

## Thursday 12 September

### Rail and road bridges

**Chairperson: Richard Stroetmann, Pavel Ryjáček**

**HALL: SUN I. + II.**

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|---------------|---|----------------|
| 09:00 – 09:10 | <b>Opening speach</b>   | <b>10 min.</b> |
| 09:10 – 09:50 | <b>KEY SPEAKER: Latest developments in long span bridges</b><br><i>Henrik Polk, Technical Director for Design of Major Steel Bridges, Bridges International, COWI A/S</i> | <b>40 min.</b> |
| 09:50 – 10:30 | <b>KEY SPEAKER: Rhine Bridge Leverkusen Design and Construction</b><br><br><i>ppa. Dipl.-Ing. Martin Romberg, PE</i>  | <b>40 min.</b> |

### Rail and road bridges

**Chairperson: Mike Tibolt, Patrick Nosbusch**

**HALL: SUN II.**

- |               |   |                |
|---------------|---|----------------|
| 11:00 – 11:15 | <b>OIA14 – BOWSTRING OF THE NEW RAILWAY LINE LUXEMBOURG-BETTEMBOURG – CONSTRUCTION AND SPECIAL DESIGN CHALLENGES FOR HANGERS</b><br><i>Patrick Nosbusch; InCA Ingénieurs Conseils Associés, Structural Engineering Department, Julien Depasse, InCA Ingénieurs Conseils Associés, Communication</i> | <b>15 min.</b> |
| 11:15 – 11:30 | <b>Railway bridge “Under Vyšehrad” in Prague, preparation of reconstruction</b><br><i>Jiří Krouský; Správa Železnic, s. o.</i>  | <b>15 min.</b> |
| 11:30 – 11:45 | <b>Design and assembly of a new extradosed bridge in Nuremberg</b><br><i>Thomas Klähne; KLÄHNE BUNG Beratende Ingenieure im Bauwesen GmbH, Mike Owusu-Yeboah; KLÄHNE BUNG Beratende Ingenieure im Bauwesen GmbH, Matthias Weißbach; Bung Ingenieure AG</i>  | <b>15 min.</b> |
| 11:45 – 12:00 | <b>Steel solutions for a sustainable bridge infrastructure of today and tomorrow</b><br><i>Mike Tibolt; ArcelorMittal Belval and Differdange, Steligence, Wojciech Ochojski; ArcelorMittal Europe, Steligence</i>   | <b>15 min.</b> |
| 12:00 – 12:15 | <b>Modernization of Railway Track Pardubice – Stéblová: New steel bridge over Labe river</b><br><br><i>Jan Mitlöhner; Skanska a.s.</i>  | <b>15 min.</b> |

12:15 – 12:30 **Preliminary design of a viaduct on new High-speed line RS 2 VRT Jižní Morava 15 min.**

*Samuel Franko, Martin Hukel*

**HALL: SUN I.**

**Research: Rudolf Aroch, Miroslav Vacek**

**Chairperson:**

11:00 – 11:15 **More durable modular expansion joint constructions for road bridges 15 min.**

*Dieter Ungermann; TU Dortmund University Faculty of Architecture and Civil Engineering, Chair of Steel Construction, Bettina Brune; TU Dortmund University Faculty of Architecture and Civil Engineering, Chair of Steel Construction, Michael Diener; TU Dortmund University Faculty of Architecture and Civil Engineering, Chair of Steel Construction*

11:15 – 11:30 **Prefabricated Composite Dowels Girders for Small Bridges-Structural Design and Efficiency Evaluation 15 min.**

*Zhihua Xiong; Northwest A&F University, Civil Engineering; RWTH Aachen University, Institute of Steel Construction Jun Li; CCCC First Highway Consultants Ltd. Pan, Zhenhua; Northwest A&F University, Civil Engineering, Litao Cheng; CCCC First Highway Consultants Ltd., Hongyu Liu; Northwest A&F University, Civil Engineering, Kevin Wolters; RWTH Aachen University, Institute of Steel Construction, Markus Feldmann; RWTH Aachen University, Institute of Steel Construction*

11:30 – 11:45 **Development of a lamella-model to evaluate stresses caused by hot asphalt installation**

**15 min.**

*Damian Händeler; RWTH Aachen University, Institute of Steel Construction Geßler, Achim; RWTH Aachen Fakultät für Bauingenieurwesen, Institut für Stahlbau Kevin Wolters; RWTH Aachen University, Institute of Steel Construction, Markus Feldmann; RWTH Aachen University, Institute of Steel Construction*

11:45 – 12:00 **Design of the cross-section of a steel composite bridge taking into account the buckling check according to EN 1993-1-5 15 min.**

*Joseph Ndogmo; Technical University of Munich, Chair of Metal Structures, Martin Mensinger; Technical University of Munich, chair of metal structures*

12:00 – 12:15 **Experimental and theoretical evaluation of axial forces in short steel ropes 15 min.**

*Rudolf Aroch; Slovak University of Technology in Bratislava, Steel and Timber Structures, Michal Venglar; Slovak University of Technology in Bratislava, Structural Mechanics, Tomas Klas; Slovak University of Technology in Bratislava, Steel and Timber Structures, Michal Kovac; Slovak University of Technology in Bratislava, Steel and Timber Structures*

12:15 – 12:30 **Influence of Distance from Roads on Corrosion Loss in Weathering Steel Bridges** **15 min.**

*Miroslav Vacek; VSB–Technical University of Ostrava, Faculty of Civil Engineering, Vít Křivý; VSB–Technical University of Ostrava, Faculty of Civil Engineering, Monika Marťáková; VSB–Technical University of Ostrava, Faculty of Civil Engineering Kateřina Kreislová; SVÚOM s.r.o, Markéta Vlachová; SVÚOM s.r.o*

12:30 – 13:30 **LUNCH** **60 min.**

### **Footbridges**

**Chairperson: Sascha Grubmüller, Konrad Freymann**

**HALL: SUN II.**

13:30 – 13:45 **The new pedestrian footbridge of the Luxembourg train Station** **15 min.**

*Thomas Borboux; Patrick Nosbusch; Julien Depasse*

13:45 – 14:00 **The new bridge “Lahnsteg Nauheim”, Wetzlar: slender, elegant, parametrically designed**

**15 min.**

*Roman Gatsko; Milton Mendez*

14:00 – 14:15 **Sprung über die Emscher** **15 min.**

*Sascha Grubmüller; Günther, Eitelberger, Johannes, Jagsch, Valentin*

14:15 – 14:30 **White City pedestrian bridge – structural design of the cable-stayed future landmark**

**15 min.**

*Konrad Freymann*

### **Research**

**Chairperson: Radim Nečas, Vincent Kvočák**

**HALL: SUN I.**

- 13:30 – 13:45    **Parametric analysis of innovative corrugated profile of soil-steel composite bridge** **15 min.**  
*Nerijus Bareikis*
- 13:45 – 14:00    **Tuned mass dampers – evaluation of the effect on two real footbridges**    **15 min.**  
*Radim Nečas; Jiří Kučera; Jan Kolářek; Kristína Bezručová*
- 14:00 – 14:15    **Comparison of Durability of Composite-Based Shear connectors**    **15 min.**  
*Michala Weissová; Patricia Vanova; Vincent Kvočák; Daniel Dubecký*
- 14:15 – 14:30    **Dynamic behaviour of railway bridges – an overview of damping**    **15 min.**  
*Pavel Ryjáček, Vojta Dynybyl, Michal Polák, Jiří Litoš*

**HALL: SUN I. + II.**

**Chairperson: Richard Stroetmann, [Pavel Ryjáček](#)**

- 15:00 – 15:40    **KEY SPEAKER: Chemnitz Viaduct – Technical Rehabilitation and Upgrading of a Monument**    **40 min.**  
*Richard Stroetmann*
- 16:00 – 17:00    **The European Steel Bridge Awards**    **60 min.**
- 19:00 – 23:00    **Gala dinner**

**Friday 13 September**

**Special session: Road and pedestrian bridges – challenging bridges in the heart of Europe**

**Chairperson: Marek Foglar, Jiří Stráský**

**HALL: SUN II.**

- 09:00 – 09:30    **Sky Bridge 721 World's longest suspension footbridge**    **15 min.**  
*Václav Röder*
- 09:30 – 09:45    **Conversion of historical stone bridge to lifting bridge in the Hořín lock chamber** **15 min.**  
*Jan Blažek; Radek Navrátil*
- 09:45 – 10:00    **Experiences from launching the bridge over Gottleuba-valley (Gottleubatalbrücke)** **15 min.**  
*Marek Foglar*
- 10:00 – 10:15    **Pedestrian bridge over the River Elbe in Hradec Králové**    **15 min.**  
*Petr Harazim; Lukáš Vráblík; Libor Kábrt; Gabriela Elichová; Martin Elich*
- 10:15 – 10:30    **Steel Arch Structures with Prestressed Concrete Deck**    **15 min.**  
*prof. Ing. Jiří Stráský, DSc., Stráský, Hustý a partneři s.r.o.*

**Research II.**

Chairperson: Michael Volz, [Jaroslav Odrobiňák](#)

**HALL: SUN I.**

- 09:00 – 09:15    **Fatigue strength of repair-welded headed studs**    **15 min.**  
*Michael Volz*
- 09:15 – 09:30    **Remaining Fatigue Strength of an Orthotropic Steel Deck with Respect to a Repair Method by Cold Joining Techniques**    **15 min.**  
*Florian Kalkowsky; Markus Schröder; Christoph Blunk; Ralf Glienke; Jörg Alex; Wilko Flügge*
- 09:30 – 09:45    **INCREASING FATIGUE LIFE OF NEW WELDED AND REPAIRED JOINTS BY HFMI TREATMENT**    **15 min.**  
*Jakub Štěpán; Pavel Ryjáček*
- 09:45 – 10:00    **Material selection for railroad bridge bearings to avoid brittle fracture**    **15 min.**  
*Natalie Hoyer*
- 10:00 – 10:15    **Diagnostics of prestressed ropes after multiannual operation – Bridge SNP Bratislava**    **15 min.**  
*Vladimir Chmelko; Tomáš Koščo; Matúš Margetin*
- 10:15 – 10:30    **Analysis of bow-string arches using geometric data from 3D scanning**    **15 min.**  
*Jaroslav Odrobiňák; Matúš Farbák; Jakub Chromčák; Jozef Gocál*

### **Road and footbridges**

Chairperson: Lisa Peter, [Pavel Ryjáček](#)

**HALL: SUN II.**

- 11:00 – 11:15    **New Pooley Bridge – The UK's first stainless-steel road bridge**    **15 min.**  
*Haroon Ashraf; Tomasz Krok*

11:15 – 11:30 **Advantages of using thermomechanically rolled structural steels for bridge construction** **15 min.**

*Lisa Peter; Tobias Lehnert; Jessica Gola; Cécile Merlin*

11:30 – 11:45 **'Robinson' Pedestrian Bridge in Budapest, Hungary** **15 min.**

*Gábor Pál; András Kemenczés; László Hunyadi; Mihály Szabados*

11:45 – 12:00 **Cable-stayed footbridge in Lover Vítkovice Area-DOV** **15 min.**

*Jakub Janečko; Vladimír Janata;*

12:00 – 12:15 **Shui Su Ravine Bridge Design and its Steel Joint Fatigue Performance Evaluation** **15 min.**

*Zhijia Xiong; Xin Yang; Xuyao Liu; Jiaqi Li;*

12:15 – 12:30 **A Comprehensive Exploration of Glass Reinforced Plastic (GRP) Panels** **15 min.**

*Michael Train; Pavel Bulejko*

## **Research II.**

**Chairperson: Miroslav Sýkora, [Alexander Jiponov](#)**

**HALL: SUN I.**

11:00 – 11:15 **Cable Force Adjustments of an Arch Steel Pedestrian Bridge** **15 min.**

*Alp Caner; Martine Klein*

11:15 – 11:30 **Aerodynamic Performance-Based Design for Steel Bridges and Embodied Carbon Awareness**

**15 min.**

*Emanuele Mattiello*

11:30 – 11:45 **Reliability-based Allowances of Corrosion Losses for Weathering Steel Bridges** **15 min.**

*Miroslav Sykora; Kateřina Kreislová; Jana Marková*

11:45 – 12:00 **Failure mode and load prediction of steel bridge girders through 3D laser scanning and machine learning methods** **15 min.**

*Georgios Tzortzinis; Jan Wittig; Angelos Filippatos; Maik Gude; Aidan Provost; Chengbo Ai;  
Simos Gerasimidis*

12:00 – 12:15    **Investigations On the Effective Width of Wide Flange Steel Girders**    **15 min.**

*Alexander Jiponov; Encho Dulevski; Vasil Nikolov*

12:15 – 12:30    **Design and analysis of curved steel bridges using 3D shell modelling**    **15 min.**

*Paul Biju-Duval*

**HALL: SUN II.**

12:45 – 12:50    **Official closure of Steel bridges 2024**    **5 min.**

12:50 – 14:00    **Lunch**