

# Programme at a glance (24-25 june)

| Time            | Congress Hall                                                                                                                                                                                       | Harlekin<br>- ground floor                                                                                | Columbine<br>- ground floor                                                                                           | Pjerrot<br>- ground floor                                                                                    | Arkaden 4+5<br>- 2 <sup>nd</sup> floor                                                 | Arkaden 6<br>- 2 <sup>nd</sup> floor                                                                                              | Arkaden 7<br>- 2 <sup>nd</sup> floor                                                                                                              | Arkaden 8<br>- 2 <sup>nd</sup> floor                                                  | Dansetten<br>- 2 <sup>nd</sup> floor                                                                                  | Glassalen<br>- 1 <sup>st</sup> floor                                              | Arkaden 2+3<br>- 2 <sup>nd</sup> floor                                                                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| MONDAY 24 JUNE  |                                                                                                                                                                                                     |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
| 18:00-19:30     | City Hall Welcome reception                                                                                                                                                                         |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
|                 |                                                                                                                                                                                                     |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
| TUESDAY 25 JUNE |                                                                                                                                                                                                     |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
| 08:30-09:00     | Opening ceremony                                                                                                                                                                                    |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
| 09:00-09:30     | T. Y. Lin Lecture<br><i>Chairs:</i> Dan Frangopol and Jens Sandager Jensen<br>Aesthetic Value of Bridges. <i>Presenter:</i> Man-Chung Tang                                                          |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
| 09:30-10:00     | Keynote Speaker<br><i>Chairs:</i> Dan Frangopol and Jens Sandager Jensen<br>Bridge engineering - Proving the sustainability case for refurbishment v replacement. <i>Presenter:</i> David MacKenzie |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
| 10:00-10:30     | Coffee Break                                                                                                                                                                                        |                                                                                                           |                                                                                                                       |                                                                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                   |                                                                                       |                                                                                                                       |                                                                                   |                                                                                                              |
| 10:30-12:00     | MS 01                                                                                                                                                                                               | MS 02                                                                                                     | MS 04                                                                                                                 | SS 22                                                                                                        | SS 28                                                                                  | GS 27                                                                                                                             | SS 03                                                                                                                                             | SS 01                                                                                 | SS 39                                                                                                                 | SPONSOR                                                                           | MS 09                                                                                                        |
|                 | Prediction and Extension of the Service Duration of Bridges                                                                                                                                         | Field testing of existing bridges                                                                         | Life-Cycle Redundancy, Robustness and Resilience of Bridges and Infrastructure Networks under Multiple Hazards        | Advancements in Intelligent Monitoring and Maintenance of Bridge Infrastructure                              | Probability-Based Life-cycle Design Analysis of Bridge Engineering                     | BRIDGE SAFETY - Repair and retrofitting strategy                                                                                  | Estimating future preventive bridge interventions                                                                                                 | Short-span bridges and culverts: analysis, evaluation, durability, and rehabilitation | Digital Enabled Asset Management of Major Bridges                                                                     | A digital strategy for bridge management to improve outcomes across the lifecycle | Novel Technologies and Information Fusion for Structural Health Monitoring of Bridges                        |
|                 | <i>Chairs:</i><br>E. Brühwiler and A. Yabe                                                                                                                                                          | <i>Chairs:</i><br>E. Lantsoght and G. Sas                                                                 | <i>Chairs:</i><br>F. Biondini and D.M. Frangopol                                                                      | <i>Chairs:</i><br>S. Setunge                                                                                 | <i>Chairs:</i><br>J. He                                                                | <i>Chairs:</i><br>N. Powers and J. Turmo                                                                                          | <i>Chairs:</i><br>B. T. Adey and H. Mehranfar                                                                                                     | <i>Chairs:</i><br>D. Beben and T. Maleska                                             | <i>Chairs:</i><br>T. Friis and I. Gualtero                                                                            |                                                                                   | <i>Chairs:</i><br>C-W Kim and F. Zhang                                                                       |
|                 | Field Tests for Remaining Life Prediction of Aged Bridges<br><br><i>Presenter:</i><br>A. Miyamoto                                                                                                   | Collapse test of prestressed concrete slab-between-girder bridge<br><br><i>Presenter:</i><br>E. Lantsoght | Connectivity analysis of road network with bridges and slopes under rainfall<br><br><i>Presenter:</i><br>H. Zhengying | Real-time Structural Integrity Assessment of Bridge Infrastructure<br><br><i>Presenter:</i><br>S. Jayasinghe | Robustness Evaluation of a Twin I-Girder Bridge<br><br><i>Presenter:</i><br>P. Acharya | Analytical study on the effects of flange size on the axial force introduced in the rivet<br><br><i>Presenter:</i><br>K. Yamamoto | Improvements in providing overviews of future bridge interventions, their possession windows, and costs.<br><br><i>Presenter:</i><br>H. Mehranfar | Restoration of the Rochers noirs viaduct<br><br><i>Presenter:</i><br>E. Combescure    | Extending Great Belt Bridge bearing service life using Mobile Computer Vision<br><br><i>Presenter:</i><br>Jan Winkler |                                                                                   | Real-time scour depth estimation of a pier using vibration monitoring.<br><br><i>Presenter:</i><br>D. Kawabe |

|  |                                                                                                                                               |                                                                                                                                                  |                                                                                                                                        |                                                                                                                                                                 |                                                                                                                                               |                                                                                                                                                     |                                                                                                                                                                |                                                                                                                                             |                                                                                                                                       |  |                                                                                                                                                         |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Behavior Analysis of an Integrated Column by Multiple Steel Pipes Using Monitoring Measurement<br><br><b>Presenter:</b><br><i>S. Akamatsu</i> | Bridge load testing: recent advances in research, collaboration, and codes<br><br><b>Presenter:</b><br><i>E. Lantsoght</i>                       | Measuring the extreme risk of coastal bridges under tropical cyclones<br><br><b>Presenter:</b><br><i>Y. Li</i>                         | Optimal Sensor Placement Applications for Bridge Structural Health Monitoring Using the Effective Independence Method<br><br><b>Presenter:</b><br><i>Z. Sun</i> | Fatigue reliability analysis for welding details under traffic flow<br><br><b>Presenter:</b><br><i>Z. Pan</i>                                 | Novel Fe-SMA bonding method for repair of U-rib butt welds in OSDs<br><br><b>Presenter:</b><br><i>Z. Lv</i>                                         | Connecting predictive algorithms to BIM to improve the planning process.<br><br><b>Presenter:</b><br><i>S. Chuo</i>                                            | Loads Rating of Cast-In-Place Reinforced Concrete Box Culverts based on Load Testing<br><br><b>Presenter:</b><br><i>A. Peiris</i>           | 30 years' experience of optimizing the use of corrosion sensors<br><br><b>Presenter:</b><br><i>P. Møller</i>                          |  | Structural Integrity Estimation of Bridges Based on Acceleration Measurement<br><br><b>Presenter:</b><br><i>H. Yu</i>                                   |
|  | Prediction of bridge service duration for CBM by the indirect monitoring using vehicles<br><br><b>Presenter:</b><br><i>A. Yabe</i>            | Reliability of I-girder PC bridges through proof load testing: preliminary results<br><br><b>Presenter:</b><br><i>G. Addonizio</i>               | Resilience-based countermeasure strategy for bridges under multiple hazards<br><br><b>Presenter:</b><br><i>H. Ishibashi</i>            | Field Monitoring of Bridge Link Slab Performance Under Long-term and Live Load Effects<br><br><b>Presenter:</b><br><i>A. Okeil</i>                              | Static and Fatigue tests for hybrid welded-bolted de-mountable shear connectors.<br><br><b>Presenter:</b><br><i>J. He</i>                     | Experiment research on fatigue cracks at diaphragm cutouts reinforced employing Fe-SMA in steel bridge.<br><br><b>Presenter:</b><br><i>X. Qiang</i> | Bridge deterioration modeling considering the climate change effects.<br><br><b>Presenter:</b><br><i>S. Moghtadernejad</i>                                     | Seismic finite element method simulation of a soil-steel bridge with a gravel-rubber mix<br><br><b>Presenter:</b><br><i>M. R. Massimino</i> | Digital Technologies for bridge damage detection: drones and AI for remote inspections<br><br><b>Presenter:</b><br><i>M. Malavizi</i> |  | Research on application of real-time dynamic safety monitoring system for medium and small span bridges<br><br><b>Presenter:</b><br><i>H. Hong</i>      |
|  | Combining monitoring information and UHPFRC strengthening to extend bridge service duration.<br><br><b>Presenter:</b><br><i>N. Bertola</i>    | Danish concrete bridge proof load-ing procedure and considerations<br><br><b>Presenter:</b><br><i>J.W. Schmidt</i>                               | Enhancing seismic resilience of aging highway bridges using FRP retrofit<br><br><b>Presenter:</b><br><i>V. Singh</i>                   | Equivalent structural stress concentration factor for non-planar oblique butt joints<br><br><b>Presenter:</b><br><i>W. Xing</i>                                 | Optimization of maintenance program for bridge cable in service lifetime<br><br><b>Presenter:</b><br><i>J. Peng</i>                           | Experimental study on seismic performance of different failure modes of RC shear keys<br><br><b>Presenter:</b><br><i>M. Heng</i>                    | Application of open deep learning datasets for building vision-based bridge condition monitoring solutions<br><br><b>Presenter:</b><br><i>K Tomaszekiewicz</i> | Long-term monitoring of earth pressure in a soil-steel composite railway tunnel<br><br><b>Presenter:</b><br><i>D. Beben</i>                 | Service Life Strategies on Hanger Cables of the Great Belt Bridge<br><br><b>Presenter:</b><br><i>P. Holmstrøm</i>                     |  | Enhancing Structural Performance Evaluation of PC Girder Bridges through Bayesian Model Updating<br><br><b>Presenter:</b><br><i>D. Chen and C-W Kim</i> |
|  | UHPFRC technology for the extension of the service duration of bridges<br><br><b>Presenter:</b><br><i>E. Brühwiler</i>                        | A comparative study of proof load configurations related to bridge classification.<br><br><b>Presenter:</b><br><i>K. Dahl Schjøttz Damsgaard</i> | Fragility curves for regular and irregular RC bridges via non-linear static analysis<br><br><b>Presenter:</b><br><i>Y. Tsompanakis</i> | Electrochemical-chemical-mechanical phase field model for corrosion-induced cracking<br><br><b>Presenter:</b><br><i>X. Fang</i>                                 | Probabilistic inspection planning for the life cycle management of railway bridges<br><br><b>Presenter:</b><br><i>T. Nogueira Bittencourt</i> |                                                                                                                                                     | Influence of the pavement conditions on the bridge response<br><br><b>Presenter:</b><br><i>M. G. Mulas</i>                                                     | Experimental tests of a soil-steel culvert with a shallow soil cover under static loading<br><br><b>Presenter:</b><br><i>T. Maleska</i>     |                                                                                                                                       |  | Framework of UAV Bridge Inspection with Computer Vision and Deep Learning<br><br><b>Presenter:</b><br><i>K. Yen</i>                                     |

|             |                                                                                                                        |                                                                                                                   |                                                                                                                                                                               |                                                                                                                                                              |                                                                                                                                                                                             |                                                                                                                    |                                                                                                                                                                           |                                                                                                                                                  |                                                                                                                                                             |                                                                                                                                                        |                                                                                                                                               |
|-------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 12:00-13:00 | Lunch                                                                                                                  |                                                                                                                   |                                                                                                                                                                               |                                                                                                                                                              |                                                                                                                                                                                             |                                                                                                                    |                                                                                                                                                                           |                                                                                                                                                  |                                                                                                                                                             |                                                                                                                                                        |                                                                                                                                               |
| 13:00-14:30 | MS 01                                                                                                                  | MS 02                                                                                                             | MS 04                                                                                                                                                                         | SS 04                                                                                                                                                        | SS 17                                                                                                                                                                                       | GS 27                                                                                                              | MS 12                                                                                                                                                                     | SS 01                                                                                                                                            | SS 39                                                                                                                                                       | SS 25                                                                                                                                                  | MS 09                                                                                                                                         |
|             | Prediction and Extension of the Service Duration of Bridges<br><br><b>Chairs:</b><br><i>E. Brühwiler and A. Yabe</i>   | Field testing of existing bridges<br><br><b>Chairs:</b><br><i>E. Lantsoght and G. Sas</i>                         | Life-Cycle Redundancy, Robustness and Resilience of Bridges and Infrastructure Networks under Multiple Hazards<br><br><b>Chairs:</b><br><i>F. Biondini and D.M. Frangopol</i> | Advances in Machine Learning and Data-Driven System Identification Techniques for Structural Health Monitoring.<br><br><b>Chairs:</b><br><i>J. Diaz-Roso</i> | Integrating digital twin with machine-learning techniques for structural damage identification<br><br><b>Chairs:</b><br><i>J.F. Jiménez-Alonso and I. Duvnjak</i>                           | BRIDGE SAFETY - Repair and retrofitting strategy.<br><br><b>Chairs:</b><br><i>N. Powers and J. Turmo</i>           | Decision-making in bridge management - Gaps between research and practice and recommendations for the future.<br><br><b>Chairs:</b><br><i>P. Linneberg and A. Strauss</i> | Short-span bridges and culverts: analysis, evaluation, durability, and rehabilitation<br><br><b>Chairs:</b><br><i>D. Beben and T. Maleska</i>    | Digital Enabled Asset Management of Major Bridges<br><br><b>Chairs:</b><br><i>T. Friis and I. Gualtero</i>                                                  | Vulnerability assessment and retrofit of in-service bridges: contributions and experiences.<br><br><b>Chairs:</b><br><i>M. Domaneschi and V. Villa</i> | Novel Technologies and Information Fusion for Structural Health Monitoring of Bridges<br><br><b>Chairs:</b><br><i>C-W Kim and F. Zhang</i>    |
|             | Interpreting monitored responses of an orthotropic steel deck using FEM.<br><br><b>Presenter:</b><br><i>S. Ye</i>      | Static and dynamic monitoring of bridges with contactless techniques.<br><br><b>Presenter:</b><br><i>T. Moser</i> | Connectivity of post-earthquake bridge networks under aging of isolators.<br><br><b>Presenter:</b><br><i>H. Matsuzaki</i>                                                     | Long-Term Performance Evaluation of Low-Cost sensors using AI-Driven Tools.<br><br><b>Presenter:</b><br><i>J. Lozano-Galant</i>                              | Vibration-based NDT system for external tendons: anomaly detection through machine learning classifiers.<br><br><b>Presenter:</b><br><i>J. Jiménez-Alonso</i>                               | Progressive failure analysis of strengthened masonry arch bridges.<br><br><b>Presenter:</b><br><i>T. Kamiński</i>  | Current and future decision-making in Danish and Austrian bridge management.<br><br><b>Presenter:</b><br><i>P. Linneberg and A. Strauss</i>                               | Maximum Shear Strength of Prestressed Concrete Deep Beams.<br><br><b>Presenter:</b><br><i>X. Duanmu</i>                                          | Data-driven Maintenance of Bogibeel Bridge - Large Scale Structural Health Monitoring.<br><br><b>Presenter:</b><br><i>H. Gjølstrup</i>                      | Reliability of UT for the grouting inspection in PT bridges: a case study.<br><br><b>Presenter:</b><br><i>I. Mazzatura</i>                             | Vision-based optimal sensor selection for full-field displacement reconstruction.<br><br><b>Presenter:</b><br><i>Y. Weng</i>                  |
|             | Predicting time history response of bridges under vehicle load using CNN.<br><br><b>Presenter:</b><br><i>H. Li</i>     | Shear stop criteria for reinforced concrete slab strips.<br><br><b>Presenter:</b><br><i>E. Lantsoght</i>          | Computational analysis of resilience in reinforced concrete railway bridge.<br><br><b>Presenter:</b><br><i>R. R. Santos and T. N. Bittencourt</i>                             | Fast Bridge Health Monitoring Deployment with Transferable Expertise.<br><br><b>Presenter:</b><br><i>R. Sojo-García</i>                                      | Machine learning-based clustering and regression for assessing temperature-induced variations on external tendon's natural Frequencies.<br><br><b>Presenter:</b><br><i>Luis. Chillitupa</i> | Repair of Timber Piles in Rail Bridges – A Canadian Perspective.<br><br><b>Presenter:</b><br><i>M. Ehsani</i>      | Comparison of ranking frameworks for specification of bridge scour monitoring systems using a case study database.<br><br><b>Presenter:</b><br><i>G. Gavriel</i>          | Low carbon solution for short-span bridges: soil-steel composite bridges versus concrete bridges.<br><br><b>Presenter:</b><br><i>A. Czerepak</i> | Digital Health Monitoring of the Great Belt Suspension Bridge.<br><br><b>Presenter:</b><br><i>T. Friis</i>                                                  | Resilience and Sustainability Assessment of a Prestressed Concrete Viaduct.<br><br><b>Presenter:</b><br><i>M. Domaneschi</i>                           | Domain Adaptation for Bridge Health Monitoring via Physics-informed Generative Adversarial Learning.<br><br><b>Presenter:</b><br><i>L. Ge</i> |
|             | Behavior of CFST piers with compound concrete under cyclic lateral loading.<br><br><b>Presenter:</b><br><i>W. Jiji</i> | Development of a guideline for proof loading of bridges.<br><br><b>Presenter:</b><br><i>S. Englund</i>            | Assessment of honeycomb cushion for enhancing bridge deck impact protection.<br><br><b>Presenter:</b><br><i>J. Hashemi</i>                                                    | Anomaly Detection with Switching Kalman Filter and Imitation Learning.<br><br><b>Presenter:</b><br><i>Z. Xin</i>                                             | Integrating CWT and CNN for Damage Detection in High-Speed Railway Bridges.<br><br><b>Presenter:</b><br><i>J. F. Jiménez-Alonso</i>                                                         | Rapid Repair of Bridge Beams and Decks with Prefabricated FRP Panels.<br><br><b>Presenter:</b><br><i>M. Ehsani</i> | Next generation risks challenge bridge maintenance & management in Finland.<br><br><b>Presenter:</b><br><i>J. Wuorenjuuri</i>                                             | Steel soil composite bridges, advantages – based on case studies.<br><br><b>Presenter:</b><br><i>M. Nonbo</i>                                    | Data-Driven Preventive Maintenance and Service Life Extension of the Sunshine Skyway Bridge – Tampa FL, USA.<br><br><b>Presenter:</b><br><i>I. Gualtero</i> | Deterioration rate diagnosis to global climatic change: the case of Dnipro Dam in Ukraine.<br><br><b>Presenter:</b><br><i>N. Kopiika</i>               | Anomaly detection of bridges by Bayesian method with optimized sensor placement.<br><br><b>Presenter:</b><br><i>C-W. Kim</i>                  |

|             |                                                                                                                                         |                                                                                                                                                          |                                                                                                                                                   |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                 |                                                                                                                                              |                                                                                                                                                            |                                                                                                                                         |                                                                                                                                                      |                                                                                                                                            |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|             | Extending the Service Duration of Bridges by means of (R-)JUHPRC<br><br><b>Presenter:</b><br><i>S. De Maria</i>                         | Load testing on existing prestressed concrete bridges to determine long-term effects on strain measurement.<br><br><b>Presenter:</b><br><i>H. Burger</i> | Multi-hazard resilience-based bridge prioritization for aging bridge networks in a changing climate.<br><br><b>Presenter:</b><br><i>L. Jafari</i> | Improving frequency-features by parametric study of data-driven SHM schemes.<br><br><b>Presenter:</b><br><i>C. Puerto-Santana</i> | Data-driven framework for damage detection in structural system.<br><br><b>Presenter:</b><br><i>J. F. Jiménez-Alonso</i>   | Incremental Repair Method for Corroded Bolted Connection.<br><br><b>Presenter:</b><br><i>E. Yamaguchi</i>                                                       | The effect of conceptualization on bridge maintenance prioritization.<br><br><b>Presenter:</b><br><i>K. Zangpo</i>                           |                                                                                                                                                            | Sustaining Structural Bearings – Assessment and renovation design on Storebælt West Bridge.<br><br><b>Presenter:</b><br><i>A. Smyth</i> | Model-driven strategy for bridge measurement-system design.<br><br><b>Presenter:</b><br><i>R. Galli</i>                                              | Converting FE Models to Irreducible Element Models for use in Population-Based SHM.<br><br><b>Presenter:</b><br><i>C. O'Higgins</i>        |
|             | Optimization Study on Wet Joints Construction of Steel Plate Composite Beams.<br><br><b>Presenter:</b><br><i>Z. Liu</i>                 |                                                                                                                                                          | Probabilistic Capacity Models for Concrete-Filled Steel Tubes.<br><br><b>Presenter:</b><br><i>A. Aloisio</i>                                      | Robust Modal Identification of a Large-span Bridge with the New SpCF Technique.<br><br><b>Presenter:</b><br><i>S. Amador</i>      | Measurement and Structural Behavior of Suspended Swaying Pedestrian Bridge.<br><br><b>Presenter:</b><br><i>E-S. Hwang</i>  | Anchored response tailored prestressed CFRP strengthening – preliminary long-term and temperature investigations.<br><br><b>Presenter:</b><br><i>J. Schmidt</i> | Bridge Condition Index: a review of methodologies used in Bridge Management Systems.<br><br><b>Presenter:</b><br><i>J. Gonzalez-Libreros</i> |                                                                                                                                                            |                                                                                                                                         | Quality assurance of interventions in reinforced concrete bridges.<br><br><b>Presenter:</b><br><i>A. C. P. Martins</i>                               |                                                                                                                                            |
| 14:30-14:45 | Coffee Break                                                                                                                            |                                                                                                                                                          |                                                                                                                                                   |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                 |                                                                                                                                              |                                                                                                                                                            |                                                                                                                                         |                                                                                                                                                      |                                                                                                                                            |
| 14:45-16:15 | GS 05                                                                                                                                   | MS 02                                                                                                                                                    | MS 11                                                                                                                                             | MS 06                                                                                                                             | SS 18                                                                                                                      | SS 37                                                                                                                                                           | SS 30                                                                                                                                        | SS 06                                                                                                                                                      | SS 02                                                                                                                                   | SS 25                                                                                                                                                | MS 09                                                                                                                                      |
|             | BRIDGE MAINTENANCE - Inspection and diagnostic<br><br><b>Chairs:</b><br><i>Z. Lounis and D. Mackenzie</i>                               | Field testing of existing bridges<br><br><b>Chairs:</b><br><i>E. Lantsoght and G. Sas</i>                                                                | Towards the realization of the Submerged Floating Tunnels<br><br><b>Chairs:</b><br><i>B. Faggiano and Y. Ziang</i>                                | AI and Robotics for Bridges: Monitoring, Assessment, and Maintenance<br><br><b>Chairs:</b><br><i>Y. Dong and J. Li</i>            | Human-Bridge Managing Interfaces through digital twinning<br><br><b>Chairs:</b><br><i>R. Chacón and J. Turmo</i>           | Nordic Operation and Maintenance Strategies for Bridges: Pioneering a Sustainable Future<br><br><b>Chairs:</b><br><i>D. Honfi and B.T. Svendsen</i>             | Virtual Inspection<br><br><b>Chairs:</b><br><i>P. Linneberg and S. Gjerding</i>                                                              | Forensic Engineering and Damaged Structures. Critical Cases Studies and Lesson Learned of LATAM road bridges<br><br><b>Chairs:</b><br><i>M. Valenzuela</i> | Bridge Weigh-in-Motion: recent experiences, technology developments, and new applications<br><br><b>Chairs:</b><br><i>D. Cantero</i>    | Vulnerability assessment and retrofit of in-service bridges: contributions and experiences.<br><br><b>Chairs:</b><br><i>M. Domanech and V. Villa</i> | Novel Technologies and Information Fusion for Structural Health Monitoring of Bridges<br><br><b>Chairs:</b><br><i>C-W Kim and F. Zhang</i> |
|             | Utilization of soundness assessment of medium and small spanbridges based on the ML models.<br><br><b>Presenter:</b><br><i>A. Arong</i> | Lessons Learnt from Bridge Load Testing in the UK.<br><br><b>Presenter:</b><br><i>D. Cousins</i>                                                         | Coupled dynamic analysis method for wave action on a submerged floating tunnel.<br><br><b>Presenter:</b><br><i>B. Huang</i>                       | Bridge condition assessment with full-scale view and computer vision method.<br><br><b>Presenter:</b><br><i>X. Lei</i>            | A Framework for an Integrated & Digitally-Supported Bridge Management<br><br><b>Presenter:</b><br><i>S. Maghtadernejad</i> | Risk-based evaluation of fire protection on cable supported bridges.<br><br><b>Presenter:</b><br><i>N. P. Høj</i>                                               | Immersive Visualization for Enhanced Operations and Management of Bridges.<br><br><b>Presenter:</b><br><i>P. Linneberg and B. Aryal</i>      | Seismic Design Modifications for Damage Prevention in Skewed Bridges.<br><br><b>Presenter:</b><br><i>T. Amaya</i>                                          | New feature based on influence lines for anomaly detection in bridge monitoring.<br><br><b>Presenter:</b><br><i>A. Döring</i>           | Fatigue analysis and maintenance strategies for details in long-span bridge girders.<br><br><b>Presenter:</b><br><i>C. Deng</i>                      | Impact factor of a seven span continuous cable-stayed bridge.<br><br><b>Presenter:</b><br><i>S. Kimura</i>                                 |

|  |                                                                                                                    |                                                                                    |                                                                                                                        |                                                                                                                     |                                                                                                    |                                                                            |                                                                                 |                                                                                             |                                                                                 |                                                                                          |                                                                                                                    |
|--|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|  | AI for Bridge Inspection with IBM Inspecto.                                                                        | Load testing and evaluation of inverted T-section slabs in road bridges.           | Dynamic Substructuring Technique for Submerged Floating Tunnels.                                                       | Data-driven prediction models for extreme wave impacts on coastal bridges.                                          | PONTI: an open WebGL-based tool in support to defect analysis and 3D visualisation of bridges.     | Maintenance strategies by the Swedish Transport Administration.            | Digital Transition in Asset Management - Virtual Inspections of Bridges.        | Collapse of Caucau Bridge: Foresinc Engineering Study.                                      | Vehicle speed estimation in BWIM systems via convoluted reciprocity.            | A comparison of Italian and UK guidelines on the vulnerability assessment of bridges.    | Distributed fiber optic sensors for structural health monitoring of post-tensioned bridges.                        |
|  | <b>Presenter:</b><br><i>F. Scheidegger</i>                                                                         | <b>Presenter:</b><br><i>C. Christensen</i>                                         | <b>Presenter:</b><br><i>S. Corazza</i>                                                                                 | <b>Presenter:</b><br><i>D. Zhu</i>                                                                                  | <b>Presenter:</b><br><i>R. Fascia</i>                                                              | <b>Presenter:</b><br><i>F. Olsson</i>                                      | <b>Presenter:</b><br><i>N. L. Barnes</i>                                        | <b>Presenter:</b><br><i>M. A. Valenzuela</i>                                                | <b>Presenter:</b><br><i>D. Cantero</i>                                          | <b>Presenter:</b><br><i>A. Lipari</i>                                                    | <b>Presenter:</b><br><i>B. Piątek</i>                                                                              |
|  | A review of recent research on visual inspection processes for bridges and the potential uses of AI.               | The use of smart bridge bearings for railway bridge monitoring.                    | Forming Guidelines for Software Evaluation in Bridge Structural Health Monitoring Systems.                             | Digital Twin for Intelligent Maintenance Towards Sustainable Bridges.                                               | Advancing Bridge Asset Management in Indonesia: Integrating Scan-to-BIM for Digital Twin Approach. | Evaluation of Post-Tensioned Bridges by State-of-the-Art Techniques.       | Norwegian Coastal Bridges.                                                      | Philosophy of rehabilitation of the Cau Cau bridge.                                         | Strain-based FEM-aided Bridge Health Monitoring: A case study.                  | Sustainable Repair of Concrete Structures in Denmark.                                    | Modeling Temperature Impact on Sensor Data in Prestressed Concrete Bridges.                                        |
|  | <b>Presenter:</b><br><i>P. Vardanega</i>                                                                           | <b>Presenter:</b><br><i>P. Olaszek</i>                                             | <b>Presenter:</b><br><i>T. Bayda</i>                                                                                   | <b>Presenter:</b><br><i>Y. Dong</i>                                                                                 | <b>Presenter:</b><br><i>H. Tri Saksena</i>                                                         | <b>Presenter:</b><br><i>G. Rapaport</i>                                    | <b>Presenter:</b><br><i>T. F. Kvamstad</i>                                      | <b>Presenter:</b><br><i>R. M. Teneos</i>                                                    | <b>Presenter:</b><br><i>P. Rizzo</i>                                            | <b>Presenter:</b><br><i>J. M. Frederiksen</i>                                            | <b>Presenter:</b><br><i>V. Coric</i>                                                                               |
|  | Performance Evaluation of TMDs for a Continuous Steel Box Girder.                                                  | Development of a proof loading method for a railway bridge with masonry abutments. | Nonlinear Seismic-Response Time-History Analysis of Submerged Floating Tunnel.                                         | Structural Damage Detection Approach Using Input-Output Monitoring System and Transfer Learning.                    | Material characterization for HBIM data structures on a masonry arch bridge.                       | Development and implementation of digital inspection notebook for bridges. | Virtual Supervision of the New Storstrøm Bridge: Status and potential with CVI. | Advanced non-destructive methods for the structural diagnosis of the Cau Cau bridge, Chile. | Actual bridge verification of monitoring technique using optical fiber sensors. | Vulnerability Assessment of Timber Piles by Bending and Dispersive Wave Testing Methods. | Field testing of the longest Polish footbridge made of FRP composites using distributed fibre optic sensor system. |
|  | <b>Presenter:</b><br><i>G. Liu</i>                                                                                 | <b>Presenter:</b><br><i>C. Wang</i>                                                | <b>Presenter:</b><br><i>Y. Xiang</i>                                                                                   | <b>Presenter:</b><br><i>L. Ge</i>                                                                                   | <b>Presenter:</b><br><i>R. Chacón</i>                                                              | <b>Presenter:</b><br><i>M. Tai</i>                                         | <b>Presenter:</b><br><i>T. Norsk</i>                                            | <b>Presenter:</b><br><i>G. Valdebenito</i>                                                  | <b>Presenter:</b><br><i>S. Aoki</i>                                             | <b>Presenter:</b><br><i>W. Zatar</i>                                                     | <b>Presenter:</b><br><i>M. Kulpa</i>                                                                               |
|  | Improvement of thickness estimation model on a steel member using local vibration mode based on data augmentation. |                                                                                    | Experimental investigation for dynamic behavior of the scaled segment model of submerged floating tunnels under waves. | Data Fusion in Structural Health Monitoring: Integrating Computer Vision and Strain Gauges for Enhanced Inspection. | Integration of BIM and MIVES to automate the sustainability assessment of viaducts.                | Towards a service life extension of the Øresund Fixed Link.                |                                                                                 | A study on machine learning for creating crack images of RC columns.                        | Machine-learning for analyzing bridge displacement using radar data.            |                                                                                          | On-line noise parameter estimation for Kalman filter with sequential importance resampling.                        |
|  | <b>Presenter:</b><br><i>S. Kato</i>                                                                                |                                                                                    | <b>Presenter:</b><br><i>H. Ding</i>                                                                                    | <b>Presenter:</b><br><i>D. Lattanzi</i>                                                                             | <b>Presenter:</b><br><i>J. T. Coderque</i>                                                         | <b>Presenter:</b><br><i>I. Björnsson</i>                                   |                                                                                 | <b>Presenter:</b><br><i>H. Yasukawa</i>                                                     | <b>Presenter:</b><br><i>M. Arnold</i>                                           |                                                                                          | <b>Presenter:</b><br><i>F-L. Zhang</i>                                                                             |

|             |                                                                                                                                             |                                                                                                                                                      |                                                                                                                             |                                                                                                                                    |                                                                                                                                                  |                                                                                                                                                     |                                                                                                                                                                   |                                                                                                                                  |                                                                                                                                                              |                                                                                                                     |                                                                                                                                            |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 16:15-16:30 | Break                                                                                                                                       |                                                                                                                                                      |                                                                                                                             |                                                                                                                                    |                                                                                                                                                  |                                                                                                                                                     |                                                                                                                                                                   |                                                                                                                                  |                                                                                                                                                              |                                                                                                                     |                                                                                                                                            |
| 16:30-18:00 | GS 05                                                                                                                                       | MS 02                                                                                                                                                | MS 11                                                                                                                       | MS 06                                                                                                                              | SS 26                                                                                                                                            | SS 31                                                                                                                                               | SS 27                                                                                                                                                             | SS 08                                                                                                                            | SS 02                                                                                                                                                        | SS 42                                                                                                               | GS 19                                                                                                                                      |
|             | BRIDGE MAINTENANCE - Inspection and diagnostic<br><br><b>Chairs:</b><br>Z. Lounis and D. Mackenzie                                          | Field testing of existing bridges<br><br><b>Chairs:</b><br>E. Lantsoght and J.W. Schmidt                                                             | Towards the realization of the Submerged Floating Tunnels<br><br><b>Chairs:</b><br>B. Faggiano and Y. Xiang                 | AI and Robotics for Bridges: Monitoring, Assessment, and Maintenance<br><br><b>Chairs:</b><br>Y. Dong and J. Li                    | Risk-Informed Decision Making and Asset Management of Highway Bridge Portfolios<br><br><b>Chairs:</b><br>X. Wang and C. Demartino                | O&M of Major Bridges<br><br><b>Chairs:</b><br>J.A. Jensen and K.A. Nielsen                                                                          | Life-Cycle Performance Safety, Reliability, and Risk of Bridges and Infrastructure Systems under Climate Change<br><br><b>Chairs:</b><br>F. Biondini and M. Ghosn | Posttension Analysis, Design, and Assessment in Bridge Construction<br><br><b>Chairs:</b><br>U. Attanayake and M. LaViolette     | Bridge Weigh-in-Motion: recent experiences, technology developments, and new applications<br><br><b>Chairs:</b><br>D. Cantero                                | Community Resilience and Decision-Support systems<br><br><b>Chairs:</b><br>N. Makhoul, R. Kromanis and J.v.d. Lindt | BRIDGE SAFETY - assessment and evaluation<br><br><b>Chairs:</b><br>T.N. Bittencourt and T. Kaminski                                        |
|             | Crack detection method for RC beams with an automatic hammering device.<br><br><b>Presenter:</b><br>I. Uchiyama                             | Structural reliability updating using monitoring data from in-situ load testing and laboratory test results.<br><br><b>Presenter:</b><br>R. De Vries | Numerical simulation of motion response of submerged floating tunnel under wave action.<br><br><b>Presenter:</b><br>H. Zhao | A smart robotic system for autonomous inspection of large-scale concrete girder.<br><br><b>Presenter:</b><br>Y. Pan                | Maintenance plan optimization system based on remaining life prediction.<br><br><b>Presenter:</b><br>A. Miyamoto                                 | The Organisation, O&M Operations and Inspection of the 1915Çanakkale Bridge.<br><br><b>Presenter:</b><br>F. Aytekin and A. M. Kizilkaya             | Remaining Fatigue Service Life of the Hillsborough River Bridge in PEI, Canada.<br><br><b>Presenter:</b><br>C. MacAulay                                           | Simplified Stages and Creep analysis of a segmental precast concrete bridge.<br><br><b>Presenter:</b><br>A. Guarnieri            | Assessment of the Accuracy of Bridge Weigh-in-motion (B-WIM) System in Indonesia.<br><br><b>Presenter:</b><br>W. Nugraha                                     | Dynamic traffic simulation for transportation system resilience assessment.<br><br><b>Presenter:</b><br>P. Bocchini | The Behaviour and Management of Post-tensioned Girder Halving Joints.<br><br><b>Presenter:</b><br>R. Sampaio                               |
|             | An Attempt to Improve the Accuracy of 3D Point Cloud Considering Bridge Vibration Effects.<br><br><b>Presenter:</b><br>A. Akutsu            | Load testing of the first stress ribbon bridge in Slovenia.<br><br><b>Presenter:</b><br>D. Đukić                                                     | Modeling of two-dimensional water motion field during a seaquake.<br><br><b>Presenter:</b><br>L. Martinelli                 | LSTM-based structural pattern recognition for floating bridges.<br><br><b>Presenter:</b><br>S. Ryu                                 | Risk-Informed Approach to Determining Optimal Bridge Inspection Frequency for Periodic Replacement Policies.<br><br><b>Presenter:</b><br>A. Yuan | Traffic wind hazards on the Storebælt East Bridge and mitigation.<br><br><b>Presenter:</b><br>A. Larsen                                             | Climate Change Challenges: A Study on Bridge Accessories and Structural Performance.<br><br><b>Presenter:</b><br>A. Moscatelli                                    | NDE for pre-stressing systems condition: metrological validation.<br><br><b>Presenter:</b><br>S. Zorzi                           | Bridge weigh-in-motion event detection using wavelet scattering features and unsupervised learning.<br><br><b>Presenter:</b><br>V. Bokaeian and K. Arjomandi | Adaptive Transition of Critical Transport Infrastructures.<br><br><b>Presenter:</b><br>N. Makhoul                   | Fatigue Behaviour of Reinforced Concrete Inverted T Headstock Halving Joints.<br><br><b>Presenter:</b><br>T. Heldt                         |
|             | Scour detection method of bridge foundation based on pier vibration mode under vehicle braking action.<br><br><b>Presenter:</b><br>Z. Zhang | Damage evaluation of a road bridge subjected to an avalanche.<br><br><b>Presenter:</b><br>H. Naito                                                   | Analysis of Hydroelastic Response of a SFT Based on the Discrete-Module-Beam Method.<br><br><b>Presenter:</b><br>C. Ji      | Vision-Based Structural Displacement Measurements using Deep Learning and Super-Resolution.<br><br><b>Presenter:</b><br>D. Linzell | Fragility Assessment of Water-crossing Bridges Exposed to Flood Hazard.<br><br><b>Presenter:</b><br>J. E. Padgett                                | Experiences with repair of fatigue cracks in an orthotropic steel deck, New Little Belt Bridge, Denmark.<br><br><b>Presenter:</b><br>P. L. Sørensen | Fatigue life of steel wires with multiple corrosion pits based on peridynamics<br><br><b>Presenter:</b><br>Y. Yang                                                | The Impact of Post-tension Modeling Techniques on Calculated Concrete Member Stresses.<br><br><b>Presenter:</b><br>U. Attanayake | Bridge Weigh-in-Motion applied to Heritage Iron Truss Bridges in France.<br><br><b>Presenter:</b><br>F-B. Cartiaux                                           | Machine learning improving seismic infrastructure recovery time estimation.<br><br><b>Presenter:</b><br>N. Makhoul  | Enhancing Safety on Timber Bridges: Feasibility and Risk Assessment of Bridge Barrier Implementation.<br><br><b>Presenter:</b><br>R. Daley |

|  |                                                                                                                                   |                                                                                                                               |                                                                                                                                         |                                                                                                                                |                                                                                                                                   |                                                                                                                                        |                                                                                                                                                                |                                                                                                            |                                                                                                                                              |                                                                                                                          |                                                                                                                            |
|--|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|  | Field test study of bridge scour diagnostic method based on time-varying frequency.<br><br><b>Presenter:</b><br><i>Z. Zhang</i>   | In-situ, lab testing and FE simulations historical steel-concrete bridge decks.<br><br><b>Presenter:</b><br><i>A. De Boer</i> | Main issues of the structural analysis of SFT against environmental loads.<br><br><b>Presenter:</b><br><i>B. Faggiano and G. Lovane</i> | Multimodal Data Collection Using Mobile Robotics for Rapid Structural Assessment.<br><br><b>Presenter:</b><br><i>N. Catbas</i> | Combining Deterioration and Seismic Risks for Bridge Asset Management.<br><br><b>Presenter:</b><br><i>X. Wang</i>                 | Tjörn Bridge O&M Challenges and Mitigation.<br><br><b>Presenter:</b><br><i>J. Laigaard and A. Maglica</i>                              | Fatigue life estimation for long-span suspension bridges due to buffeting<br><br><b>Presenter:</b><br><i>Z. Z. Bandy</i>                                       | Service Life Determination of Post-Tensioned Hanger Rods.<br><br><b>Presenter:</b><br><i>A. Ranasinghe</i> | Accuracy of BWIM considering autocorrelation in bridge dynamic response.<br><br><b>Presenter:</b><br><i>K. Maruyama</i>                      | Information Entropy-Driven Recovery Strategies for Systems' Resilience.<br><br><b>Presenter:</b><br><i>A. Tzioutziou</i> | Seismic performance of highway RC bridges with corroded piers.<br><br><b>Presenter:</b><br><i>D. Cardone</i>               |
|  | Accuracy of the pulsed eddy current thickness measurement for a corroded steel pipe.<br><br><b>Presenter:</b><br><i>Y. Kitane</i> | Practical experience with proof loading – examples from 3 bridges.<br><br><b>Presenter:</b><br><i>J. H. Roldsgaard</i>        | Self-healing of aged bacteria-based cementitious materials: An overview.<br><br><b>Presenter:</b><br><i>N. Kim</i>                      |                                                                                                                                | A Short-Term Hyperlocal Meteorological Forecast Tool for Mitigating Bridge Risks.<br><br><b>Presenter:</b><br><i>C. Demartino</i> | The maintenance project of the special anti-seismic devices of the longest Italian bridge.<br><br><b>Presenter:</b><br><i>A. Greco</i> | Cellular automata damage models incorporating climate change effects for life-cycle assessment of concrete bridges.<br><br><b>Presenter:</b><br><i>G. Nava</i> |                                                                                                            | Exploring Kriging Metamodeling for Applications in Bridge Weigh-in-Motion Prediction.<br><br><b>Presenter:</b><br><i>P. Agüero-Barrantes</i> |                                                                                                                          | Non-destructive testing of a post-tensioned concrete road bridge in Norway.<br><br><b>Presenter:</b><br><i>B. Täljsten</i> |