ICSAS 2024

10th International Conference on Steel and Aluminium Structures

5-7 June 2024 | Rio de Janeiro, Brazil

Conference Programme

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Introduction

This booklet contains the program schedule of papers to be presented at the 10th International Conference on Steel and Aluminium Structures (ICSAS 2024) held in Rio de Janeiro, Brazil, from June 5th to 7th, 2024. The conference, organised by Prof. Luciano Lima from the State University of Rio de Janeiro and Prof. Eduardo Batista from the Federal University of Rio de Janeiro, Brazil, aims to bring international experts and leaders together to disseminate recent research findings and discuss developments in the design and construction of steel and aluminium structures. The previous nine ICSAS Conferences have been held in Cardiff, UK (1987), Singapore (1991), Istanbul, Turkey (1995), Helsinki, Finland (1999), Sydney, Australia (2003), Oxford, UK (2007), Kuching, Malaysia (2011), Hong Kong (2016) and Bradford, United Kingdom (2019).

The papers contained in the proceedings cover a wide variety of topics, including design and analysis of steel and aluminium structures, steel connections behaviour, fire engineering, composite bridges, composite columns, innovative composite structural systems, seismic resistance of structural systems and engineering practical applications. Over 120 participants from more than 20 countries will engage in three days of presentations and discussions covering all aspects of design and construction issues in steel and aluminium structures. **This conference is a Tribute to our friend Prof. Pedro Vellasco, who passed away on April 1st 2022. Prof. Pedro Vellasco was an enthusiast of steel and composite structures in Brazil and was responsible for bringing this edition of the ICSAS to Brazil.**

The International Scientific Committee conducted a peer review of all the papers in the proceedings. The proceeding editors managed the review process and extend their gratitude to all the reviewers for their prompt and valuable feedback. The Journal of Thin-Walled Structures has agreed to publish a special issue for ICSAS2024, which will feature an extended version of selected papers presented at the conference.

The Editors would like to thank Ms. Alessandra Leitão from Creacteve® for all her work in preparing and during the conference.

Finally, the editors would like to express their appreciation to the main sponsors of ICSAS 2024, ArcelorMittal, CAPES, CNPq, FAPERJ and JOTUN.

Prof. Luciano Lima
State University of Rio de Janeiro

Prof. Eduardo Batista
Federal University of Rio de Janeiro

Conference Programme

This conference programme can be accessed at the following link or QR Code:

https://bit.ly/3wP4vqw

Conference Proceedings

The conference proceedings can be accessed at the following link or QR Code:

https://bit.ly/3WPnrA1

Social Program

The **Welcome Reception** will be held at the ICSAS 2024 venue, Pestana Hotel, in Copacabana.

Date: **June 5th 2024**

Time: **18h30h - 20h30h (6h30PM - 8h30PM)**

The Conference Dinner will take place at the Assador Steakhouse, overlooking the view of Guanabara Bay. The Conference Organization will provide coaches that will depart from Hotel Pestana at 19h30h (7h30PM).

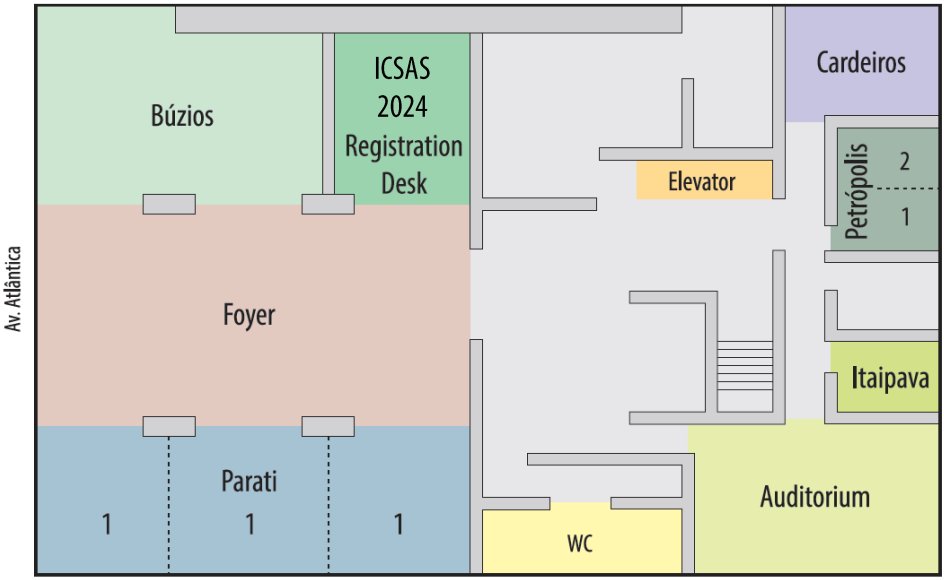
Date: **June 6th 2024**

Time: **20h00h - 23h00h (8h00PM - 11h00PM)**

Registration Desk

The Registration Desk will be open on Tuesday, June 4th, from 16h00 to 18h00 (4 PM to 6 PM) for participants to check in and receive their conference materials.

Pestana Rio Atlântica Convention Center
Second Floor



Hotel Pestana
Avenida Atlântica, 2964
Copacabana
Rio de Janeiro, Brasil

Global Symposium Programme

June 4th - Tuesday - Registration Desk - 16h to 18h (4h00PM to 6h00PM)

June 5th - Wednesday			June 6th - Thursday			June 7th - Friday		
8h00 - 9h00	Registration		8h30 - 9h00	Registration		8h30 - 9h00	Registration	
9h00 - 9h30	Opening Ceremony, Tribute to Prof. Pedro Vellasco		9h00 - 9h45	KS – Prof. Dinar Camotim		9h00 - 10h15	Composite Structures C	Dynamic Analysis
9h30 - 10h15	KS – Prof. Esther Real		9h45 - 10h30	Round Table – Arcelor Mittal		10h15 - 10h45	Coffee-break	
10h15 - 10h45	Coffee-break		10h30 - 11h00	Coffee-break		10h45 - 12h00	Connections C	Structural Members B
10h45 - 12h15	Cold-Formed Structures A	Composite Structures A	11h00 - 12h15	Cold-Formed Structures B	Composite Structures B			
12h15 - 13h30	Lunch		12h15 - 13h30	Lunch		12h00 - 13h30	Lunch	
13h30 - 14h15	KS – Prof. Luis S. da Silva		13h30 - 14h15	KS – Prof. Leroy Gardner		13h30 - 14h45	Structural Members C	Cold-Formed Structures C
14h15 - 15h45	Stability of Steel Struc. – TC8 A	Connections A	14h15 - 15h45	Structural Members A	3D Printing and Materials	14h45 - 15h00	Closing Ceremony	
15h45 - 16h15	Coffee-break		15h45 - 16h15	Coffee-break		15h00 - 15h30	Coffee-break	
16h15 - 17h00	KS – Prof. Ben Young		16h15 - 17h00	KS – Prof. Kim Rasmussem		Time to enjoy the city of Rio de Janeiro		
17h00 - 18h30	Stability of Steel Struc. – TC8 B	Stainless Steel Structures	17h00 - 18h15	Connections B	Case Studies			
18h30 - 20h30	Welcome Reception		20h00 - 23h00	Conference Dinner				

June 5th - Wednesday		
9h00	Opening Ceremony - Tribute to Prof. Pedro Vellasco – Paraty Room	
9h30	Keynote Speaker – Prof. Esther Real – Paraty Room **Revolutionizing Steel Structures: Bridging Research and Sustainable Design for Future Societal Impact** Chairs: Prof. Katherine Cashell and Prof. Itsaso Arrayago	
10h15	Coffee-break	
	Cold-Formed Structures A – Paraty Room **Chairs: Prof. Ben Young and Prof. Man-Tai Chen**	**Composite Structures A – Buzios Room** **Chairs: Prof. José Alexandre Henriques and Prof. Konstantinos Tsavdaridis**
10h45	**Global Buckling Tests of Cold-Rolled Aluminium Alloy Asymmetric Sections Beams** Ngoc Hieu Pham, **Cao Hung Pham**, Kim J.R. Rasmussen	**Experimental Performance of Recycled Porcelain Aggregate Concrete Filled Steel Tubular Stub Columns Subjected to Concentric Loads** **David H. Figueirido**, A. Melchor, Vicente Albero, Marta R.-Flores and Ana Piquer
11h00	**Experimental Investigations on Buckling Behaviour of Aluminum Sections and Members with I and H Cross-Sectional Shapes** **Prachi Verma**, Sahar Dahboul, Liya Li, Pampa Dey, Nicolas Boissonnade	**Finite Element Analysis of Steel-Concrete Composite Beams with Elliptically-Based Web Openings** Eduardo Santos, **Felipe Ferreira**, Carlos Martins and Konstantinos Tsavdaridis
11h15	**Shear Buckling Behaviour of Thin-Walled Channel Sections with Narrow Flanges** **Xuyang Chen**, Duy Khanh Pham, Cao Hung Pham	**Experimental Pushout Tests on Stainless Steel Headed Stud Shear Connectors** **Rebecca Presswood**, Sheida Afshan, Mohamed Shaheen
11h30	**Design Strength of Cold-formed Steel Elliptical Tubular Stub Columns with Steel Grades Up to 960MPa** Ye Yao, **Wai-Meng Quach** and Ben Young	**A Novel Shear Connection and Analysing Algorithm to Allow for Circular Economy In Steel-Concrete and Steel Timber Composite Construction** **Christoph Odenbreit**, Alfredo Romero and András Kozma
11h45	**Design of Cold-formed Steel Elliptical Hollow Section Members Under Combined Compression and Biaxial Bending** Ye Yao, **Wai-Meng Quach** and Ben Young	**Fire Performance of A Novel Inter-Module Connection for Steel Composite Modular Buildings-A Numerical Study** **Tattukolla Kiran**, Huu-Tai Thai, Tuan Ngo and Brian Uy
12h00	**Embossed Cold-Formed Steel Sections for the Application of Reuse** **Sivaganesh Selvaraj**, Tak-Ming Chan	**Insights into the Cyclic Behaviour of Novel Hybrid Inter-Module Joints Under Lateral Load** **Konstantinos Daniel Tsavdaridis** and Dan-Adrian Corfar
12h15	Lunch	

June 5th - Wednesday		
13h30	Keynote Speaker – Prof. Luis Simões da Silva – Paraty Room **Will Climate Change Affect the Safety of Steel Structures?** Chairs: Prof. Ben Young and Prof. Leroy Gardner	
	Stability of Steel Structures – TC8 A – Paraty Room **Chairs: Prof. Richard Stroetmann and Prof. Luis Simões da Silva**	**Connections A – Buzios Room** **Chairs: Prof. Yao Sun and Prof. Rui Matos**
14h15	**Sway-Member Imperfection Combinations for Stability Design of Steel Structures** Harry Slack, **Fiona Walport**, Hou Un Chan, M. Ahmer Wadee, Leroy Gardner	**Bolted Connections Between Thin-Walled and Thick Elements** **Maxime Vermeylen**, Marios-Zois Bezas, Koenraad Ginckels and Jean François Demonceau
14h30	**Local Buckling Design of Steel Circular Hollow Sections Under Compression** **Pablo Rico,** Mariana Echeverri, Liya Li, Carlos Graciano and Nicolas Boissonnade	**Experimental Assessment on Stainless Steel Tubular T-Joints Subjected to Axial Compression** **Chrysthyan Oliveira,** Luciano Lima, Monique Rodrigues and André Silva
14h45	**Buckling Resistance of Non-Uniform Slender I-Section Beams** **José Osvaldo Ferreira Filho,** Luís Simões da Silva, Trayana Tankova, Hermes Carvalho, José Onésimo Gomes Junyor	**Experimental Study of Stainless Steel T-Joint Reinforced With Chord Sidewall Plate** Felipe Coutinho, André T. Silva, **Monique Rodrigues** and Luciano R. O. de Lima
15h00	**System Factors for the Direct Design of Steel Frames in the Eurocode Framework** **Itsaso Arrayago**, Kim J.R. Rasmussen, Hao Zhang, Esther Real	**Semi-Rigid Behaviour of Joints Between RHS with Self-Drilling Screws** André N. Garcia, **Carlos López-Colina**, Miguel A. Serrano, Ismael Garcia and Fernando L. Gayarre
15h15	**Buckling Resistance and Residual Stresses of Welded Box Columns Made of High-Strength Steels** **Richard Stroetmann**, Gerd Penner	**Fatigue Behaviour of Pre-Damaged Welded Steel Components Strengthened with Steel Cover Plates** **Matthias Winkler** and André Dürr
15h30	**Experimental Investigation and Design Consideration on Pull-Through Capacity of a C-Shaped Purlin Section** Haripriya Karthikeyan, Bishal Naik, **Mahendrakumar Madhavan**	**Experimental Investigation on HSS Butt-Welded Joints 6 mm Plates** **S. Zhao**, J. Chen and T. M. Chan
15h45	Coffee-break	

June 5th - Wednesday		
16h15	Keynote Speaker – Prof. Ben Young – Paraty Room **Experimental investigation of additively manufactured aluminium alloy angle stub columns** Chairs: Prof. Luis Simões da Silva and Prof. Dinar Camotim	
	Stability of Steel Structures – TC8 B – Paraty Room Chairs: Prof. Richard Stroetmann and Prof. Dinar Camotim	Stainless Steel Structures – Buzios Room Chairs: Prof. Itsaso Arrayago and Prof. Marina Bock
17h00	**Numerical Imperfection Sensitivity Assessment of Non-Continuously Stiffened Plates** **Immo Lukas**, Ralph Timmers and Robert Lang	**Numerical Assessment of Fixed-Ended Stainless Steel Unequal-Leg Angle Columns** **Ada M. G. Kayser**, Fernando R. Sarquis, Luciano R. O. de Lima
17h15	**Stability Verification of Two-Span Steel Channel Members** **Anna-Lena Bours**, Fabian Jörg, Rebekka Winkler, Ulrike Kuhlmann, Markus Knobloch	**Web Crippling Design of Lean Duplex Stainless Steel Z-Sections** **Yancheng Cai**, Feng Zhou, Nakhelin Chhun, Chi Chung Lee
17h30	**GBT-Based Buckling Analysis of Cold-formed Steel Built Up Section Columns** **Cilmar Basaglia**, Dinar Camotim and Rodrigo Gonçalves	**Testing and Numerical Modelling of Aluminium Alloy Angle Sections** **Yao Sun**, Mingtao Shao, Mingju Li, Fernando Sarquis and Luciano Lima
17h45	**On the Behaviour and Strength of Cold-Formed Steel Lipped Channel Columns Affected by Distortional-Global Interaction** Elisson Bilheiro Ferreira Filho, **Alexandre Landesmann**, Dinar Camotim	**Numerical Assessment of Fixed-Ended Stainless Steel Bolted Starred Equal-Leg Angle Columns** **Fernando R. Sarquis** and Luciano R. O. de Lima
18h00	**Carrying Capacity of Thin-Walled Cold-formed Square Hollow Columns with Large Holes** **Marios-Zois Bezas**, Maxime Vermeylen, Koenraad Ginckels, Jean-François Demonceau	**Web Bearing Capacity of Cold-formed Stainless Steel Channels Under Interior Loading** **Amir M. Yousefi**, Bijan Samali and Yang Yu
18h15	**Selection of Suitable Local Imperfection Shapes in the F.E. Modelling of Steel Rectangular Hollow Sections** **Nicolas Boissonnade**, Joanna Nseir and Liya Li	**Numerical Study of Post-Fire Behaviour of H500 Austenitic Stainless Steel** **Hadi El Samad**, Luke Lapira and Katherine A. Cashell
18h30	Welcome Reception	

June 6th - Thursday

9h00	Keynote Speaker – Prof. Dinar Camotim – Paraty Room **BRASIL - Bilateral Research About Stability Interacting with Leisure** Chairs: Prof. Eduardo Batista and Prof. Cilmar Basaglia	
9h45	Round Table – Arcelor Mittal – Paraty Room **Environmentally Sustainable Buildings: the Role of Steel Structures** Moderator: Ms Débora Guimarães Participants: Dr. Hermano Souza, Mr. André Gomes and Prof. Helena Gervásio	
10h30	Coffee-break	
	Cold-Formed Structures B – Paraty Room **Chairs: Prof. Nicolas Boissonnade and Prof. Cao Hung Pham**	**Composite Structures B – Buzios Room** **Chairs: Prof. David H. Figueirido and Prof. Yang Xiang**
11h00	**Cold-formed Steel Zed Section Beams with Complex Edge Stiffeners: Testing and Numerical Modelling** **Qiu-Yun Li** and Ben Young	**Numerical Analysis of Bolted Inter-Modular Connection for Steel-Concrete Composite Modules Under Seismic Loading** Qi Qi, **Chao Hou** and Jiahao PENG
11h15	**Local-Distortional-Global Buckling Modes Interaction of Steel Cold-formed Members Under Axial Compression** Gustavo Y. Matsubara and **Eduardo de M. Batista**	**Confinement Models for Circular Recycled Aggregate Concrete-Filled Steel Tubular Stub Columns Under Concentric Compression** **Maicon de Freitas Arcine**, Ricardo Carrazedo and Silvana De Nardin
11h30	**Numerical Modelling of Bolted Connections In Cold-Rolled Aluminium Portal Frames** Hoai Cuong Nguyen, **Cao Hung Pham** and Kim J.R. Rasmussen	**Numerical and Analytical Assessment of the Tubular Perfobond Shear Connectors** Keila L. B. Souza, Vinicius A. S. Sardinha, André T. Silva, **Jose A. G. Henriques**, Luciano R. O. Lima and Monique C. Rodrigues
11h45	**The Relevance of the Local-Distortional Buckling Mode (LD) for the Design of Commercial Cold-formed Steel Members Under Axial Compression** **Rafael Vieira de Oliveira**, Eduardo de Miranda Batista	**The Influence of Different Steel Grades on the Lateral Distortional Buckling Resistance of Steel Concrete Composite Cellular Beams** Vinicius Oliveira, Vinicius Santos, Alexandre Rossi, Pablo Krahl and **Carlos H. Martins**
12h00	**Shear Strength Tests of Cold-Rolled Aluminium Alloy Channels Using Dual-Actuator Test Rig** **Xuyang Chen**, Duy Khanh Pham, Cao Hung Pham	**Numerical Investigation on the Structural Behaviour of High Strength Steel Octagonal Hollow Section Beam-Columns** **Haixin Liu**, Jiong-Yi Zhu, Tak-Ming Chan
12h15	Lunch	

June 6th - Thursday		
13h30	Keynote Speaker – Prof. Leroy Gardner – Paraty Room **Hybrid Steel Construction Featuring Wire Arc Additive Manufacturing** Chairs: Prof. Esther Real and Prof. Kim Rasmussem	
	Structural Members A – Paraty Room Chairs: Prof. Ronald Zieman and Prof. Kim Rasmussem	3D Printing and Materials – Buzios Room Chairs: Prof. Leroy Gardner and Prof. Trayana Tankova
14h15	**Lateral-torsional Buckling Resistance Prediction of High-Strength Steel I-Beams with Sinusoidal Web Openings** Douglas dos Santos, **Carlos Martins**, Felipe Ferreira, Konstantinos Tsavdaridis and Hermano Cardoso	**Mechanical Characterisation in Pseudo-Static and Dynamic Regimes of SIm 3D-Printed 17-4PH Stainless Steel** Francesca R. Andreacola, Ilaria Capasso, Daniele Forni, Ezio Cadoni and **Giuseppe Brando**
14h30	**Lateral-torsional Buckling Resistance Prediction of High-Strength Steel Cellular Beams** **Vitor Augusto Pazin**, Felipe Ferreira and Silvana De Nardin	**Mechanical Properties of WAAM Steels at Polar Temperatures** **Cheng Huang**, Nicolas Hadjipantelis and Leroy Gardner
14h45	**O.I.C.-Based Design of Aluminium Rectangular Hollow Sections Under Simple Load Cases** **Sahar Dahboula**, L; Li, Prachi Verma, Pampa Dey and Nicolas Boissonnade	**Study on Mechanical Properties of Heat-Affected Zone of Q690 High Strength Steel at Micro Scale** **Yan-Bo Wang**, Zhe Sun, Ya-Mei He, Ben Lin and Xiang-Yu Ma
15h00	**Implementation of Dumbbell-Shaped Hysteretic Dampers for Seismic Retrofit of RC Structures** M. Ferraioli, O. Pecorari, S. Mottola, E. Mistakidis and **G. De Matteis**	**Calibration Method for Parameters in Ductile Fracture Initiation Model** Jingsheng Zhou, **Shen Yan**, Kim J.R. Rasmussen and Mengyao Zhang
15h15	**Primary-Secondary Steel Tubular Columns Linked by Corrugated Steel Plates with Large Aspect-Ratio** **Yang Xiang**, Chen-Xu LV, Guo-Qiang Li and Yu-Shu Liu	**Framework for Non-Destructive Metrology of Wire Arc Additive Manufacturing** **Carlos Zhu**, Trayana Tankova, Ricardo Branco and Luís Simões da Silva
15h30	**Towards the System-Based Design of Aluminium Portal Frames** **Anđelo Valčić**, Itsaso Arrayago, Davor Skejića	**3D Printed Austenitic Stainless Steel: Microstructure and Mechanical Characteristics** Zhichao Gong, Tianyi Zhang, Wenkang Zuo and **Man-Tai Chen**
15h45	Coffee-break	

June 6th - Thursday		
16h15	Keynote Speaker – Prof. Kim Rasmussen – Paraty Room **Recent Research on Built-up Cold-formed Steel Structures** Chairs: Prof. Dinar Camotim and Prof. Leroy Gardner	
	Connections B – Paraty Room **Chairs: Prof. Markus Knobloch and Prof. Carlos López-Colina**	**Case Studies – Buzios Room** **Chairs: Prof. Helena Gervásio and Prof. Hermano Souza**
17h00	**Behaviour and Design of Bolted Aluminium Flange Cleats** Manuela Cabrera, Marios Theofanous, **Marina Bock**	**Fatigue Assessment for the Remaining Life of a Riveted Steel Railway Bridge Accounting for Mean Stresses** **Tahira Majeed**, Elisa Bertolesi and Katherine A. Cashell
17h15	**The Quality Assurance In the Execution of Welded Steel Structures** **Michael Volz**	**Comparative Analysis of Retaining Wall Solutions for Underground Carparks - Brazilian Case Study** **Rui Matos**, Mariana Guerrero, João Martins, Marcos Magri
17h30	**Influence of Transverse Welds on the Strength of Aluminum Alloy I-Shaped Members** **Ronald D Ziemian** and Constance W. Ziemian	**Life Cycle Assessment of An Underground Car Park Considering Different Retaining Wall Solutions** **José Humberto Filho**, João Martins, Marcos O. C. Magri, Mariana R. G. Guerrero
17h45	**Building for the Future: Application of Digital Technologies for Finding Efficient Connections** **Trayana Tankova**, Milan Veljkovic	**Comparative Analysis of Structural Solutions for Vicinal Bridge Abutments** **Luis Pupin, Rui Matos, Mariana Guerrero, Miguel Candeias**
18h00	**Numerical and Theoretical Assessment of Sleeve Connection in Thin-Walled RHS** **Lucas Roquete**, Matheus de Oliveira, Lucas S. Cruz, Gabriela M. Azevedo, Vinícius N. Alves and Arlene M. C. Sarmanho	**Application and Discussion of Steel Structures In China's Super High-Rise Buildings** Honglei Wu, Marcos Alexandre Stuart Nogueira, **Alexandre Magnus Jordão**, Shiyu Wang
20h00	Conference Dinner	

June 7th - Friday		
	Composite Structures C – Paraty Room **Chairs: Prof. Silvana De Nardin and Prof. Carlos Humberto Martins**	**Dynamic Analysis – Buzios Room** **Chairs: Prof. José Guilherme Silva and Prof. Guilherme Alencar**
9h00	**Determination of the Perfobond Rib Shear Connector Strength in Steel-Concrete Structures Through Artificial Neural Network** Samara L. Marques and **Fernanda Lins Gonçalves Pereira**	**Nonlinear Analyses of Single Story Steel Buildings With Semi-Rigid Joints** Greta Agata Venneri, Gianfranco De Matteis and **Giuseppe Brando**
9h15	**Design of Concrete-Encased Steel Composite Columns Using High-Performance Materials** Omer Anwaar, J. Richard Liew, Shan Li, Jie Yang, Renata Obiala and **Rui Matos**	**Fatigue Assessment of Steel-Concrete Composite Highway Bridges Considering the Vehicle-Bridge Dynamic Interaction** Ana C.S. da Silva, Diego L. Lucca, **Guilherme S. Alencar** and José G.S. da Silva
9h30	**Analysis of Demountable Shear Connections In Cold-formed Steel-Concrete Composite Beamsh A Finite Element Approach Validated with Experimental Data** **Vlaho Žuvelek**, Ivan Ćurković, Ivan Lukačević, Andrea Rajić	**Human Comfort Assessment of Pedestrian Footbridges Based on the Use of A Probabilistic Approach** Paula O.B. Diniz, Amanda B. Oliveira, Gilvan L. Debona and **José G.S. da Silva**
9h45	**Numerical Study of Non-Welded Flange T-Perfobond Shear Connectors in Composite Steel-Concrete Beams** Fernanda Costa, **André Silva**, Monique C. Rodrigues and Luciano R. O. de Lima	**Human Comfort Assessment of Steel-Concrete Composite High Buildings** Jean C. Silva, Juliana M. Farias, George L. Quintanilha and **José G.S. da Silva**
10h00	**Test of Sheathed Cold-formed Steel Sigma Studs Under Shear Loading** **Amir M. Yousefi**, Bijan Samali and Yang Yu	**Dynamic Analysis of Steel Plates Subjected to Blast Loads Considering the Membrane Effect** Mayara Machado Martins, **Ana Waldila Reis** and Rodrigo Burgos
10h15	Coffee-break	

June 7th - Friday		
	Connections C – Paraty Room **Chairs: Prof. Arlene Sarmanho and Prof. Monique Rodrigues**	**Structural Members B – Buzios Room** **Chairs: Prof. Fernando Sarquis and Prof. André Silva**
10h45	**Experimental and Numerical Analysis of Extended End-Plate Connection with Two and Four Bolts** **Anita Gjukaj**, Petar Cvetanovski and Ana Trombeva Gavriloska	**Investigation of Hybrid Welded Box Sections Using Welding Simulation and Laboratory Measurements** **Dénes Kollár** and András Horváth
11h00	**Semi-Rigid STC Beam-to-Column Jointsh Review, Future Perspectives and Needs** **José Henriques**, Alper Turgut, Jean-François Demonceau and Hervé Degée	**Comparative Analysis of Semianalytical, Numerical and Experimental Results for Lateral-Torsional Buckling of Steel Beams** **Luiz Alberto Araújo de Seixas Leal**, Roberval José Pimenta, Eduardo de Miranda Batista
11h15	**Experimental Study on the Behaviour of Bolted Steel Angle Connections Under Tension** Muhammad Bilal Waris, **Khalifa Al-Jabri**, Maryam Al-Salmiyah and Kazi Abu	**Loading Paths Effects In Hollow Structural Sections Under Biaxial Cyclic Loading** **Elisa Cerqueira**, Cyrus Eshaghi, Rita Peres and José Miguel Castro
11h30	**An Advanced Neutral Artificial Network (ANN) Model for Predicting the Behaviour of Angle Joints with More Than one Bolt Rows Under Axial Tensile Actions** **Mubarak Al-Alawi**, Ronald Ekyalimpa, Muhammad Bilal Waris and Khalifa Al-Jabri	**Seismic Performance of Lightweight Cold-formed Steel Structural System** Sarmad Shakeel, Muhammed Çoşut, Seyed Mohammad Mojtabaei, Ioannis Papargyriou and **Iman Hajirasouliha**
11h45	**Displacement-Based Design Procedure of Aluminum Shear Panel for Seismic Retrofit of Reinforced Concrete Buildings** Massimiliano Ferraioli, Angelo Lavino and **Gianfranco De Matteis**	**Post-Fire Behaviour of 7075-T6 High-Strength Aluminium Alloy Tubular Section Stub Columns** **Wen Cheng**, Yu Miao, Yibo Wang, Kang Chen and Yao Sun
12h00	Lunch	

June 7th - Friday		
	Structural Members C – Paraty Room **Chairs: Prof. Luis Costa Neves and Prof. Daniel Taissum**	**Cold-Formed Structures C – Buzios Room** **Chairs: Prof. Alexandre Landesmann and Prof. Cilmar Basaglia**
13h30	**Hygrothermal Aging of Steel-FRP Joints: Experimental Results and Analytical Model** **Daniel Cardoso**, Priscilla Vieira, Bruno Lopes, Cintia Ferreira and Antonio Henrique da Silva	**Flexural-torsional Post-Buckling Behavior of Pultruded Angle Section Columns** Leyser Pacheco Pires Filho, Paulo Batista Gonçalves
13h45	**Structural Reliability of the Design of Pallet-Rack Columns Via Direct Strength Method** **Victor A. Moreira de Faria,** Marcílio S. da R. Freitas and André L. R. Brandão	**Ultimate Capacity of Cold-Formed Z-Sections with Web Stiffeners: Experiments and FE Simulations** Diego Fernandes, **Guilherme Alencar**, Luís Veloso, Elias Pereira, Fabrício Piveta, Marcos Comim, Victor Moura, José Humberto M. de Paula and José Guilherme S. da Silva
14h00	**Optimum Design of Steel Cellular Beams Using Particle Swarm Optimisation and Finite Element Method** **Lucas Alves de Aguiar**, Daniele Kauctz Monteiro., Inácio Bevengnú Morsh	**Experimental Analysis of the Mechanical Behaviour of Steel Storage Rack Baseplate Upright Connections** **Marina Naomi Furukawa** and Maximiliano Malite
14h15	**Compressive Behaviour and Design of Circular CFST Incorporating Demolished Concrete Lumps** **James Hay** and Fangying Wang	**Experimental Investigation on Bolted Apex Connector for Single-Channel CFS Portal Frames** Hareesh Sirigiria and **Mahendrakumar Madhavan**
14h30	**Parametric Study of a Cold-Formed Steel Profile Employed in Composite Ribbed Slabs** **André V.S. Gomes**, Daniel C.M. Candido, Lucas F. Favarato, Johann A. Ferrareto, Juliana A.C. Vianna and Fernanda A. Calenzani	**The Stressed Skin Effect of Trapezoidal Sheet Diaphragmsh Potential Paths for Extending the Current Design Procedures** **Barnabás A. Lőrincz**, Zsolt Nagy, Andrea Kelemen and Szabolcs L.-Molnár
14h45	Closing Ceremony	
15h00	Coffee-break	

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