

# STEEL BRIDGES

PRAGUE 2018

9<sup>th</sup> INTERNATIONAL SYMPOSIUM  
ON STEEL BRIDGES 2018

5<sup>th</sup> EUROPEAN STEEL BRIDGE  
AWARDS

10<sup>th</sup> - 11<sup>th</sup> SEPTEMBER 2018  
NH PRAGUE CITY HOTEL, PRAHA

## INVITATION WITH PROGRAMME



ORGANIZED BY



Czech Constructional  
Steelwork Association



European Convention for  
Constructional Steelwork

[www.steelbridges2018.com](http://www.steelbridges2018.com)

GOLD PARTNERS



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## SUPPORTERS

- ASCEM – Asociación para la Construcción de Estructuras Metálicas, Spain
- Bauforumstahl e.v., Germany
- CMM – Portuguese Steelwork Association, Portugal
- DSI – Dansk Stalinstitut, Denmark
- EGGA - European General Galvanizers Association
- FCSA – Finnish Constructional Steelwork Association, Finland
- FEDIL – Business Federation Luxembourg, Luxembourg
- MAGESZ – Hungarian Steel Association, Hungary
- NSA – Norsk Stalforbund, Norway
- OSTV – Österreichischer Stahlbauverband, Austria
- SBI – Stålbyggnadsinstitutet, Sweden
- SCMF – Syndicat de la Construction Metallique de France, France
- SNS – Samenwerkende Nederlandse Staalbouw, The Netherlands
- SZS – Stahlbau Zentrum Schweiz, Switzerland
- TUCSA – Turk Yapısal Çelik Derneği, Turkey
- University of Naples, Italy
- UPT – University Politehnica Timisoara, Romania
- Rzeszow University of Technology, Poland

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## TOPICS

Bridge architecture • Bridge maintenance • Bridge monitoring, computer technology and analysis • Case studies • Fabrication and construction • Field testing • High strength steel for bridges • Highway bridges • Historical bridges • Pedestrian bridges • Railway bridges • Refurbishment  
 • Safety and seismic behaviour • Structural connections • Surface protection • Sustainability

## SCIENTIFIC COMMITTEE

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**Milan Veljkovic**, The Netherlands  
**Josef Vican**, Slovakia  
**Nesrin Yardimci**, Turkey  
**Riccardo Zanon**, Luxembourg  
**Henryk Zobel**, Poland

## REGISTRATION FEE

The Symposium fee covers admission to the symposium, the Book of Abstracts, Proceedings on CD, symposium bag, coffee breaks and lunches for two days, Symposium Dinner. In the case of Accompanying Persons, Symposium Dinner, Tour and Gala Dinner can be bought separately.

	Before 01 July 2018	Beginning on 02 July 2018
Symposium fee (including Symposium Dinner)	390 €	450 €
Additional fee for authors wishing to be published in Scopus (optional)	50 €	50 €
Students (under 26 years old)	250 €	270 €
Symposium Dinner only (10 September)	100 €	100 €
European Steel Design Awards Ceremony	gratis	gratis
Gala Dinner (11 September)	80 €	80 €
Accompanying person tour (10 September)	80 €	80 €

## 9<sup>th</sup> International Symposium on Steel Bridges 2018 Programme

### Monday 10<sup>th</sup> September

<p><b>09:00 – 13:00</b> <b>Hall: Zürich 2+3+4</b> <b>Keynote Speakers</b></p> <p>09:00 – 09:10 Opening speech (Prof. Frantisek Wald)</p> <p>09:10 – 09:30 <b>Long-Span Orthotropic Steel Deck Bridges of Turke</b> <i>Nurdan M. Apaydin</i></p> <p>09:30 – 09:50 <b>Troja Bridge in Prague</b> <i>Vladimir Janata</i></p> <p>09:50 – 10:10 <b>Railway Road Bridge in Novi Sad – Steel tied network arches across the Danube</b> <i>Antonio Mora Munoz</i></p> <p>10:10 – 10:30 <b>The New Champlain Bridge</b> <i>Marwan Nader</i></p> <p><b>10:30 – 11:00</b> <b>Coffee break</b></p> <p>11:00 – 11:20 <b>New Stary most (Old bridge) across Danube river in Bratislava</b> <i>Petr Novotný</i></p> <p>11:20 – 11:40 <b>Railway network arch bridge – Oskar</b> <i>David Rose</i></p> <p>11:40 – 12:00 <b>Boomerang and Jungle pedestrian bridges in Oslo</b> <i>Gaute Mo</i></p> <p>12:00 – 12:20 <b>Maintenance free corrosion protection for composite bridges with hot-rolled sections</b> <i>Dennis Rademacher</i></p> <p>12:20 – 12:40 <b>Holistic approach to sustainability of bridges</b> <i>Ana M. Pascual Pastor</i></p> <p>12:40 – 13:00 <b>Rehabilitating project of unconventional suspension bridge</b> <i>Hermes Carvalho</i></p> <p><b>13:00 – 14:00</b> <b>Lunch</b></p> <p><b>14:00 – 16:00</b> <b>Hall: Zürich 2+3</b> <b>Case studies</b></p> <p>14:00 – 14:20 <b>The particular challenges of expansion joint installation in steel bridges – Case studies</b> <i>David Jelínek</i></p> <p>14:20 – 14:40 <b>Design, construction and on-site fabrication of the Chenab Bridge using BIM</b> <i>Matti-Esko Järvenpää</i></p> <p>14:40 – 15:00 <b>Why Steel Bridges for Accelerated Bridge Construction: Steel Bridge Systems Best Suited for ABC</b> <i>Atorod Azizinamini</i></p> <p>15:00 – 15:20 <b>Advanced solutions with hot-rolled sections for more economical bridges</b> <i>Wojciech Lorenc</i></p> <p>15:20 – 15:40 <b>Case study: Small steel ready-made bridges for rural and mountainous areas</b> <i>Boris Tasevski</i></p> <p>15:40 – 16:00 <b>Experience of duplex stainless steels as structural materials for bridges</b> <i>Andrew Backhouse</i></p> <p><b>14:00 – 16:00</b> <b>Hall: Zürich 4</b> <b>Bridge maintenance</b></p> <p>14:00 – 14:20 <b>Challenging the Performance Myth of Inorganic Zinc Rich vs Organic Zinc Rich Primers and Activated Zinc Primers</b> <i>Raquel Morales</i></p> <p>14:20 – 14:40 <b>Lifetime extension of existing steel bridges</b> <i>Roberto Pavan</i></p> <p>14:40 – 15:00 <b>FEVE based coating systems: Protecting Steel Bridges for over 30 years</b> <i>Floris B. Kooistra</i></p> <p>15:00 – 15:20 <b>Retrofit against fatigue cracking at web penetration details with a slot in steel girder</b> <i>Chihiro Sakamoto</i></p>	<p>15:20 – 15:40 <b>Problems and innovative solutions considering “open type” bridge deck structures in old steel riveted railway bridges</b> <i>Martina Nikolova</i></p> <p>15:40 – 16:00 <b>Lightweight solution for existing steel movable bridge retrofit and repair</b> <i>Roberto Pavan</i></p> <p><b>16:00 – 16:20</b> <b>Coffee break</b></p> <p><b>16:20 – 17:40</b> <b>Hall: Zürich 2+3</b> <b>Pedestrian bridges</b></p> <p>16:20 – 16:40 <b>Modular system of steel bridges for pedestrian and bicycles</b> <i>Pavel Simon</i></p> <p>16:40 – 17:00 <b>Advanced layout of a steel bridge - Ullevaalskrysset footbridge</b> <i>Andri Gunnarsson</i></p> <p>17:00 – 17:20 <b>Väster pedestrian and cycle bridge</b> <i>Fernando Ibañez</i></p> <p>17:20 – 17:40 <b>Stovner Tower - accessible pedestrian walkway</b> <i>Birger Opgård</i></p> <p><b>16:20 – 17:20</b> <b>Hall: Zürich 4</b> <b>Bridge maintenance</b></p> <p>16:20 – 16:40 <b>Failure analysis and repair assessment of a steel box girder bridge</b> <i>Maciej Kulpa</i></p> <p>16:40 – 17:00 <b>Reinforced structures type “Filler Beam” – advantages in reconstruction of bridge superstructures</b> <i>Lazar Georgiev</i></p> <p>17:00 – 17:20 <b>Zinc coatings for sustainable steel bridges</b> <i>Martin Gagné</i></p> <p><b>19:30 – 22:30</b> <b>Symposium Dinner on Europé Boat on the Vltava River</b></p>
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### Tuesday 11<sup>th</sup> September

<p><b>09:00 – 10:20</b> <b>Hall: Zürich 2</b> <b>Research and materials</b></p> <p>09:00 – 09:20 <b>Experimental investigation on the bridge segments with transversally curved bottom flange</b> <i>Filip Ljubinković</i></p> <p>09:20 – 09:40 <b>Special heavy plates solutions for bridge building</b> <i>Tobias Lehnert</i></p> <p>09:40 – 10:00 <b>Choice of steel grade for Structural Applications – design for toughness requirements according Eurocodes</b> <i>Riccardo Zanon</i></p> <p>10:00 – 10:20 <b>Experimental evaluation of stiffened curved plates subjected to pure compression</b> <i>Sara Piculin</i></p> <p><b>09:00 – 10:20</b> <b>Hall: Zürich 3</b> <b>Refurbishment</b></p> <p>09:00 – 09:20 <b>Box-action giving new life-time to old steel bridges</b> <i>Victor Vestman</i></p> <p>09:20 – 09:40 <b>Experimental results of steel truss nodes strengthen by high strength concrete encasement</b> <i>Stoyan Ivanov</i></p> <p>09:40 – 10:00 <b>Using fracture mechanics principles in steel bridge renovation projects</b> <i>Maarten Rikken</i></p> <p>10:00 – 10:20 <b>The strengthening of a steel bridge with prestressed CFRP strips</b> <i>Tomasz Siwowski</i></p>
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<b>09:00 – 10:20</b>	<b>Hall: Zürich 4</b>	<b>Structural connections</b>	<b>13:20 – 15:20</b>	<b>Hall: Zürich 2</b>	<b>Highway bridges</b>
09:00 – 09:20	<b>Research on shear and bolt connection of steel and composite bridge construction regarding corrosion protection</b> <i>Svenja Holtkamp</i>		13:20 – 13:40	<b>Construction of the Angerbachtal bridge</b> <i>Andreas Jäger-Cañás</i>	
09:20 – 09:40	<b>Advanced procedures for design of bolted connections</b> <i>František Wald</i>		13:40 – 14:00	<b>Architecture of steel bridges</b> <i>Jiří Stráský</i>	
09:40 – 10:00	<b>An Experimental Study of Friction Connection for Different Surface Treatments</b> <i>Peter Collin</i>		14:00 – 14:20	<b>Fatigue failure modes and fatigue resistance evaluation for structural system of orthotropic steel bridge deck</b> <i>Jun Li</i>	
10:00 – 10:20	<b>Time-optimized assembly of bridge bearings</b> <i>Luigi Di Gregorio</i>		14:20 – 14:40	<b>Barkarby Bridge</b> <i>Manuel Biedma García</i>	
<b>10:20 – 11:00</b>	<b>Coffee break</b>		14:40 – 15:00	<b>Norgesporten road bridge, the gateway to Norway</b> <i>Gaute Mo</i>	
<b>11:00 – 12:20</b>	<b>Hall: Zürich 2</b>	<b>Fabrication and construction</b>	15:00 – 15:20	<b>Design of vertically-curved members</b> <i>Bo Dowswell</i>	
11:00 – 11:20	<b>Fabrication and construction of a hexagonal section steel arch bridge</b> <i>Philippe Van Bogaert</i>		<b>13:20 – 15:00</b>	<b>Hall: Zürich 3</b>	<b>Research and innovations</b>
11:20 – 11:40	<b>Galvanized Bridges in Japan</b> <i>Murray Cook</i>		13:20 – 13:40	<b>Investigation on stiffened panels subjected to biaxial compression</b> <i>Nadine Maier</i>	
11:40 – 12:00	<b>Influence of High Frequency Impact Treatment (HiFIT) on fatigue strength of welded joints of high-strength steel S700MC for bridges applications</b> <i>Krzysztof Krasnowski</i>		13:40 – 14:00	<b>Investigation of displacements function in soil-steel bridge based on strain gauges measurements</b> <i>Piotr Tomala</i>	
12:00 – 12:20	<b>New Modular Bridges Solutions</b> <i>António André</i>		14:00 – 14:20	<b>Automation of evaluation of data measured on steel bridges, category detail of welded lamellas</b> <i>Stanislav Vejvoda</i>	
<b>11:00 – 12:20</b>	<b>Hall: Zürich 3</b>	<b>Railway bridges</b>	14:20 – 14:40	<b>Models of thermal actions for steel and composite bridges based on monitoring</b> <i>Jana Marková</i>	
11:00 – 11:20	<b>Composite bridge solutions in rolled shapes for small and medium span bridges – Review and future developments</b> <i>Riccardo Zanon</i>		14:40 – 15:00	<b>The impact of backfill quality on soil-steel composite bridge response under seismic excitation</b> <i>Tomasz Maleska</i>	
11:20 – 11:40	<b>Railway bridges - SUDOP PRAHA a.s.</b> <i>Filip Kutina</i>		<b>13:20 – 15:40</b>	<b>Hall: Zürich 4</b>	<b>Bridge monitoring + Historical bridges</b>
11:40 – 12:00	<b>Comparison of acoustic phenomena in the vicinity of two types of steel plate girder bridges</b> <i>Lucjan Janas</i>		13:20 – 13:40	<b>Structural health monitoring for combined damage states</b> <i>Martin Butler</i>	
12:00 – 12:20	<b>New Athens-Thessaloniki high speed railway line: Detailed design and construction engineering of a steel tied-arch bridge</b> <i>Georgios Mavrakīs</i>		13:40 – 14:00	<b>Fatigue performance evaluation of steel arch bridge based on experimental tests in the light of increased operating loads</b> <i>Mieszko Kuźawa</i>	
<b>11:00 – 12:20</b>	<b>Hall: Zürich 4</b>	<b>Bridge monitoring</b>	14:00 – 14:20	<b>Estimate of the steel bridges fatigue life by application of the fracture mechanics</b> <i>Ján Bujňák</i>	
11:00 – 11:20	<b>Strain measurement of a bridge deck in order to evaluate the fatigue life of a steel bridge on the D1 highway in the Vysočina region</b> <i>Stanislav Vejvoda</i>		14:20 – 14:40	<b>The residual lifetime of steel bridges under the action of fatigue and corrosion effects</b> <i>Pavel Ryjáček</i>	
11:20 – 11:40	<b>Open and standard-based method to link structural health monitoring data through a BRIM with a bridge FM system</b> <i>Markku Kiviniemi</i>		14:40 – 15:00	<b>Comparison of FEM Analysis And Experimental Investigation for A 168m Long Steel Double Twin Truss Launching Gantry Subjected To Different Load And Support Conditions</b> <i>Lazar Georgiev</i>	
11:40 – 12:00	<b>Potential modelling and verification of bridge superstructures behaviour</b> <i>Ján Bujňák</i>		15:00 – 15:20	<b>Factors Influencing the Design Life of Old Steel Bridges</b> <i>Nor Ashikin Muhamad Khairussaleh</i>	
12:00 – 12:20	<b>Numerical simulation of rib distortion in orthotropic steel decks</b> <i>Heng Fang</i>		15:20 – 15:40	<b>Damage or change detection in a small scale model of steel bridge deck under static loading by extensometry</b> <i>Sidalı Iglouli</i>	
<b>12:20 – 13:20</b>	<b>Lunch</b>		<b>15:40 – 16:30</b>	<b>Coffee break</b>	
			<b>16:30 – 18:30</b>	<b>5<sup>th</sup> European Steel Bridge Awards Ceremony</b>	
			<b>19:30 – 23:00</b>	<b>Gala Dinner</b>	

The program is subject to change.