (Australia)*

## Organising Institution

IST - INSTITUTO SUPERIOR TÉCNICO, UNIVERSIDADE DE LISBOA



## Sponsors

THE HONG KONG INSTITUTION OF ENGINEERS  
(Keynote Speaker Sponsor)



HONG KONG INSTITUTE OF STEEL CONSTRUCTION  
(Keynote Speaker Sponsor)



ELSEVIER  
(Gold Sponsor)



FUNDEC  
(Gold Sponsor)



CSI - Portugal  
(Silver Sponsor)



Turismo de Lisboa  
(Silver Sponsor)



## Specialising in the Stability of Structures for an Integrated Design and Analysis

- **Innovative** software to help understand and apply modern code provisions for the direct analysis and design of steel structures incorporating second order effects.
- No need to assume effective lengths again! **Direct** analysis applied.
- No need for individual member checks.
- **Safe and economical.** Avoid the under-design of crucial members and over-design of redundant members.
- Generate **3D** global analysis models on an open BIM platform and determine action effects!
- Benefit from and invest in the most relevant and **current** research in the area of structural design.
- Download a free 60 day trial copy on our Website at [www.nidaeurope.com](http://www.nidaeurope.com)



**We will help you comply with EC3 Clause 5.2.2 rules. P-Δ and P-δ**

**Buy it, and benefit from our services!**

- Assistance with structural analysis and design. Build proficiency in safe and sustainable methods.
- Experienced technical advice.
- Training and guidance in direct analysis methods.

Hong Kong Institute of Steel Construction (HKISC) was established in November 2000. It has been registered as a non-profit making organization with its board members from universities, consultants, contractors, laboratories etc. in Hong Kong. HKISC serves the steel construction industry in Hong Kong and the region, we are dedicated to transfer knowledge between academics and the steel construction industry for improved quality in design, analysis and construction. Join us for one of our technical seminars and discover the fascinating world of steel structure technology. Please visit our website for more information : [www.hkisc.org](http://www.hkisc.org)



The International Journal of Advanced Steel Construction provides a platform for the publication and rapid dissemination of original and up-to-date research and technological developments in steel construction, design and analysis. Scope of research papers published in this journal includes but is not limited to theoretical and experimental research on elements, assemblages, systems, material, design philosophy and codification, standards, fabrication, projects of innovative nature and computer techniques. The journal is specifically tailored to channel the exchange of technological know-how between researchers and practitioners. Contributions from all aspects related to the recent developments of advanced steel construction are welcome. Please visit our website for more information :

[www.ascjournal.com](http://www.ascjournal.com) ISSN:1816-112X

Science Citation Index Expanded, Materials Science Citation Index and ISI Alerting

20 YEARS IN CONTINUOUS TRAINING  
TO ENHANCE AND UPGRADE PEOPLE AND FIRMS  
ENGAGED IN THE FIELD OF CIVIL ENGINEERING

**3** Research and  
Development Units

**5** Experimental laboratories

**13** Consulting Areas

**12** Member Organizations

**4** Continents

**713** Courses Held

**20** Nationalities

**60** Lecturer Coordinators

**20** Years of Training

**16.525** Trainees

[www.fundec.pt](http://www.fundec.pt)

## Conference Venue

The Conference takes place in the Congress Centre of Instituto Superior Técnico (IST), the Faculty of Engineering of the University of Lisbon (UL).

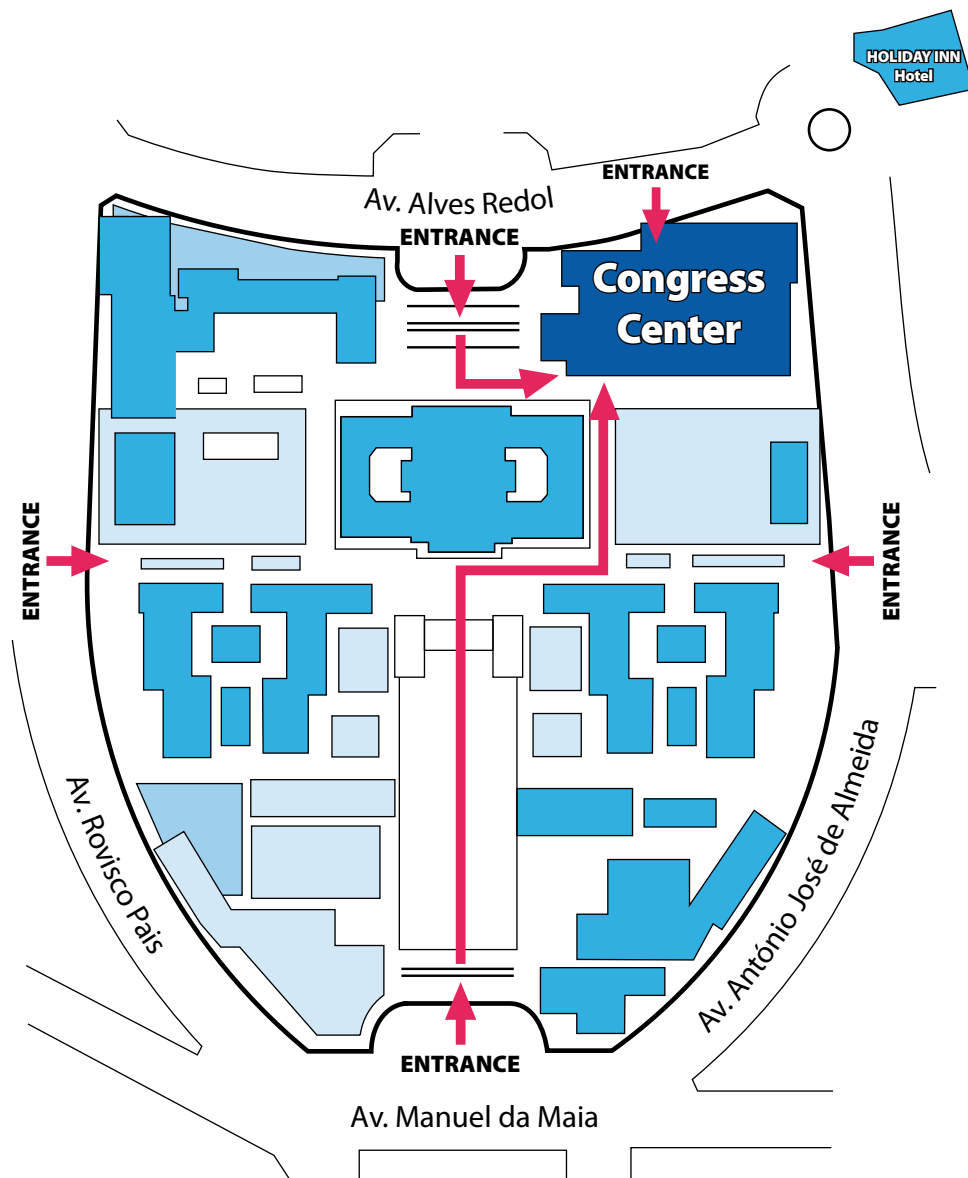
There are four entrances to the IST Campus, as indicated in the figures. The Congress Centre is located in the lower levels of the Civil Engineering Pavilion (*Pavilhão de Engenharia Civil*) – the building in the Campus corner closest to the Holiday Inn Hotel.

### Congress Centre (Civil Engineering Pavilion)

Instituto Superior Técnico

Av. Rovisco Pais 1

1049-001 LISBOA



## Map of Lisbon



 linha  
**Azul**  
Blue line

 linha  
**Amarela**  
Yellow line

 linha  
**Verde**  
Green line

 linha  
**Vermelha**  
Red line



## General Tourist Information

### Getting to Lisbon by air

Direct Flights from Most of European Cities, North or South America and Africa Land at the Lisbon Airport (Portela), Terminal 1. From Portela Airport to IST Alameda Campus is a 10 minutes' Drive. Lisbon Airport is Very Close to the City Centre – it is Located 7km from the Centre – and There are Different Alternatives to get There, Namely by Metro to Aerobus, City Bus (Carris) or by Taxi. If You Choose the Metro to go From the Airport Straight to IST, You Have the Red Line (Linha Vermelha) and You Should Exit in Alameda or Saldanha Station. It Takes Around 15 to 20 Minutes and Costs €1,40 Plus €0,50 for the “Viva Viagem” Rechargeable Card. A Taxi Ride from the Airport to IST is About 4-5 km That Takes 10-15 Min, Depending on Traffic, and Should Cost Around €10 (Note That 1.60€ is Charged for the Transportation of Luggage or Animals). A Sure Option is the “Taxi Voucher”, a Prepaid Taxi Service Starting at 16.40€, on Sale at the “Information Desk” in the Arrival Terminal. Other Options are the AeroBus and the Aero Shuttle (3.5€).

### Getting to Lisbon by car

Drivers coming from the north use highway A1 while those coming from East and South use highway A2, entering in Lisbon through the 25 de Abril bridge or use A12 and enter by the Northeast of Lisbon through the Vasco da Gama bridge. The speed limits in Portugal are 120 km/h on highways, 90 km/h on roads and 50 km/h in urban areas, unless marked otherwise.

### Getting to Lisbon by train

The St. Apolónia station is the terminal for trains arriving from the North of Portugal. Another option is to use the train station Oriente. From the South of Portugal an option is to use the train station Oriente. Connections to the metro lines exist at both stations (St. Apolónia - blue line, Oriente - red line).

### Moving around

#### Taxi:

Lisbon is served by an extensive network of public transportation that can take you anywhere in the city and to its surroundings. Taxis (black and green or beige) are cheap when comparing to most of the European

countries. They can be called by phone, picked-up on taxi plazas or stopped on the street. The fare on the taxi meter should start at 3.25€ (daytime pick-up) or 3.90€ (nighttime). Outside the city limits, city fares are charged per kilometer. 1.60€ is charged for the transportation of luggage or animals. Before taking a taxi, inquire about the fare.

#### Metro:

The Lisbon Metro is a very comfortable and easy way to reach most of the city, from 6:30 to 1:00. The Metro lines reach most of the city being the Metro stations close to IST:

- **Alameda** (red and green line)
- **Saldanha** (red and yellow line)

#### Bus

The bus routes cover all Lisbon and extend to its outskirts. The tickets can be pre-paid, at the counters of Carris, the surface transportation operator for Lisbon, or bought aboard the bus, electric cars or funiculars.

The Following Buses Stop Near IST Alameda Campus: Av. Rovisco Pais/Av. António José de Almeida (Side Entrances): **720, 742, 767.**

Alameda: **708** (Bike Bus), **717, 718, 720, 735, 767;**  
**Night Bus: 206, 208.**

Saldanha/Arco do Cego: **713, 716, 720, 726, 727, 736, 738, 742, 744, 767, 783;** Night Bus: **207.**

#### Metro and Bus Fares:

Reusable card > 0.50 €

METRO/CARRIS > 1.40 €

CARRIS - Bus > 1.80€ (on board fare)

> Tram – 2.85 (on board fare)

#### Trains

Suburban trains to Estoril and Cascais depart from the Cais do Sodré train station, to the south of the river cities from Roma-Areeiro (Entrecampos) while to Sintra the trains depart from Rossio train station or Oriente (Entrecampos). The ride to Cascais or to Sintra should take about 35-45 min, each way. The train ride to south of the river is a highlight as the train will cross the 25 de Abril bridge with magnificent views of Lisbon.

For IST the nearby train stations are: **Roma-Areeiro**  
**Entrecampos**

## National emergency number: 112

### Other general information

- Time zone: GMT +1 summer time
- Electricity: 220V, 50 Hz with standard European power sockets
- Currency: Euro (€)
- Banks: working hours are 8:30 – 15:00 (Monday-Friday)
- Pharmacies: 9:00 – 19:00
- Shops: 9:00 – 19:00
- Shopping Malls: 10:00 – 23:00
- Temperature: Average high 28°C, Average low 18°C



### Main Museums in Lisbon:

- Centro de Arte Moderna (Modern Art Museum)
- Museu do Oriente (Oriente Museum)
- Museu Calouste Gulbenkian (Calouste Gulbenkian Museum)
- Museu dos Coches (Coach Museum)
- Museu Nacional de Arte Antiga (National Museum for Old Art)
- Colecção Berardo (The Berardo Collection)
- Museu do Azulejo (Tile Museum)

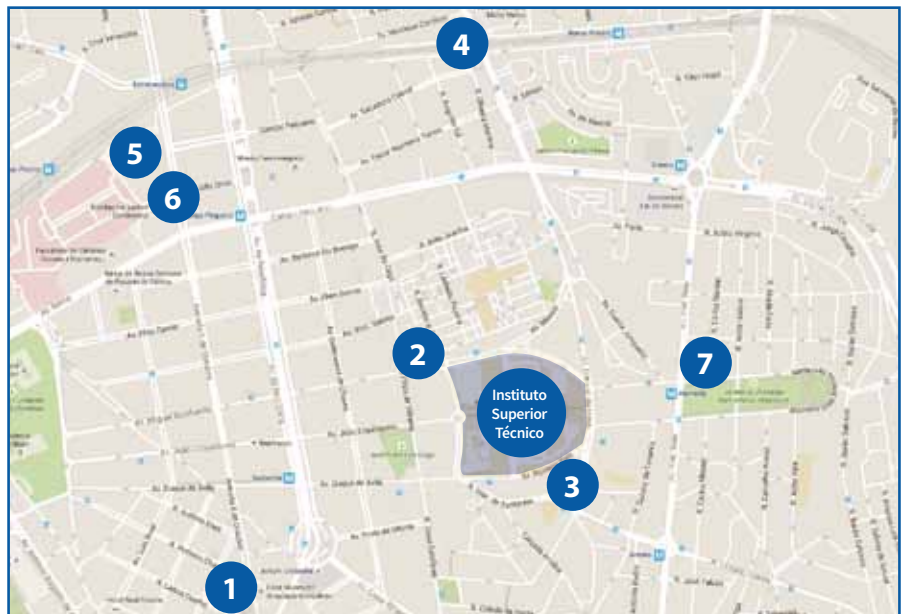
### Main Monuments in Lisbon:

- Aqueduto das Águas Livres (Free Waters' Aqueduct)
- Basílica da Estrela (Estrela Churro)
- Castelo de São Jorge (Saint George's Castle)
- Sé Patriarcal (Patriarchal Cathedral)
- Mosteiro dos Jerónimos (Jerónimos Monástico)
- Padrão dos Descobrimentos (Monument to the Discoveries)
- Torre de Belém (Belém Tower)

### Accommodation

#### Hotels close to IST:

- 1> Sheraton Lisboa Hotel & Spa
- 2> Hotel Holiday Inn Lisboa
- 3> Hotel Turim Alameda
- 4 > Hotel Roma
- 5> Hotel Vip Zurique
- 6> Hotel Vip Berna
- 7> Hotel A.S. Lisboa



# General Information

## Registration

Registered participants and accompanying persons may pick up their material at the registration desk, located at the level -1 of the civil engineering pavilion (see map of the conference centre), in the following days:

- Tuesday, July 21, 15:30-18:30
- Wednesday, July 22, 08:30-18:30
- Thursday, July 23, 08:30-18:30
- Friday, July 24, 08:30-14:00

Each registered participant will receive a conference bag and an envelope containing the badge, a certificate of attendance and the Lunch, Welcome Cocktail and Conference Dinner tickets (including additional ones purchased). Moreover, session chairs will receive a sheet with instructions.

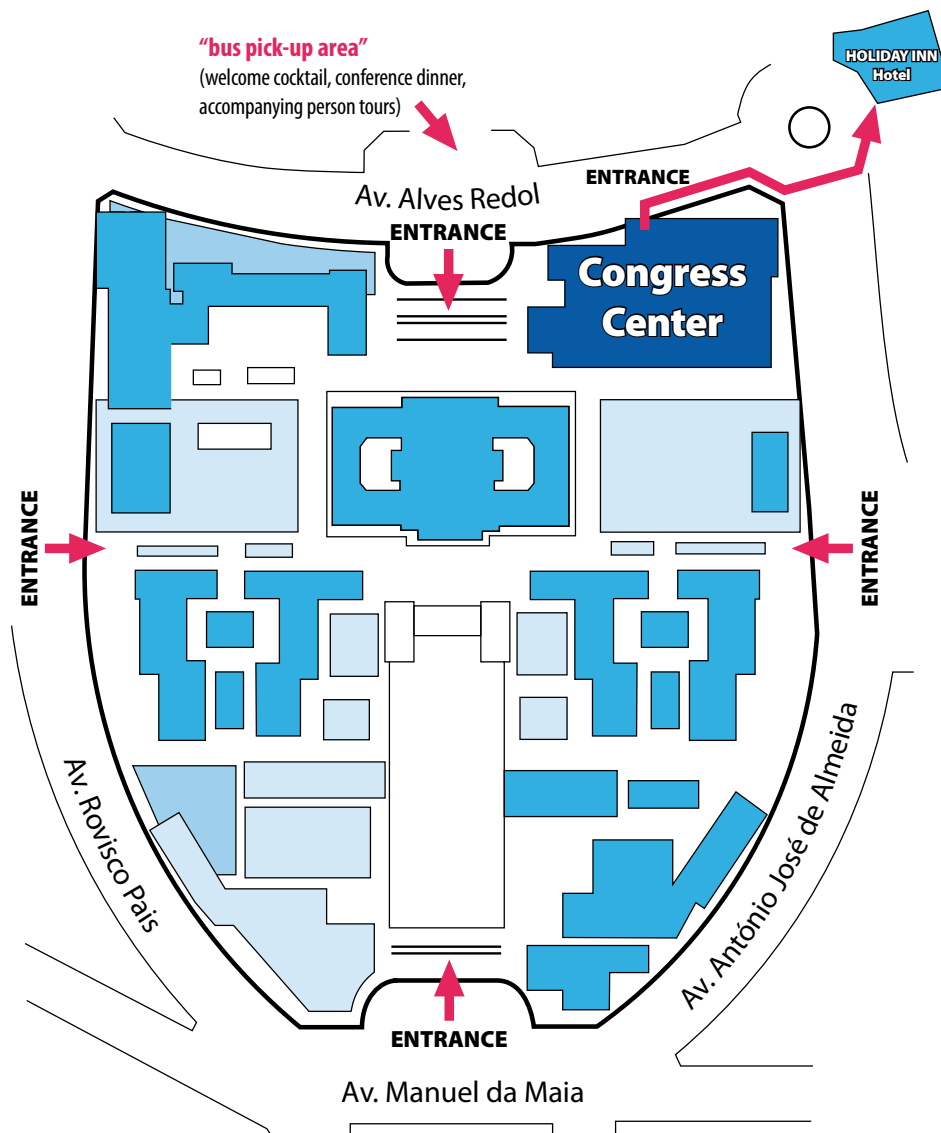
Each accompanying person will receive a folder containing the badge, the programme of activities and the Welcome Cocktail and Conference Dinner tickets.

## Coffee-Breaks

The coffee/tea breaks will take place in the halls 1(level -1) and 2 (level -2) of the civil engineering pavilion, near the Auditorium and room entrances (see map of the conference centre). They will be open to all registered participants – kindly wear your conference badge.

## Lunches

The lunches of all registered participants will take place in the “Açores Room” and “Porto Santo Room” (level -1) of the Holiday Inn Hotel, located a 2 minute walk away from the Conference Centre (see the figure below). The lunch tickets, included in the envelope given to you at registration, have three different colours, one for each day. Please, do not forget to bring the correct lunch ticket with you.





# Social Programme

## Welcome Cocktail

All participants and accompanying persons are invited to a Welcome Cocktail, which will take place at the Mãe d'Água das Amoreiras reservoir. They will board buses at the IST entrance (see the map in the previous page) at 19:00 – buses must depart at 19:15. At the end of the cocktail, the participants and accompanying persons wishing to return by bus will be dropped at this same location. **Please, do not forget to bring the welcome cocktail ticket with you.**



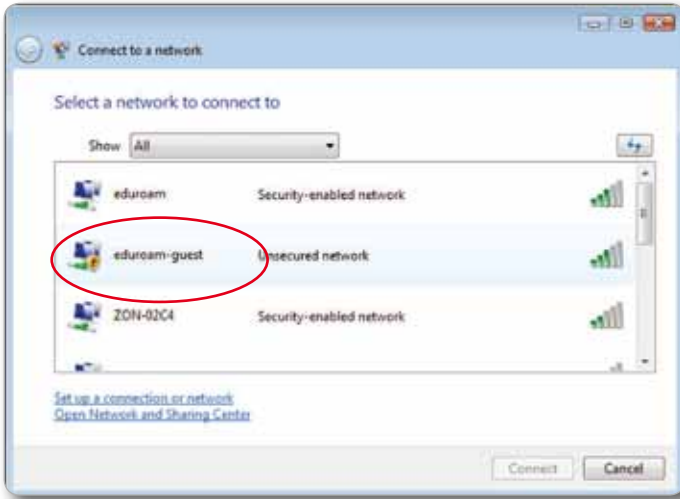
## Congress Dinner

All participants and accompanying persons are invited to the Conference Dinner, which will take place at the Condes d'Óbidos Palace. They will board buses at the IST entrance (see the map in the previous page) at 19:45 – buses must depart at 20:00. At the end of the dinner, the participants and accompanying persons will return by bus and will be dropped at this same location. **Please, do not forget to bring the conference dinner ticket with you.**

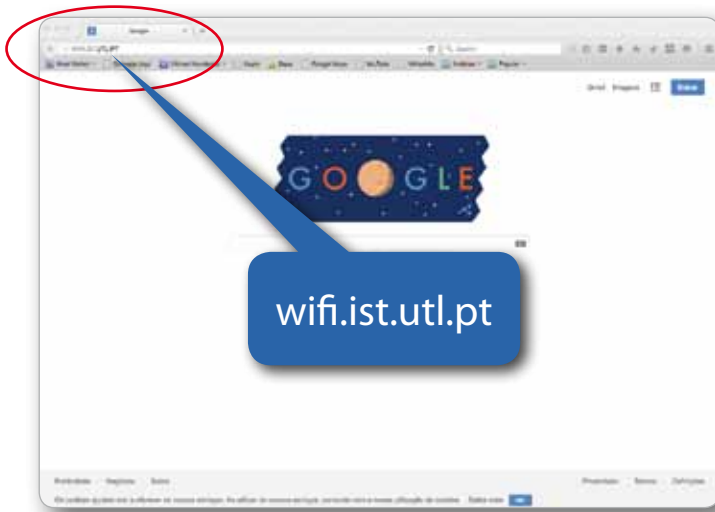


# Congress Information

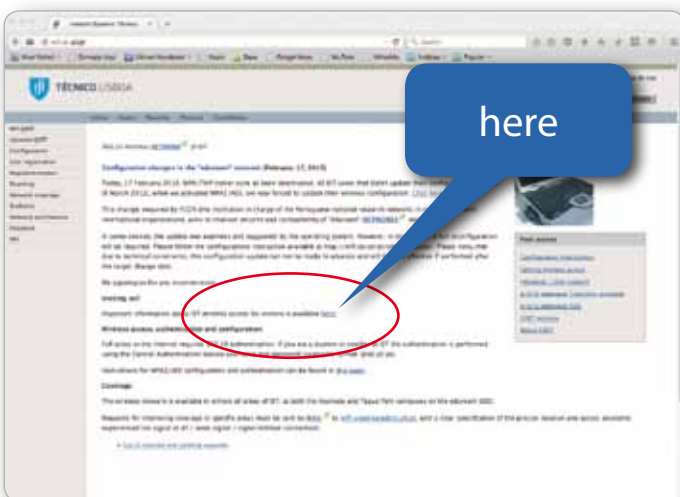
## Wireless Internet Access



**Step 1:**  
Select the eduroam-guest network

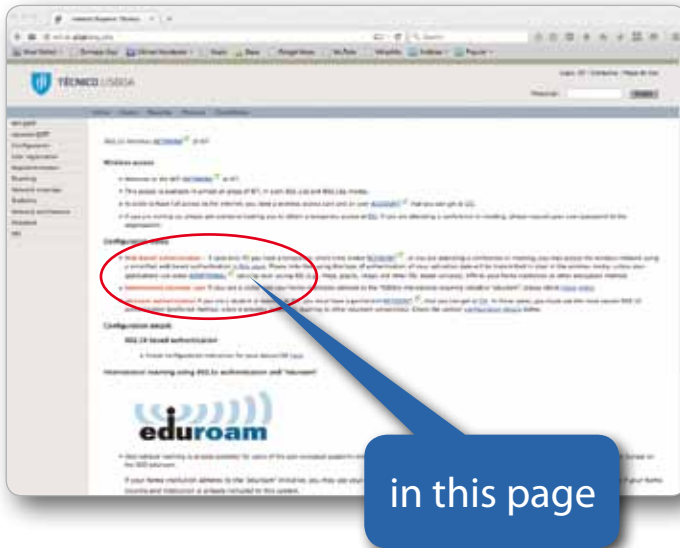


**Step 2:**  
Open your Web browser (Mozilla, Firefox or other) and write **wifi.ist.utl.pt**

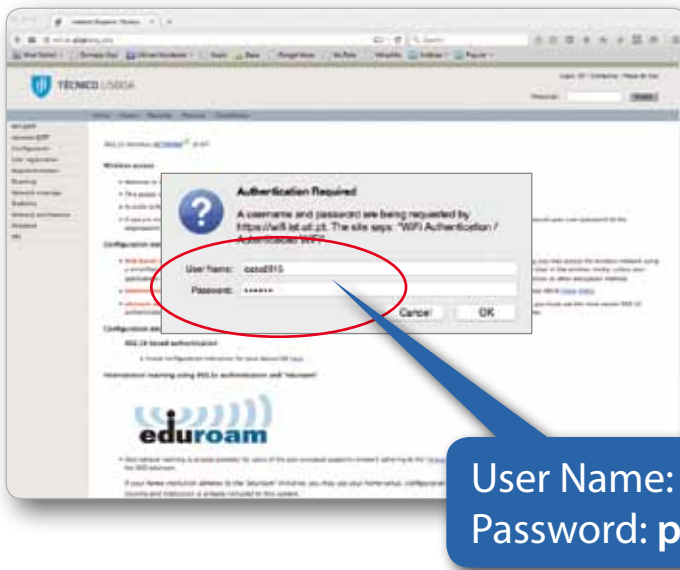


**Step 3:**  
Select here in Visiting us?

# Congress Information



**Step 4:**  
Select in this page in Web based authentication



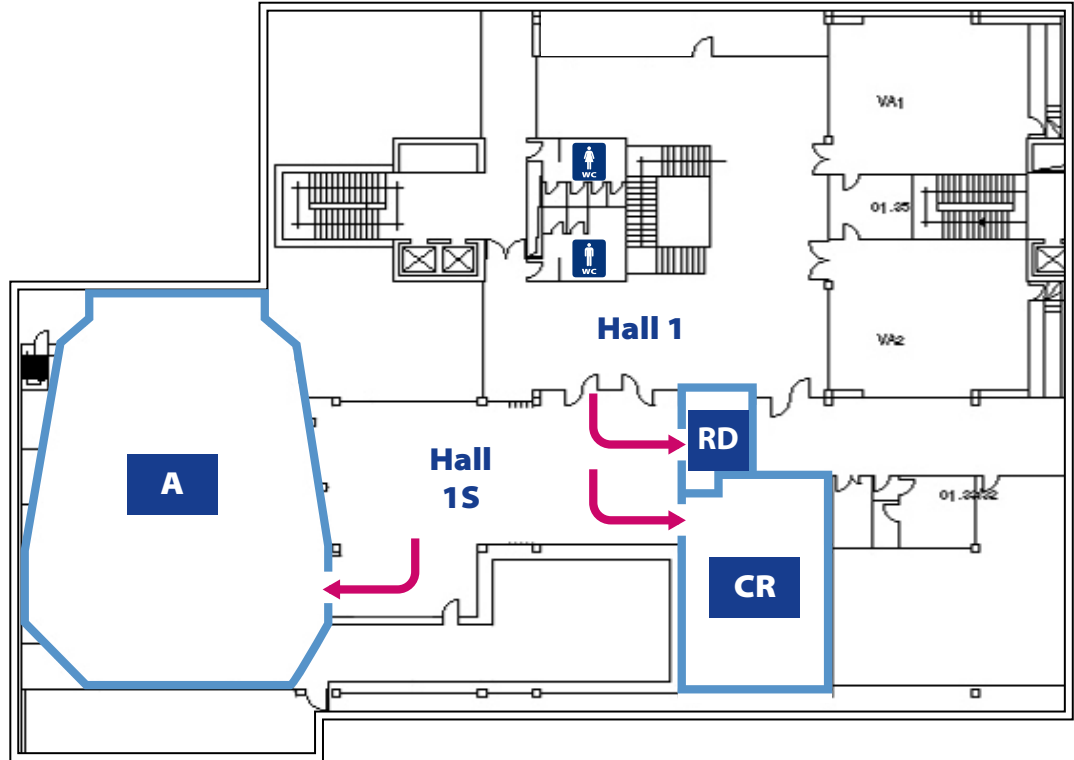
**Step 5:**  
Enter User Name and Password

## Instructions for Presenters

- Each keynote presentation is allocated 25 minutes plus 5 minutes of questions and answers.
- Each regular presentation is allocated 12 minutes plus 3 minutes of questions and answers.
- The presentations (powerpoint or pdf files) must be tested and uploaded, at the computer room (see the map of the conference centre), at least half a day prior to the respective sessions. **The presentations for the 22 July morning sessions must be uploaded on 21 July, during the early registration period.**

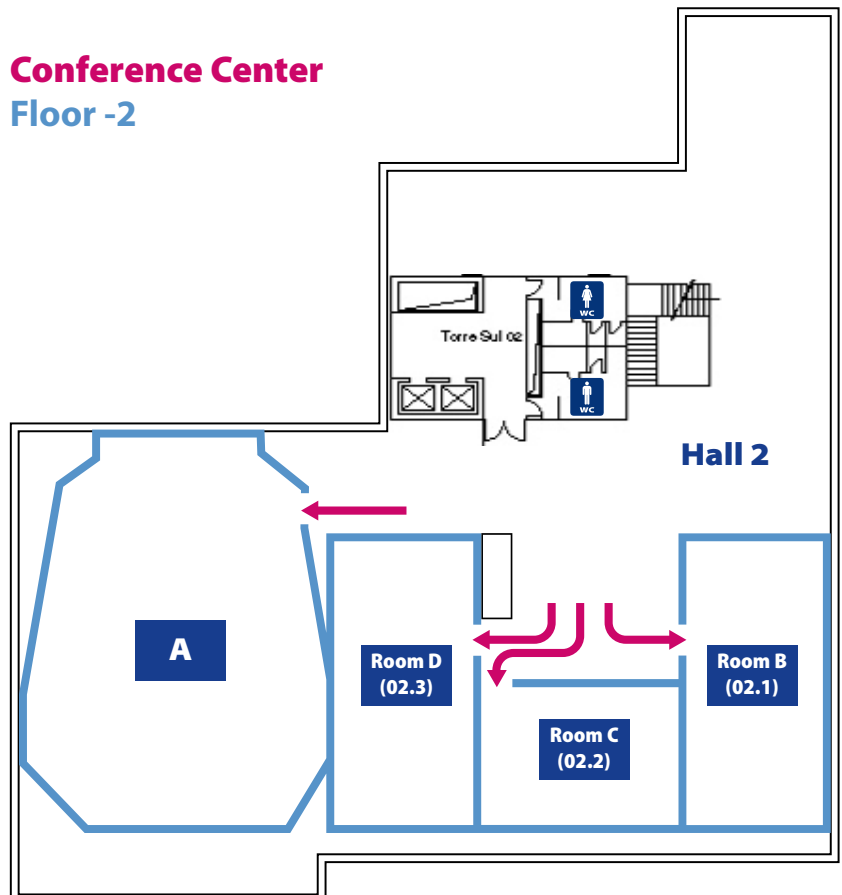
# Congress Information

## Conference Center Floor -1



## Conference Center Floor -2

- A - Auditorium
- RD - Secretariat
- CR - Computer Room
- Room B (02.1) - Lecture Room
- Room C (02.2) - Lecture Room
- Room D (02.3) - Lecture Room





---

EIGHTH INTERNATIONAL CONFERENCE ON  
**ADVANCES IN  
STEEL STRUCTURES**

**IJSSD 2015**  
SYMPOSIUM ON PROGRESS IN  
STRUCTURAL STABILITY AND DYNAMICS

---

TECHNICAL  
PROGRAMME

# Programme-at-a-Glance

<b>Programme-at-a-Glance</b>				
	<b>Tuesday - 21 July</b>	<b>Wednesday - 22 July</b>	<b>Thursday - 23 July</b>	<b>Friday - 24 July</b>
7:30-8:30		REGISTRATION		
8:30-9:00		OPENING SESSION	REGISTRATION	REGISTRATION
9:00-9:30		KEYNOTE SESSION I	KEYNOTE SESSION III	PARALLEL SESSIONS VII
9:30-10:00		Coffee/Tea Break	Coffee/Tea Break	
10:00-10:30				Coffee/Tea Break
10:30-11:00		PARALLEL SESSIONS I	PARALLEL SESSIONS IV	KEYNOTE SESSION V
11:00-11:30				
11:30-12:00				
12:00-12:30		Lunch	Lunch	Lunch
12:30-14:00				
14:00-14:30		PARALLEL SESSIONS II	PARALLEL SESSIONS V	PARALLEL SESSIONS VIII
14:30-15:00				
15:00-15:30				
15:30-16:00				
16:00-16:30		Coffee/Tea Break	Coffee/Tea Break	Coffee/Tea Break
16:30-17:00	EARLY REGISTRATION	KEYNOTE SESSION II	KEYNOTE SESSION IV	PARALLEL SESSIONS IX
17:15-17:45		PARALLEL SESSIONS III	PARALLEL SESSIONS VI	
17:45-18:15				CLOSING SESSION
18:15-18:30				
19:00-21:00		WELCOME COCKTAIL <small>(BUSES LEAVE IST AT 19:15)</small>		
19:45-23:30			CONFERENCE DINNER <small>(BUSES LEAVE IST AT 20:00)</small>	

# Programme Overall View

Wednesday - 22 July				
7:30-8:30	REGISTRATION			
8:30-9:00	OPENING SESSION			
9:00-10:00	KEYNOTE SESSION I <i>Auditorium</i>			
10:00-10:30	Coffee/Tea Break			
PARALLEL SESSIONS I				
10:30-12:30	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Cold-Formed I</b> Flexural Members	<b>IJSSD 1</b> Tribute to S. Kitipornchai	<b>Stability I</b> Global Buckling	<b>Composite I</b> Compression Members
12:30-14:00	Lunch			
PARALLEL SESSIONS II				
14:00-16:00	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Cold-Formed II</b> Compression and Web Crippling	<b>IJSSD 2</b> Tribute to S. Kitipornchai	<b>Stability II</b> Interactive and Shell Buckling	<b>Dynamics</b>
16:00-16:30	Coffee/Tea Break			
16:30-17:00	KEYNOTE SESSION II <i>Auditorium</i>			
PARALLEL SESSIONS III				
17:15-18:15	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Cold-Formed III</b> Shear and Tearing	<b>Stability III</b> Frame Buckling	<b>Composite II</b> Connections	<b>Experimental Studies</b>
19:00-19:15	Departure for the Welcome Cocktail (BUSES LEAVE IST AT 19:15)			
19:45-21:00	WELCOME COCKTAIL			

Thursday - 23 July				
8:30-9:00	REGISTRATION			
9:00-10:00	KEYNOTE SESSION III <i>Auditorium</i>			
10:00-10:30	Coffee/Tea Break			
PARALLEL SESSIONS IV				
10:30-12:30	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Cold-Formed IV</b> Tubular Members and Trusses	<b>Stability IV</b> Thin-Walled and Perforated Members	<b>IJSSD 3</b> Tribute to J.N. Reddy	<b>Connections I</b> Monotonic Behaviour
12:30-14:00	Lunch			
PARALLEL SESSIONS V				
14:00-16:00	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Cold-Formed and Stability V</b>	<b>Fire</b>	<b>IJSSD 4</b> Tribute to J.N. Reddy	<b>Connections II</b> Cyclic Behaviour and Impact
16:00-16:30	Coffee/Tea Break			
16:30-17:00	KEYNOTE SESSION IV <i>Auditorium</i>			
PARALLEL SESSIONS VI				
17:15-18:15	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Stability VI</b> Shells and Plates	<b>Stability VII</b> Beam Models	<b>IJSSD 5</b>	<b>Connections III</b> Design
19:45-20:00	Departure for the Conference Dinner (BUSES LEAVE IST AT 20:00)			
20:45-23:30	CONFERENCE DINNER			

Friday - 24 July				
8:30-9:00	REGISTRATION			
PARALLEL SESSIONS VII				
9:00-10:30	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Composite III</b> Flexural Members	<b>Steel Frames I</b> Seismic Behaviour	<b>IJSSD 6</b>	<b>Bridges and Girders</b>
10:30-11:00	Coffee/Tea Break			
11:00-12:30	KEYNOTE SESSION V <i>Auditorium</i>			
12:30-14:00	Lunch			
PARALLEL SESSIONS VIII				
14:00-16:00	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Stainless Steel I</b>	<b>Steel Frames II</b>	<b>Material Behaviour</b>	<b>Theoretical Models</b>
16:00-16:30	Coffee/Tea Break			
PARALLEL SESSIONS IX				
16:30-17:30	Auditorium	Room B (02.1)	Room C (02.2)	Room D (02.3)
	<b>Stainless Steel II and Aluminium</b>	<b>Steel Frames III</b>	-	<b>Joints and FEM Models</b>
17:45-18:15	CLOSING SESSION			







---

EIGHTH INTERNATIONAL CONFERENCE ON  
**ADVANCES IN  
STEEL STRUCTURES**

**IJSSD 2015**  
SYMPOSIUM ON PROGRESS IN  
STRUCTURAL STABILITY AND DYNAMICS

---

DETAILED  
PROGRAMME



7:30-8:30	<i>Registration</i>	
8:30-9:00	<b>Opening Session</b> <i>Auditorium</i>	
8:30-8:35	<b>Opening Word</b> D. Camotim – <i>Chair of the Organising Committee</i>	
8:35-8:40	<b>Welcome Address</b> R. Colaço – <i>Vice-President of IST for Administrative Affairs</i>	
8:40-8:45	<b>Welcome Address</b> S.L. Chan – <i>Co-Chair of the Organising Committee</i>	
8:45-8:50	<b>Welcome Address</b> C.M. Wang – <i>Organiser of IJSSD 2015</i>	
8:50-8:55	<b>Conference Information</b> N. Silvestre – <i>Member of the Organising Committee</i>	
9:00-10:00	<b>KEYNOTE SESSION I</b> <i>Auditorium</i>  <i>Chair: J. Loughlan</i>	
9:00-9:30	1	Reidar Bjorhovde
		<b>Steel for Future Structures and Design Codes</b>
9:30-10:00	2	J. Y. Richard Liew
		<b>Design of Composite Columns with High Strength Steel and Concrete</b>
10:00-10:30	<i>Coffee/Tea Break</i>	

10:30-12:30	<b>PARALLEL SESSION I</b> <i>Auditorium</i>	
	<b>Cold-Formed I</b> <b>Flexural Members</b>  <i>Chairs: Todd Helwig and Miquel Casafont</i>	
	<b>ID</b>	<b>Paper</b>
	<b>Authors</b>	
10:30-10:45	11	<b>Beam Tests of Cold-Formed Steel Built-up Sections with Web Stiffeners</b>
		L. Wang* and B. Young
10:45-11:00	12	<b>Analytical Study on Trapezoidal Steel Sheering with Transverse Corrugations by the Yield Line Theory</b>
		P. Casariego*, M. Casafont, M. Ferrer and F. Marimon
11:00-11:15	13	<b>Testing of the Front to Front Built-Up C-Section Cold-Formed Steel Flexural Members using Plate and Screw Connection</b>
		N. Nuttayasakul*, W. Patwichaichote and T. Chaisomphob
11:15-11:30	14	<b>Influence of Corrugation Depth on Lateral Stability of Cold-Formed Steel Beams of Corrugated Webs</b>
		D. Dubina, V. Ungureanu* and L. Gilia
11:30-11:45	15	<b>Local-Distortional Interaction in Pin-Ended Lipped Channel Beams: Behaviour, Strength and DSM Design</b>
		A.D. Martins*, P.B. Dinis, D. Camotim and P. Providência
11:45-12:00	16	<b>Behaviour of Cold-formed Steel Built-up Open Sections with Web Holes under Bending</b>
		L. Wang* and B. Young
12:00-12:15	17	<b>Structural Characteristics of Hollow Flange Channel Beams under Bending and Torsion</b>
		H.X. Wan* and M. Mahendran
12:15-12:30	10	<b>Local Collapse of Liner Trays: Experimental and Theoretical Approach</b>
		M. Georgescu*, V. Ungureanu and A. Gruin

<b>PARALLEL SESSION I</b> <i>Room B (02.1)</i>			
<b>IJSSD 1</b> Tribute to S. Kitipornchai <i>Chairs: Chien Ming Wang and David Nethercot</i>			
ID	Paper	Authors	
10:30-10:45	210 <b>Effect of Vortex Induced Vibration on a Paired Column Semi-Submersible Platform</b>	A.C. Odijie* and J. Ye	
10:45-11:00	211 <b>Antisymmetric Postbuckling Localisation of an Infinite Column on a Non-Linear Foundation with Softening</b>	G. Yang and M.A. Bradford*	
11:00-11:15	212 <b>Static Analysis for Exact Vibration Analysis of Clamped Plates</b>	M. Eisenberger* and A. Deutsch	
11:15-11:30	213 <b>Use of Measured Vibration of in-Situ Concrete Sleeper for Detecting Underlying Railway Ballast Damage</b>	Q. Hu, H.F. Lam* and S.A. Alabi	
11:30-11:45	201 <b>Hencky Bar-Chain Model for Buckling and Vibration of Beams with Elastic End Restraints</b>	C.M. Wang*, H. Zhang, R.P. Gao, W.H. Duan and N. Challamel	
11:45-12:00	215 <b>Behaviour and Modelling of CFRP-Strengthened Rectangular Steel Tubes Subjected to a Transverse End Bearing Load</b>	D. Fernando, T. Yu and J.G. Teng*	

<b>PARALLEL SESSION I</b> <i>Room C (02.2)</i>			
<b>Stability I</b> Global Bucklin <i>Chairs: Luís Simões da Silva and Hervé Degée</i>			
ID	Paper	Authors	
10:30-10:45	63 <b>Second-Order Direct Analysis of Steel Scaffolds and Stand Structures</b>	S. McCrory*, Y.P. Liu and S.L. Chan	
10:45-11:00	19 <b>Flexural Torsional Response of Carbon and Stainless Steel Columns with Angle Sections</b>	A.A. Menezes, P.C. Vellasco*, L.R. de Lima and A.T. Silva	
11:00-11:15	20 <b>Numerical Investigation on Lateral Torsional Buckling of Steel Beams with Class 4 Cross-Sections – Comparison with Existing Design Formulae</b>	C. Couto*, J. Ferreira, P. Vila Real and N. Lopes	
11:15-11:30	21 <b>Proposal of an Ayrton-Perry Design Methodology for the Verification of Flexural and Lateral-Torsional Buckling of Prismatic Beam-Columns</b>	T. Tankova*, L. Simões da Silva, L. Marques and A. Andrade	
11:30-11:45	22 <b>The Newly Approach to Stability Check by Controlling Buckling Modes</b>	I. Misiunaite* and A. Juozapaitis	
11:45-12:00	23 <b>Resistance Partial Factors for Stability Design of Steel Members According to Eurocodes</b>	M. Gizejowski* and Z. Stachura	
12:00-12:15	24 <b>Lateral Torsional Buckling Behaviour of Different Static Systems</b>	R. Ebel* and M. Knobloch	
12:15-12:30	25 <b>Lateral Torsional and Distortional Buckling of Cross-Connected Beams</b>	R. Stroetmann*	

<b>PARALLEL SESSION I</b> <i>Room D (02.3)</i>			
<b>Composite I</b> Compression Members <i>Chairs: Brian Uy and Luciano R. Lima</i>			
ID	Paper	Authors	
10:30-10:45	26 <b>Preliminary Investigation on the Seismic Properties of CFST Columns and RBS Steel Beam Connections with RC Slab</b>	R. Li*, B. Samali and Z. Tao	
10:45-11:00	27 <b>Analysis of Fully Encased Steel Reinforced Concrete Columns (SRC) According to Eurocode 4 and AISC360: Review of Experimental Tests Available in Literature</b>	O. Martínez-Ramos, D. Hernández-Figueroa* and A. Piquer	
11:00-11:15	28 <b>Experimental Investigation into the Mechanism of Load Introduction into Concrete-Filled Steel Tubular Column through Shear Connections</b>	M.H. Mollazadeh* and Y.C. Wang	
11:15-11:30	29 <b>Behavior of Concrete-Filled Square Steel Tubular Stub Column with Inner CFRP I-Shaped Profiles under Axial Compression</b>	G. Li*, B. Zhou and Z. Yang	
11:30-11:45	30 <b>Concrete-Filled Elliptical Section Steel Columns under Concentric and Eccentric Loading</b>	F. McCann*, L. Gardner and W. Qiu	
11:45-12:00	31 <b>Concrete-Filled Thin-Walled Tubes using 800MPa Steel</b>	H.J. Lee*, H.G. Park and I.R. Choi	
12:00-12:15	33 <b>Short Column Behavior of Rubberized Concrete Filled Steel Tubes</b>	A.P.C. Duarte*, B. A. Silva, N. Silvestre, J. de Brito and E. Júlio	

12:30-14:00	<i>Lunch</i>		
-------------	--------------	--	--

<b>PARALLEL SESSION II</b> <i>Auditorium</i>			
<b>Cold-Formed II</b> <b>Compression and Web Crippling</b> <i>Chairs: Ben Young and Alexandre Landesmann</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	34	<b>Experimental Investigation of Cold-Formed Steel Built-Up Stub Columns</b>	F. Meza*, J. Becque and I. Hajirasouliha
14:15-14:30	35	<b>Pallet Rack Uprights Subject to Combined Compression and Bending</b>	J. Bonada*, M.M. Pastor, F. Roure and M. Casafont
14:30-14:45	36	<b>Experimental Investigation on Double-C Compressed Members</b>	A.L. Joó, M. Szedlák and S. Ádány*
14:45-15:00	37	<b>Influence of Local-Distortional Interaction in the Behaviour and DSM Design of Stiffened Lipped Channel Columns</b>	A.D. Martins*, P.B. Dinis, D. Camotim and P. Providência
15:00-15:15	38	<b>Shape Optimisation of Manufacturable Cold-Formed Steel Columns for all Buckling Modes – Part I: Hough Transform</b>	B. Wang*, B.P. Gilbert, A.M. Molinier, H. Guan and L.H. Teh
15:15-15:30	39	<b>Shape Optimisation of Manufacturable Cold-Formed Steel Columns for all Buckling Modes – Part II: Improved Method</b>	B. Wang*, B.P. Gilbert, H. Guan and L.H. Teh
15:30-15:45	40	<b>Direct Strength Method (DSM) for Web Crippling Design – ETF Load Conditions</b>	P. Natário*, N. Silvestre and D. Camotim
15:45-16:00	41	<b>Experimental Studies of Lipped Channel Beams Subject to Web Crippling under ETF and ITF Load Cases</b>	L. Sundararajah*, M. Mahendran and P. Keerthan

<b>PARALLEL SESSION II</b> <i>Room B (02.1)</i>			
<b>IJSSD 2</b> <b>Tribute to S. Kitipornchai</b> <i>Chairs: Yang Xiang and Noël Challamel</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	216	<b>Global-Local-Distortional Vibration of Thin-Walled Rectangular Multi-Cell Beams</b>	R. Gonçalves*, N. Peres, R. Bebiano and D. Camotim
14:15-14:30	217	<b>Buckling and Vibration Analysis of Cold-Formed Steel CHS Members and Frames using Generalised Beam Theory</b>	C. Basaglia*, D. Camotim and N. Silvestre
14:30-14:45	218	<b>Composite Action Between Cold-Formed Steel Beams and Wood-Based Floorboards</b>	P. Kyvelou*, L. Gardner and D.A. Nethercot
14:45-15:00	214	<b>Development of a New Non-Buckling Segmented Brace</b>	H. Hao*
15:00-15:15	220	<b>Comparison of Responses of Guyed and Freestanding Transmission Towers under Conductor Breakage Loads</b>	F. Alminhana*, F. Albermani and M. Mason
15:15-15:30	209	<b>Bond Characterization of Steel-CFRP with Carbon Nanotube Modified Epoxy Adhesive via Pull-off Tests</b>	A.H. Korayem, Y.M. Liu, X.L. Zhao and W.H. Duan*

<b>PARALLEL SESSION II</b> <i>Room C (02.2)</i>			
<b>Stability II</b> <b>Interactive and Shell Buckling</b> <i>Chairs: Dennis Lam and Andreas Taras</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	42	<b>Mode Interaction of Global and Local Buckling in Thin-Walled I-Section Struts with Rigid Flange-Web Joints</b>	E.L. Liu* and M.A. Wadee
14:15-14:30	43	<b>On the Modelling of Geometric Imperfections for Multimode Buckling Problems</b>	A.N. Trouncer and K.J.R. Rasmussen*
14:30-14:45	44	<b>Numerical Study of Interactive Buckling in Thin-Walled Section Box Columns under Pure Compression</b>	J. Shen*, M.A. Wadee and A.J. Sadowski
14:45-15:00	45	<b>Koiter Asymptotic Analysis of Thin-Walled Cold-Formed Steel Members</b>	V. Ungureanu, D. Dubina, A. Madeo*, G. Zagari, G. Zucco and R. Zinno
15:00-15:15	46	<b>Spherical Dome Buckling with Edge Ring Support</b>	J.M. Rotter*, G. Mackenzie, M. Lee and J.M. Holst
15:15-15:30	47	<b>Local Behavior of Steel Tubular Towers for Wind Energy Converters Subjected to Dynamic Loads</b>	M. Pavlovic*, M. Kovarbasic, M. Veljkovic and C. Rebelo
15:30-15:45	48	<b>Secondary Rings for Large Tanks under External Pressure</b>	J. Michael Rotter*, E. Kerr, H.T. Lam and J.M. Holst
15:45-16:00	49	<b>Spiral Welded Tubes – Imperfections, Residual Stresses, and Buckling Characteristics</b>	F. Aslani, B. Uy*, S. Hicks and W.H. Kang

<b>PARALLEL SESSION II</b>			
<i>Room D (02.3)</i>			
<b>Dynamics</b>			
<i>Chairs: Pedro Vellasco and Nicola Rizzi</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
14:00-16:00			
14:00-14:15	50	<b>Effect of the Pedestrian-Structure Dynamic Interaction on the Vibration Serviceability of Steel-Concrete Composite Footbridges</b>	J.G. da Silva* and G.L. Debona
14:15-14:30	51	<b>Non-Linear Dynamic Analysis and Stability of Thin-Walled Beams with Monosymmetric Channel-Section</b>	R.C. Mancilla, P.B. Gonçalves* and E.C. Carvalho
14:30-14:45	52	<b>Buckling Transition of Open-Section Thin-Walled Columns under Dynamic Load – Theoretical and Experimental Study</b>	Z. Kołakowski and M. Kotelko*
14:45-15:00	53	<b>Time-Domain Wind-Induced Oscillation Analysis of a Steel Box Girder Suspension Bridge</b>	W.S. Kim*, C. Jeoung, G. Min, Y. Jeong and D. Cho
15:00-15:15	54	<b>Surrogate Model-Based Seismic Performance Sensitivity for Irregular Steel Buildings</b>	J. Seo*
15:15-15:30	55	<b>Failure Mechanisms of Metallic Ultra-Light Microlattice Structures Subjected to Dynamic Loading</b>	M.G. Rashed*, M. Ashraf and P.J. Hazell
15:30-15:45	56	<b>Human Comfort Assessment and Vibration Control of Steel-Concrete Composite Floors Subjected to Aerobics</b>	J.G. da Silva* and C.M. Gaspar
15:45-16:00	57	<b>Dynamic Stability of a Sandwich Beam with Variable Mechanical Properties of the Core</b>	M. Grygorowicz*, K. Magnucki and P. Kędzia

16:00-16:30	<i>Coffee/Tea Break</i>		
-------------	-------------------------	--	--

<b>KEYNOTE SESSION II</b>			
<i>Auditorium</i>			
<i>Chair: Gregory J. Hancock</i>			
16:30-17:00	3	Benjamin W. Schafer	<b>Seismic Response and Engineering of Cold-Formed Steel Framed Buildings</b>

<b>PARALLEL SESSION III</b>			
<i>Auditorium</i>			
<b>Cold-Formed III</b>			
<b>Shear and Tearing</b>			
<i>Chairs: Riccardo Zandonini and Cao Hung Pham</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
17:15-18:15			
17:15-17:30	58	<b>Numerical Modelling of Rivet Fastened Rectangular Hollow Flange Channel Beams Subject to Shear</b>	P. Keerthan and M. Mahendran*
17:30-17:45	59	<b>High-Performance Cold-Formed Steel Framed Shear Walls Sheathed with Noncombustible Panels</b>	C. Yu*, G. Yu and C. Li
17:45-18:00	60	<b>Cyclic Response of CFS Framed Shear Walls</b>	M. Accorti, N. Baldassino*, R. Zandonini, F. Scavazza and C.A. Rogers
18:00-18:15	61	<b>Experimental and Numerical Studies of Thin Steel Roof Battens under Wind Uplift Loads</b>	M. Sivapathasundaram and M. Mahendran*

<b>PARALLEL SESSION III</b>			
<i>Room B (02.1)</i>			
<b>Stability III</b>			
<b>Frame Buckling</b>			
<i>Chairs: Richard Stroetmann and Yong Wang</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
17:15-18:15			
17:15-17:30	62	<b>Down-Aisle Stiffness of Steel Shelving Structures: Experimental and FE Approach</b>	F. Roure*, M.R. Somalo, J. Bonada, M.M. Pastor and M. Casafont
17:30-17:45	65	<b>Ideal Brace Stiffness for Systems with Multiple Parallel Members</b>	R.D. Ziemian* and C.W. Ziemian
17:45-18:00	64	<b>Stability Design of Imperfect Steel and Composite Frames with Semi-Rigid Connections</b>	Y.P. Liu*, S.W. Liu, P.T.C. Pang and S.L. Chan
18:00-18:15	18	<b>Design of Steel Members in Terms of Ultimate Strength Design Concept vs. Defined Concepts of the Limit Load Carrying Capacity</b>	J. Melcher, M. Karmazínová and M. Horáček*

<b>PARALLEL SESSION III</b> <i>Room C (02.2)</i>			
<b>Composite II Connections</b> <i>Chairs: Chia-Ming Uang and Gianluca Ranzi</i>			
	ID	Paper	Authors
17:15-18:15			
17:15-17:30	66	<b>Nonlinear Analysis for the Pre and Post-Yield Behaviour of a Hybrid Structure by a Higher-Order Element with the Refined Plastic Hinge Approach</b>	C.K. Lu*
17:30-17:45	68	<b>Characterization of the Bond Properties at the Steel-Concrete Interface in Concrete Members Reinforced by Steel Profiles</b>	H. Degée*, T. Bogdan, D. Dragan and A. Plumier
17:45-18:00	69	<b>Fracture Critical Members and Redundancy Analysis of Continuous Composite Twin I-Girder Bridges</b>	H. Lam*, T. Yoda, W. Lin and H. Kasano
18:00-18:15	194	<b>Experimental Study on Failure Mechanism of Tubular K-Joints under Drop-Weight Impact Loading</b>	Y. Hu, H. Qu, J. Huo* and Y. Liu

<b>PARALLEL SESSION III</b> <i>Room D (02.3)</i>			
<b>Experimental Studies</b> <i>Chairs: Eduardo M. Batista and Yuner Huang</i>			
	ID	Paper	Authors
17:15-18:15			
17:15-17:30	70	<b>The Use of Post-Installed Shear Connectors for Strengthening Non-Composite Continuous Steel Bridge Girders</b>	K. Kreitman, A. Reza G. Azad, H. Patel, M. Engelhardt, T. Helwig* and E. Williamson
17:30-17:45	71	<b>Pseudo-Dynamic Test on Semi-Rigid Frame of Concrete Filled Square Steel Tubular Column-Steel Beam</b>	H. Wan*, R. Feng and W. Du
17:45-18:00	72	<b>Component Testing of Steel-Core Buckling Restrained Braces (BRBS) with Pinned End Connections</b>	O.C. Celik*, E. Yuksel, C. Avci-Karatas, A. Bal, T. Gokce, Z. Bago and G. Koller
18:00-18:15	73	<b>The Stiffness and Strength Behavior of Cross Frames in Steel Bridge Applications</b>	A. Battistini, W. Wang, T. Helwig*, M. Engelhardt and K. Frank

19:00-19:45	Transportation to Mãe d'Água Reservoir - Meeting in Front of the Conference Building at 19:00 (BUSES MUST DEPART AT 19:15)		
19:45-21:00	<b>Welcome Cocktail</b>		



**EIGHTH INTERNATIONAL CONFERENCE ON  
ADVANCES IN STEEL STRUCTURES**  
IJSSD 2015 SYMPOSIUM ON PROGRESS IN STRUCTURAL STABILITY AND DYNAMICS  
**21-24 JULY 2015, LISBON, PORTUGAL**

8:30-9:00	<b>Registration</b>		
-----------	---------------------	--	--

9:00-10:00	<b>KEYNOTE SESSION</b> <i>Auditorium</i> <b>Chair: Siu-Lai Chan</b>		
9:00-9:30	4	David A. Nethercot	<b>The Changing Basis for the Design of Cold-Formed Purlin Systems</b>
9:30-10:00	5	Ben Young	<b>Cold-Formed High Strength Tubular Sections of Steel Grade up to 1100 MPa</b>

10:00-10:30	<i>Coffee/Tea Break</i>		
-------------	-------------------------	--	--

10:30-12:30	<b>PARALLEL SESSION IV</b> <i>Auditorium</i> <b>Cold-Formed IV</b> <b>Tubular Members and Trusse</b> <b>Chair: Reidar Bjorhovde and Maria Kotelko</b>		
	ID	Paper	Authors
10:30-10:45	74	<b>Influence of Material Law on the F.E. Modelling of Cold-Formed Tubes</b>	M. Hayeck, E. Saloumi, J. Nseir and N. Boissonnade*
10:45-11:00	75	<b>Behaviour of Cold-Formed High Strength Tubular Beam-Columns of Steel Grade up to 900MPa</b>	J.L. Ma, T.M. Chan* and B. Young
11:00-11:15	76	<b>Tests of Cold-Formed High Strength Steel Tubular Sections under Concentrated Bearing Load</b>	H.T. Li* and B. Young
11:15-11:30	77	<b>Effect of Imperfection on Behavior of Square Hollow Section Member</b>	K. Sato* and K. Ikarash
11:30-11:45	78	<b>Experimental and Analytical Characterization of the Resistance of Steel Hollow Sections</b>	J. Nseir, E. Saloumi, M. Hayeck and N. Boissonnade*
11:45-12:00	79	<b>Local Buckling Behavior of Cold-Formed Tubular Sections Made of High Strength Steel</b>	N. Schillo* and M. Feldmann
12:00-12:15	80	<b>Finite Element Studies on the Global Buckling of Cold-Formed Trusses</b>	D. Visy*, S. Ádány and A.L. Joó
12:15-12:30	190	<b>Review of International Code Provisions - Steel Beams with Flange Holes</b>	K.S. Sivakumaran*, P. Arasaratnam and M. Tait

<b>PARALLEL SESSION IV</b> <i>Room B (02.1)</i>			
<b>Stability IV</b> Thin-Walled and Perforated Members <i>Chairs: Kim J.R. Rasmussen and Eiki Yamaguchi</i>			
	ID	Paper	Authors
10:30-12:30			
10:30-10:45	82	<b>Thin-walled Member Linear and Buckling Analysis: A Comparison between GBT and GE</b>	G. Garcea*, R. Gonçalves, A. Bilotta, D. Manta, R. Bebiano, L. Leonetti, D. Magisano and D. Camotim
10:45-11:00	83	<b>Modal Decomposition for Thin-Walled Members with Rounded Corners: An Extension to cFSM by using Elastic Corner Elements</b>	S. Ádány* and Z. Beregszàski
11:00-11:15	84	<b>Relationship Between the Semi-Analytical Finite Strip Methods for Buckling of Thin-Walled Sections under Uniform and Localised Loading</b>	G.J Hancock* and C.H. Pham
11:15-11:30	85	<b>Development of the THIN-WALL-2 Program for Buckling Analysis of Thin-Walled Sections under Generalised Loading</b>	V.V. Nguyen*, G.J. Hancock and C.H. Pham
11:30-11:45	86	<b>Generalized Beam Theory Buckling Analysis for Members with Holes</b>	J. Cai and C.D. Moen*
11:45-12:00	87	<b>GBT Calculation of Distortional and Global Buckling Loads of Cold-Formed Steel Channel Columns with Multiple Perforations</b>	M. Casafont*, J. Bonada, M.M. Pastor and F. Roure
12:00-12:15	88	<b>The Failure Mechanics of Steel Plate Shear Webs with Cut-Outs</b>	J. Loughlan and N. Hussain*
12:15-12:30	89	<b>Buckling Studies of Thin-Walled C-Sections with Square Holes in Shear using the Spline Finite Strip Method</b>	C.H. Pham*

<b>PARALLEL SESSION IV</b> <i>Room C (02.2)</i>			
<b>IJSSD 3</b> Tribute to J.N. Reddy <i>Chairs: Yeong-Bin Yang and Jin-Guang Teng</i>			
	ID	Paper	Authors
10:30-12:30			
10:30-10:45	198	<b>Dynamic Response of an Elastic Half Space with Cavity Subjected to P and SV Waves by Finite/Infinite Element Approach</b>	Y.B. Yang*, H.H. Hung, K.C. Lin and K.W. Cheng
10:45-11:00	199	<b>Finite Cell Method: High Order Structural Dynamics for Complex Geometries</b>	M. Elhaddad, N. Zander, S. Kolkmanberger, A. Shadavakhsh, V. Nübel and E. Rank*
11:00-11:15	200	<b>On Nonlocal Computation of Eigenfrequencies of Beams using Finite Difference and Finite Element Methods</b>	N. Challamel*, V. Picandet, I. Elishakoff, C.M. Wang, B. Collet and T. Michelitsch
11:15-11:30	203	<b>Buckling of Graphene Embedded in Polymer Matrix under Compression</b>	F. Lin*, Y. Xiang and H.S. Shen
11:30-11:45	221	<b>On Accuracy of Analytical Modeling of Lamb Wave Scattering at Delaminations in Multilayered Isotropic Plates</b>	C.T. Ng*

<b>PARALLEL SESSION IV</b> <i>Room D (02.3)</i>			
<b>Connections I</b> Monotonic Behaviour <i>Chairs: László Dunai and Mihai Nedelcu</i>			
	ID	Paper	Authors
10:30-12:30			
10:30-10:45	90	<b>An Assessment of the Tension Capacity of Duplex Stainless Steel Elements with Staggered Bolt Connections</b>	J.J. dos Santos, Sebastião A. L. de Andrade, P.C. Vellasco and L.R. de Lima*
10:45-11:00	91	<b>Steel RHS Tubular Beam-to-Column Bolted Connection: Experimental Investigation</b>	G.B. dos Santos and E.M. Batista*
11:00-11:15	92	<b>Assessment of the F-Δ Relationships for the Web Components using Detailed Finite Elements Models of Beam-to-Column Steel Joints</b>	H. Augusto*, J.M. Castro, C. Rebelo and L. Simões da Silva
11:15-11:30	93	<b>Calibration of the High Strength Bolts for Measuring of the Pretension Force</b>	N.T. Fric, D.V. Budjevac, Z.M. Miskovic, M.B. Veljkovic, Z.A. Markovic and J.D. Dobric*
11:30-11:45	94	<b>Compressive Strength of Centric Gusset Plate Connections in Braced Frames</b>	M. Couchaux* and A. Rodier
11:45-12:00	96	<b>Non-Linear Behaviour of Boltless Beam to Upright Connections in Cold Formed Steel Storage Racks</b>	A.Firouzianhaji*, A. Saleh and B. Samali
12:00-12:15	97	<b>Solutions for Column-Base Connections for Steel Over-Roofing Systems: Numerical Investigations</b>	A. Floricel, G. Zagari and V. Ungureanu*
12:15-12:30	193	<b>Resistance of Cross-Section to Bending-Shear-Normal Force Interaction</b>	I. Baláz* and Y. Koleková



12:30-14:00	Lunch
-------------	-------

PARALLEL SESSION V <i>Auditorium</i>			
Cold-Formed and Stability V <i>Chairs: Franscesc Roure and Leroy Gardner</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	98	Coupon Tests and Residual Strain Measurements of Cold-Formed and Hot-Finished Elliptical Hollow Sections	W.M. Quach* and B. Young
14:15-14:30	99	Experimental and Numerical Investigations of Fracture Toughness of G450 Sheet Steels Subjected to Tension	M.T. Huynh, D.K. Phan, C.H. Pham* and G.J. Hancock
14:30-14:45	100	Direct Strength Method for Thin-Walled Beam-Columns	Y. Yan and Y.C. Wang*
14:45-15:00	101	Design of $\Sigma$ -Shaped Pallet Beams under Bending Stress for the Construction of High-Bay Racking Systems	D. Ungermann, B. Brune and M.S. Bertelsbeck*
15:00-15:15	102	Stability Behaviour of Truss Members Made of I-Sections with Slotted Gusset Plates on Both Sides	H. Unterweger* and A. Kamplleitner
15:15-15:30	103	The Behaviour and Design of T-Section Beam-Columns with Slender Webs	A. Taras*, P. Kugler and H. Unterweger
15:30-15:45	104	Cyclic Performance of Deep Wide-Flange Steel Beam-Columns	C.M. Uang*, G. Ozkula and J.L. Harris
15:45-16:00	105	Analysis of Steel Thin-Walled Members through a Higher Order Beam Model	R.F. Vieira, F.B. Virtuoso* and E.B. Pereira

PARALLEL SESSION V <i>Room B (02.1)</i>			
Fire <i>Chairs: Mahen Mahendran and Markus Knoblock</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	106	Fire Resistance of Protected I-Shaped Steel Columns in Front of Partially Encased Composite Columns. An Analytical Study.	A. Piquer, D. Hernández* and O. Martínez
14:15-14:30	107	Numerical Analysis of Shear Buckling in Beams Subjected to Interaction between Shear and Bending at Elevated Temperatures	A. Reis, N. Lopes and P. Vila Real*
14:30-14:45	108	Finite Element Analysis of Ultra-High Strength Concrete Filled Circular Hollow Steel Tube Columns under Static Load in Fire	X. Lyu*, G.P. Shu, J.Y. Richard Liew, M.X. Xiong and E.F. Du
14:45-15:00	109	Numerical Study of Slender Section Beams Subjected to Lateral-Torsional Buckling at Elevated Temperature	M. Prachar*, M. Jandera, F. Wald and B. Zhao
15:00-15:15	110	Fire Design of Tapered Steel Beams with Class 4 Cross-Sections	C. Couto*, P. Vila Real, N. Lopes and B. Zhao
15:15-15:30	111	Material Properties of Cold-Formed Ferritic Stainless Steel at Elevated Temperatures	L.H. Li* and B. Young
15:30-15:45	112	Assessment of the Safety Level Ensured by a Steel Load-Bearing Structure when Subject to Fire	M. Mašlak*
15:45-16:00	113	On the Strength and DSM Design of Cold-Formed Steel Lipped Channel Beams Buckling in Distortional Modes Exposed to Fire Conditions	A. Landesmann* and D. Camotim

PARALLEL SESSION V <i>Room C (02.2)</i>			
IJSSD 4 Tribute to J.N. Reddy <i>Chairs: Moshe Eisenberger and Heung-Fai (Paul) Lam</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	204	Free Vibration and Buckling Analysis of Sandwich Beams with Functionally Graded Carbon Nanotube-Reinforced Composite Face Sheets	H. Wu*, S. Kitipornchai and J. Yang
14:15-14:30	205	Nonlinear Vibration of PZT4/PZT-5H Monomorph and Bimorph Beams with Graded Microstructures	J. Yang*, S. Kitipornchai and C. Feng
14:30-14:45	206	Flexural Vibration of an Atomic Force Microscope Cantilever based on Modified Couple Stress Theory	L.N. Liang, L.L. Ke*, Y.S. Wang, J. Yang and S. Kitipornchai
14:45-15:00	207	Effects of Meso Shape Irregularity of Metal Foam on Yield Features under Triaxial Loading	X. Zhang, L. Tang*, Z. Jiang, Z. Liu, Y. Liu and D. Fang
15:00-15:15	208	Ambient Vibration Test, Modal Identification and Structural Model Updating Following Bayesian Framework	J. Yang, H.F. Lam* and J. Hu
15:15-15:30	219	Dynamic Buckling of Thermo-Electro-Mechanically Loaded FG-CNTRC Beams	J. Yang*, L.L. Ke and C. Feng

<b>PARALLEL SESSION V</b> <i>Room D (02.3)</i>			
<b>Connections II</b> Cyclic Behaviour and Impact <i>Chairs: Marian Gizejowski and Sándor Ádány</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	114	<b>Development of Ductile Steel Knee Brace Member with Built-In Comb-Shaped Damper</b>	Y. Harada* and S. Honma
14:15-14:30	115	<b>Experimental Study of the Behavior of Blind Bolted End Plate Connections</b>	Y.S. Liu*, L. Zhang, G.Q. Li, Y. Lu and J.Y. Sun
14:30-14:45	116	<b>An Analytical Study for Seismic Performance Evaluation of Column-Tree Steel Moment Connections</b>	K. Oh*, S.B. Hong, Y. Yang, J.H. So and K. Lee
14:45-15:00	117	<b>Experimental Tests of Compound Columns and their Base-Plate Connections Subject to Axial and Horizontal Forces</b>	G. Della Corte* and R. Landolfo
15:00-15:15	118	<b>Design and Modeling of a Novel Damage-Free Steel Column Base</b>	V.C. Kamperidis, T.L. Karavasilis* and G. Vasdravellis
15:15-15:30	119	<b>Prediction of Block Shear Fracture in Bolted Connections</b>	H. Wen and H. Mahmoud*
15:30-15:45	120	<b>Experimental Behaviour of Beam-to-Column Steel Joints Subjected to Impact Loading</b>	P. Barata, A. Santiago*, C. Rigueiro and J.P. Rodrigues
15:45-16:00	121	<b>Numerical Assessment of Beam-to-Column Steel Joints Subjected to Impact Loading</b>	J. Ribeiro, A. Santiago* and C. Rigueiro

16:00-16:30	<i>Coffee/Tea Break</i>		
-------------	-------------------------	--	--

<b>KEYNOTE SESSION II</b> <i>Auditorium</i>			
<i>Chair: Mark A. Bradford</i>			
16:30-17:00	6	Riccardo Zandonini	<b>Progressive Collapse: The Case of Composite Steel-Concrete Frames</b>

<b>PARALLEL SESSION VI</b> <i>Auditorium</i>			
<b>Stability VI</b> Shells and Plates <i>Chairs: Ivan Baláz and Paulo B. Gonçalves</i>			
	ID	Paper	Authors
17:15-18:15			
17:15-17:30	125	<b>Design Criteria for Intermediate Ring Stiffeners for Discretely Supported Cylindrical Shells</b>	Ö. Zeybek, C. Topkaya* and J. Michael Rotter
17:30-17:45	126	<b>A Study of Imperfect Cylindrical Steel Tubes under Global Bending and Varying Support Conditions</b>	O.K. Fajuyitan, A.J. Sadowski* and J. Michael Rotter
17:45-18:00	127	<b>A Semi-Analytical Model for the Nonlinear Stability Analysis of Stiffened Plates</b>	P.S. Ferreira* and F.B. Virtuoso
18:00-18:15	128	<b>Ultimate Strength of Cylindrically Curved Steel Panels under Generalised In-Plane Stresses</b>	J.P. Martins* and L. Simões da Silva

<b>PARALLEL SESSION VI</b> <i>Room B (02.1)</i>			
<b>Stability VII</b> Beam Models <i>Chairs: Giovanni Garcea and M. Ahmer Wadee</i>			
	ID	Paper	Authors
17:15-18:15			
17:15-17:30	122	<b>A GBT-Based Adaptation of the Ayrton-Perry Formula for the Global-Distortional Buckling</b>	M. Nedelcu*
17:30-17:45	123	<b>Generalized Warping Analysis of Curved Beams by Isogeometric Methods</b>	E.J. Sapountzakis and I.N. Tsipitsis*
17:45-18:00	124	<b>1D Nonlinear TWB Model Accounting for in Plane Cross-Sections Deformation</b>	S. Gabriele, A. Genoese, N. Rizzi* and V. Varano
18:00-18:15	173	<b>Crack Identification in a Thin-Walled Channel Section Steel Beam using a Combined Three Level Factorial Design Response Surface and Genetic Algorithm</b>	P. Dey, S. Talukdar* and D.J. Bordoloi

<b>PARALLEL SESSION VI</b> <i>Room C (02.2)</i>			
<b>IJSSD 5</b> <i>Chairs: Ernst Rank and Hayder Rasheed</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
17:15-18:15	222	<b>Nonlinear Vibration of Nonlocal Piezoelectric Nanoplates</b>	C. Liu, L.L. Ke*, Y.S. Wang and J. Yang
17:30-17:45	223	<b>Behavior and Design of Thin-Walled Cold-Formed Steel Clip Angles Subjected to Compression Load</b>	C. Yu* and M. Yousof
17:45-18:00	224	<b>An Enhanced Analytical Model for Buckling Investigation of Mindlin Plates</b>	E. Ruocco*
18:00-18:15	225	<b>Nonlinear Beam-Column Element under Consistent Deformation</b>	Y.Q. Tang, Z.H. Zhou and S.L. Chan*

<b>PARALLEL SESSION VI</b> <i>Room D (02.3)</i>			
<b>Connections III</b> <b>Design</b> <i>Chairs: Francisco Virtuoso and Nuno Silvestre</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
17:15-17:30	129	<b>Definition and Implementation of a Simplified Model for Steel Connections in an Open Source Software</b>	F. Gentili*, R. Costa and L. Simões da Silva
17:30-17:45	130	<b>Simplified Design Recommendations for Beam-to-Column Joints According to Eurocode</b>	M. Pavlovic*, G. Jeftovic, N. Gluhovic, Z. Markovic and D. Buđevac
17:45-18:00	131	<b>Flexibility of a Steel End-Plate Beam-to-Column Joint when Exposed to a Fire – Two Different, Nonequivalent Approaches to Evaluate</b>	M. Mašlak* and M. Snela
18:00-18:15	132	<b>FEA of CHS T-Joints with High Yield Strength Steels</b>	Y. Watanabe*, K. Ochi and K. Morimoto

19:45-20:00	Transportation to Condes d'Óbidos Palace - Meeting in Front of the Conference Building at 19:45 (BUSES MUST DEPART AT 20:00)
20:45-23:30	<b>Conference Dinner</b>



8:30-9:00	Registration
-----------	--------------

PARALLEL SESSION VII <i>Auditorium</i>			
Composite III Flexural Members <i>Chair: J.Y. Richard Liew and Maria Magdalena Pastor</i>			
	ID	Paper	Authors
9:00-10:30			
9:00-9:15	133	<b>Partial Interaction Analysis of Composite Steel-Concrete Beams in the Framework of the GBT</b>	G.A. Taig, G. Ranzi*, D. Dias-da-Costa, G. Piccardo and A. Luongo
9:15-9:30	134	<b>Ductility of HSS-Concrete Composite Beams</b>	H. Ban and M.A. Bradford*
9:30-9:45	135	<b>An Efficient Non-Linear GBT-Based Finite Element for Steel-Concrete Beams</b>	D. Henriques, R. Gonçalves* and D. Camotim
9:45-10:00	136	<b>Experimental Study of Sustainable Recycled Concrete Aggregates in Steel-Concrete Composite Construction</b>	E.L. Tan*, V. Tam, Z. Tao and B. Singh
10:00-10:15	137	<b>A Simplified Approach for Predicting the Initial Stiffness of Composite Beams</b>	H. Ban, B. Uy, M.A. Bradford* and Y. Shi

PARALLEL SESSION VII <i>Room B (02.1)</i>			
Steel Frames I Seismic Behaviour <i>Chairs: Benjamin W. Schafer and Zsolt Nagy</i>			
	ID	Paper	Authors
9:00-10:30			
9:00-9:15	139	<b>Estimation of Economic Losses in Seismic-Resistant Post-Tensioned Steel Frames with Viscous Dampers</b>	T.L. Karavasilis*, A.I. Dimopoulos, A.S. Tzimas, G.S. Kamaris and D. Vamvatsiko
9:15-9:30	140	<b>Comparison of Seismic Design Provisions in Canada, United States and Chile for Buckling Restrained Braced Frames</b>	R. Tremblay, L. Fahnestock, R. Herrera and M. Dehghani*
9:30-9:45	141	<b>Seismic Resistant Steel Frame with Replaceable Fuses and Energy-Dissipative Braces: Numerical Analysis</b>	M. Baiguera, G. Vasdravellis* and T.L. Karavasilis
9:45-10:00	142	<b>Experimental Study of Seismic Resistant Steel Frames in Case of Column Loss</b>	F. Dinu, I. Marginean*, D. Dubina and I. Petran
10:00-10:15	143	<b>Parametric Investigation for Seismic Response of Dual Frames with Steel Panels</b>	C. Neagu*, D. Dubina and F. Dinu
10:15-10:30	144	<b>The "Meakado" Project: Designing Steel and Composite Structures for Optimized Performances in Moderate Earthquake Areas</b>	H. Degée*, C. Castiglioni, P.O. Martin, I. Calderon and B. Hoffmeister

<b>PARALLEL SESSION VII</b> <i>Room C (02.2)</i>			
<b>IJSSD 6</b> <i>Chairs: Cheng Yu and Ran Feng</i>			
	ID	Paper	Authors
9:00-10:30			
9:00-9:15	226	<b>Simulation of Growth and Instability of Large Cracks in Coped Beams Subjected to Various End Rotations</b>	H. Wen and H. Mahmoud*
9:15-9:30	227	<b>The Discrete Planar Cosserat Rod and its Stability Analysis</b>	A. Kocsis*
9:30-9:45	228	<b>Buckling of Non-Uniform Column with Arbitrary Boundary Conditions Resting on Variable Winkler Foundation</b>	A.A. Ghadban, A.H. Al-Rahmani, M.T. Albahtiti and H.A Rasheed*
9:45-10:00	229	<b>A Novel Hybrid Semi-Active Tuned Mass Damper for Lightweight Steel Structural Applications</b>	D. Demetriou*, N. Nikitas and K.D. Tsavdaridis
10:00-10:15	230	<b>Dynamic Analysis of Train-Bridge Systems Considering Overhanging Effect of Simply Supported Beams</b>	J.D. Yau*, J. Shi and Y.J. Wang

<b>PARALLEL SESSION VII</b> <i>Room D (02.3)</i>			
<b>Bridges and Girders</b> <i>Chairs: Ken Sivakumaran and António M. Baptista</i>			
	ID	Paper	Authors
9:00-10:30			
9:00-9:15	145	<b>The Cumulative Damage Process Induced by Unavoidable Imperfections of Lamella Flanges</b>	V. Krístek, J. Kunrt, M. Škaloud and S. Urushadze*
9:15-9:30	146	<b>Evaluation of Experimental Atmospheric Corrosion Tests on Weathering Steel Bridges</b>	V. Krivy*, K. Kreislova, V. Urban and K. Vavrusova
9:30-9:45	147	<b>Deterioration of Load-Carrying Capacity of Steel Bridge Girder due to Local Corrosion</b>	E. Yamaguchi*, T. Akagi and H. Tsuji
9:45-10:00	148	<b>Post-Fracture Redundancy Analysis of an Aged Steel Truss Bridge in Japan: Field Test and Numerical Analysis</b>	W. Lin*, T. Yoda, H. Ge, Y. Xu, H. Kasano and H. Lam
10:00-10:15	149	<b>Post-Buckled Behavior and Breathing-Induced Fatigue in Thin-Walled Steel Plated Structures</b>	M. Škaloud, M. Zörnerová and S. Urushadze*
10:15-10:30	150	<b>Flexural Load Capacity for Tapered and Straight Beams with Restrained Compression Flange and Slender Web</b>	F.F. Aly, M.M. El Sadaawy* and M.S. Abdelaty

10:30-11:00	<i>Coffee/Tea Break</i>
-------------	-------------------------

<b>KEYNOTE SESSION V</b> <i>Auditorium</i>			
<i>Chair: J. Michael Rotter</i>			
11:00-12:30			
11:00-11:30	7	Luís Simões da Silva	<b>On the Safety of Stability Design Rules for Steel Members</b>
11:30-12:00	8	Dennis Lam	<b>Behaviour of Demountable Shear Connectors in Composite Beams with Profiled Deck Flooring</b>
12:00-12:30	9	Kim J.R. Rasmussen	<b>Second Order Effects in Locally Unstable Steel Storage Rack Frames</b>

12:30-14:00	<i>Lunch</i>
-------------	--------------

PARALLEL SESSION VIII <i>Auditorium</i>			
Stainless Steel I <i>Chairs: Paulo Vila Real and Tak-Ming Chan</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	152	Tests of Cold-Formed Lean Duplex Stainless Steel Beams	Y. Huang* and B. Young
14:15-14:30	153	Numerical Investigation of Stainless Steel Slender Sections Subjected to Combined Loadin	M. Anwar-Us-Saadat, M. Ashraf, S. Ahmed, S. Al-Deen*
14:30-14:45	154	Experimental and Numerical Studies of Ferritic Stainless Steel Tubular Beam-Columns	O. Zhao*, L. Gardner and B. Young
14:45-15:00	155	Tests on Concrete-Filled Lean Duplex Stainless Steel Tubular Members Subjected to Bending	Y.Q. Deng* and B. Young
15:00-15:15	156	Experimental Investigation of Flexural Buckling of Cold Formed Built-Up Stainless Steel Members	J.D. Dobric*, Z.A. Markovic, D.V. Budjevac, M.J. Spremic, N.T. Fric and M.S. Pavlovic
15:15-15:30	157	Tests on Ferritic Stainless Steel RHS and SHS Beam-Columns	I. Arrayago*, E. Real and E. Mirambell
15:30-15:45	158	Theoretical Analysis of Cold-Formed Stainless Steel Tubular Joints Subjected to Chord Side Wall Failure	R. Feng* and B. Young
15:45-16:00	159	Web Crippling Tests of Cold-Formed Ferritic Stainless Steel Tubular Sections under Two-Flange Loading	H.T. Li* and B. Young

PARALLEL SESSION VIII <i>Room B (02.1)</i>			
Steel Frames II <i>Chairs: Viorel Ungureanu and Harald Unterweger</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	160	Improved Structural Efficiency of Steel Single Storey Buildings using Sandwich Panels	D. Moutaftsis*, M.D. Heywood and R.G. Ogden
14:15-14:30	161	Stressed Skin Effect on the Elastic Buckling of Pitched Roof Portal Frames	Z. Nagy*, A. Pop, I. Moiş and R. Ballok
14:30-14:45	162	Full-Scale Experimental Tests on Steel Frames with Various Claddings	A.L. Joó and L. Dunai*
14:45-15:00	163	Development and Design of Welded Steel Frames Based on Numerical Modelling	B. Kövesdi*, L. Horváth, G.L. Vigh and L. Dunai
15:00-15:15	164	System Reliability-Based Criteria for the Design of Cold-Formed Portal Frames by Advanced Analysis	F. Sena Cardoso*, K.J.R. Rasmussen and H. Zhang
15:15-15:30	165	Characterizing Joist-Ledger Performance for Cold-Formed Steel Light Frame Construction	D. Ayhan*, Y. Qin, S. Torabian and B.W. Schafer
15:30-15:45	166	Direct Design Method for 3D Steel Frames by GMNIA Analysis	W. Liu, K.J.R. Rasmussen* and H. Zhang
15:45-16:00	167	Comparison of Low-Rise Steel Chevron and Suspended Zipper Braced Frames	Y. Ozelik, A. Saritas* and P.M. Clayton

PARALLEL SESSION VIII <i>Room C (02.2)</i>			
Material Behaviour <i>Chairs: Theodore Karavasilis and Wai-Meng Quach</i>			
	ID	Paper	Authors
14:00-16:00			
14:00-14:15	168	Constitutive Model for Confined Ultra-High Strength Concrete	Y.B. Wang*, J.Y. Richard Liew, S.C. Lee and D. Xiong
14:15-14:30	169	Strain Ageing Effect on the Mechanical Properties of Structural Steel under Multi-Phase Loading History	S. Hosseini*, A. Heidarpour and F. Collins
14:30-14:45	170	Experiment Investigate and Constitutive Model of Low Yield Point Steel Cyclic Behavior	L.Y. Xu*, J.G. Nie and J.S. Fan
14:45-15:00	171	Evaluation of Rate-Dependent Plasticity Models in Numerical Simulation of Metallic Light-Weight Microlattice Materials	M.G. Rashed*, M. Ashraf and P. J. Hazell
15:00-15:15	172	Extremely Low Cycle Fatigue of Structural Steel under Large Cyclic Inelastic Strains	Yu. Chen*, Yi. Chen, Q. Wu and F. Zhou
15:15-15:30	174	Numerical Studies on Halting Crack Growth Using Crack Stop Hole and Asymmetrically Bonded CFRP Patch	S. Reddy and M. Madhavan*
15:30-15:45	191	Evaluation of Telecommunication Self Supporting Steel Towers	E.H. Aly*

<b>PARALLEL SESSION VIII</b>			
<i>Room D (02.3)</i>			
<b>Theoretical Models</b>			
<i>Chairs: Yao-Peng Liu and Rodrigo Gonçalves</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
14:00-16:00			
14:00-14:15	175	<b>Influence of Semi-Continuous Composite Joints on the Natural Frequency and Deflection of Composite Beams</b>	J. Duarte da Costa*, M. Braun and C. Odenbreit
14:15-14:30	176	<b>Exact Stiffness Matrix of Shear-Deformable Hybrid Beam/Column Element</b>	P. Keo, M. Hjjaj*, Q.H. Nguyen and H. Somja
14:30-14:45	177	<b>Improvement Proposal for the Eurocode 3 Rules about the Plastic Resistance of I-Sections Subjected to Bending and Axial Force</b>	A.M. Baptista*
14:45-15:00	178	<b>Direct Analysis by an Arbitrarily-Located-Plastic-Hinge Element</b>	S.W. Liu*, Y.P. Liu and S.L. Chan
15:00-15:15	179	<b>Numerical Analysis of Bridge Falsework</b>	J. André*, R. Beale and A.M. Baptista
15:15-15:30	180	<b>Strength of Metal Sandwich Beams with Trapezoidal Corrugated Cores</b>	E. Magnucka-Blandzi*, L. Wittenbeck and P. Jasion
15:30-15:45	181	<b>A Simplified Model for Progressive Collapse Analysis of Steel Column Subjected to Impact</b>	P. Heng, M. Hjjaj* and J.M. Battini

16:00-16:30	<i>Coffee/Tea Break</i>
-------------	-------------------------

<b>PARALLEL SESSION IX</b>			
<i>Auditorium</i>			
<b>Stainless Steel II and Aluminium</b>			
<i>Chairs: Ronald Ziemian and Esther Real</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
16:30-17:30			
16:30-16:45	182	<b>Section Classification in Eurocode 9 for Aluminium Alloy Flexural Members</b>	M.N. Su* and B. Young
16:45-17:00	183	<b>Empirical Buckling Curves for Welded I-Section Columns Produced from Stainless Steel</b>	S. Ahmed, M. Ashraf and S. Al-Deen*
17:00-17:15	184	<b>Experimental Investigation of Cold-Formed Ferritic Stainless Steel Tubular T-Joints</b>	Y. Huang* and B. Young
17:15-17:30	185	<b>Section Classification for Aluminium Alloy Cross-Sections using the CSM Slenderness Parameter</b>	M.N. Su* and B. Young

<b>PARALLEL SESSION IX</b>			
<i>Room B (02.1)</i>			
<b>Steel Frames III</b>			
<i>Chairs: Nicolas Boissonnade and Christopher Moen</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
16:30-17:30			
16:30-16:45	186	<b>Numerical and Analytical Studies of Prestressed Stayed Columns with Multiple Cross-Arms</b>	J. Yu and M.A. Wadee*
16:45-17:00	187	<b>Modeling of the Nonlinear Behavior of Steel Framed Structures with Semi-Rigid Connection</b>	A. Saritas*, A. Koseoglu and H.F. Ozel
17:00-17:15	188	<b>Study on the Progressive Collapse Analysis of Steel Frame Considering strain Rate Effect</b>	G.P. Shu and H.H. Zhang*
17:15-17:30	189	<b>Performance Indices for Steel Multi-Storey Buildings Subjected to Fire</b>	F. Gentili* and F. Petrini

<b>PARALLEL SESSION IX</b> <i>Room D (02.3)</i>			
<b>Joints and FEM Models</b> <i>Chairs: Mohammed Hjiij and Aldina Santiago</i>			
	<b>ID</b>	<b>Paper</b>	<b>Authors</b>
16:30-17:30			
16:30-16:45	195	<b>Behaviour of Grout-Filled Double Skin Steel Tubular T-Joints under Impact Loads</b>	W. Li, D. Wang, C.M. Hu*, L.H. Han and X.L. Zhao
16:45-17:00	196	<b>Application of Shape Grammar to the Design of Steel Tubular Spatial Trusses</b>	J.M. Franco* and E.M. Batista
17:00-17:15	197	<b>Elastic-Plastic Bending–Shear Interaction in Reduced Beam Section Short Coupling Beams</b>	D. Dubina, A. Crisan* and F. Dinu

<b>Closing Session</b> <i>Auditorium</i>	
17:45-18:10	
17:45-17:55	<b>Conference Wrap-Up</b> R. Gonçalves – <i>Member of the Organising Committee</i>
17:55-18:05	<b>The Next Conference</b> S.L. Chan – <i>Co-Chair of the Organising Committee and “Keeper of the ICASS Flame”</i>
18:05-18:10	<b>Closing Words</b> D. Camotim – <i>Chair of the Organising Committee</i>







EIGHTH INTERNATIONAL CONFERENCE ON  
**ADVANCES IN  
STEEL STRUCTURES**

**IJSSD 2015**  
SYMPOSIUM ON PROGRESS IN  
STRUCTURAL STABILITY AND DYNAMICS



## Programme – at – a – Glance

	<b>Tuesday - 21 July</b>	<b>Wednesday - 22 July</b>	<b>Thursday - 23 July</b>	<b>Friday - 24 July</b>
7:30-8:30		REGISTRATION		REGISTRATION
8:30-9:00		OPENING SESSION	REGISTRATION	
9:00-9:30		KEYNOTE SESSION I	KEYNOTE SESSION III	PARALLEL SESSIONS VIII
9:30-10:00		Coffee/Tea Break	Coffee/Tea Break	
10:00-10:30				Coffee/Tea Break
10:30-11:00				
11:00-11:30		PARALLEL SESSIONS I	PARALLEL SESSIONS IV	KEYNOTE SESSION V
11:30-12:00				
12:00-12:30				
12:30-14:00		Lunch	Lunch	Lunch
14:00-14:30				
14:30-15:00		PARALLEL SESSIONS II	PARALLEL SESSIONS V	PARALLEL SESSIONS VIII
15:00-15:30				
15:30-16:00				
16:00-16:30		Coffee/Tea Break	Coffee/Tea Break	Coffee/Tea Break
16:30-17:00	EARLY REGISTRATION	KEYNOTE SESSION II	KEYNOTE SESSION IV	PARALLEL SESSIONS IX
17:15-17:45				
17:45-18:15		PARALLEL SESSIONS III	PARALLEL SESSIONS VI	CLOSING SESSION
18:15-18:30				
19:00-21:00		WELCOME COCKTAIL <small>(BUSES LEAVE IST AT 19:15)</small>	CONFERENCE DINNER <small>(BUSES LEAVE IST AT 20:00)</small>	
19:45-23:30				