

IABSE Denmark  
Invitation

# Mini seminar New Storstrøm Bridge

Wednesday 29 September 2021, 15:00 -19:00  
Storstrøm Bridge Construction Site and Visitor Center,  
Brovejen 16, 4760 Vordingborg

## Programme

- 15:00 – 15:15**    **Welcome and Introduction to IABSE**  
by Tina Vejrum, IABSE Denmark
- 15:15 – 16:15**    **“Cable Stay Bridge Design”**  
by Nikolaj Rask Pedersen,  
Senior Bridge Engineer, Rambøll
- “Viaduct design, dynamics and construction”**  
by Luca Cargnino, Chief Consultant, Rambøll
- “Marine Logistics” by Marinus Meijer,**  
Marine Construction Manager, SBJV
- 16:15 – 17:45**    **Site Visit (Please bring PPE)**
- 17:45 – 18:00**    **Closing remarks**  
by Tina Vejrum, IABSE Denmark
- 18:00 – 19:00**    **Drinks and snacks**



## Cable Stay Bridge Design

The New Storstrøm Bridge includes a signature cable-stayed bridge with two navigational spans of 160 m each and a 102 m single-tower pylon located centrally at the crossing. The main structural challenges with the analysis and design of the cable-stayed component of the bridge will be presented. This includes considerations of the construction sequence and cable system, challenges with the asymmetric pylon, design for dynamic loading and the structural interaction between the cable-stayed bridge and the other viaduct parts. The cable stay section spans over the main navigation channels. Nikolaj Rask Pedersen will present the design of the cable stay bridge.

## Viaduct design, dynamics and construction

The bridge deck has a unique cross section due to the functional demands of the railway, road and pedestrian lanes. Luca Cagnino will present how the box girder is designed for these loads, the necessary geometry, girder prefabrication and the installation method.



## Marine Logistics

For the construction of the new Storstrøm Bridge the marine works play an important part, since the bridge foundations are placed directly on the hard clay till which is present below the entire bridge. The construction and the verification of all steps in the underwater foundation part, being compacted gravel beds and uncompacted screeding layers will be explained during the presentation. This includes the verification of the bottom of excavation with ROV and divers, the compaction with custom made equipment and the presentation of the compaction data and, last but not least the techniques used for the correct levelling of the screeding layer with a new method, used until now only for this bridge.

The second part of the presentation will deal with visible part of the marine works, being the installation of the pier foundations with custom made equipment (the catamaran crane with a capacity of 2.500T) for this bridge, and will deal also with the installation of the main central pylon. This pylon with its weight of over 12.000T and, when floating, a draft of approximately 8.80m, needed quite a long preparation process, both due to its dimensions and due to the shallow waters present in the Storstrøm.

### Registration

Please register before 21<sup>st</sup> September 2021 by e-mail to: sga@sbf.dk

Please include name, affiliation and whether you are a personal member of IABSE.

### Registration fee

The mini seminar is free for personal members of IABSE, DSBy, NVF and for students.

There is a registration fee of 500 DKK for all other participants.

### Payment

Please transfer the fee at the time of registration to the following account:

### Dansk Forening for Brobygning og Bærende Konstruktioner

Branch: Danske Bank  
Reg. number: 1551  
Account number: 7020694

### Mark:

Please mark transfer with your name and "Mini seminar".

### Participants from Norway, Sweden and Finland:

IBAN: DK84 3000 0007 0206 94  
SWIFT – BIC: DABADKKK