

Organised By:



Singapore Structural Steel Society
60 Albert Street, #10-06 OG Albert Complex
Singapore 189969
Tel: 6337 0338 Fax: 6336 2583
Email: secretariat@ssss.org.sg
Website: www.ssss.org.sg

SEMINAR ON DESIGN AND CONSTRUCTION OF STEEL-CONCRETE COMPOSITE BRIDGES

15 FEBRUARY 2023 | 4.00PM TO 5.30PM
NUS ENGINEERING AUDITORIUM

**PDU/STU/CREDIT POINTS:
TBA**

Synopsis

One major advantage of composite bridges compared to concrete bridges is that steel girders can carry the weight of the formwork and the wet concrete. Another advantage is the savings in construction time, which saves money for the contract but even more so for the road users, a fact usually neglected when evaluating alternative bridge designs. A further step to improve the competitiveness of composite bridges is to prefabricate not only the steel girders, but also the concrete deck. Collin will present a unique concept with dry joints between the elements, used on designing 3 bridges.

Another technique that reduces the investment as well as maintenance costs, is integral abutments. In this case the end piers, expansion joints and bearings are excluded, and the piles are introduced in the end screens at the end of the bridge. Measurements from a real bridge as well as laboratory tests on low cycle fatigue of the piles will be presented.

Collin will also present a method for strengthening old steel-concrete bridges by introducing composite action. The installation takes place from under the bridge, and no concrete and pavement has to be removed. Monitoring from two bridges before and after strengthening will also be presented.

About the Speaker



Dr Peter Collin received his PhD degree from Lulea University of Technology (LTU) in 1992 specialising on stability of steel frames. He has since been working on design and development of steel-and composite bridges, including bridges with deck elements and integral abutments. This included I-girder and box girder bridges for road, railway and pedestrian traffic. During 1993-1994, he worked with the Oresund Bridge between Sweden and Denmark, writing project codes based on Eurocode 3 (Steel Structures) and 4 (Composite Structures). He has taught the industry on design using Eurocodes, which were introduced in Sweden in 2010. In 2007, Collin was appointed professor in Composite Structures in LTU.

**Registration is on first-come-
first-served basis and limited to
200 persons. Light refreshments
will be served at 3.30pm**

Register Now!
Click Here

Registration Fees
SSSS members \$23
Non-members \$33
Free for NUS Students