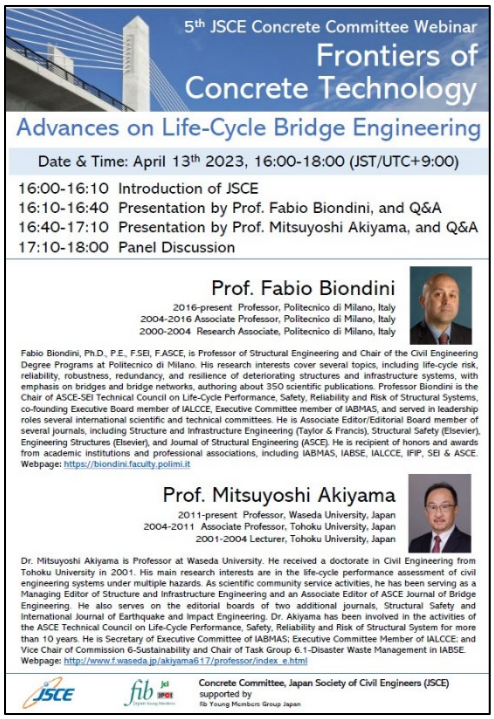
5th JSCE Concrete Committee Webinars - Frontiers of Concrete Technology (FCT)

Advances on Life-Cycle Bridge Engineering

Naoshi UEDA, Kansai University

The Concrete Committee of the Japan Society of Civil Engineers (JSCE) has started the international webinar series “Frontiers of Concrete Technology” (FCT) from 2021. It is intended to hold the webinar 2 or 3 times a year. The seminar aims to convey Japan’s cutting-edge research in concrete technology to the world. A theme is set for each seminar, and one Japanese researcher and one overseas researcher working on the theme are invited to deliver the lectures. The seminars provide time for a panel discussion, in which the overall history, the present status, and the future direction of that field of research are discussed.

This seminar was the fifth and held on April 13th, 2023. The theme was “Advances on Life-Cycle Bridge Engineering”. The invited speakers were Professor Fabio Biondini from Politecnico di Milano(Italy), and Professor Mitsuyoshi Akiyama from Waseda University(Japan). Both are distinguished researchers worldwide in the field of advances on life-cycle bridge engineering based on risk, reliability, and resilience.



Seminar Flyer

The seminars can be viewed on the JSCE YouTube channel.

The fifth seminar: https://www.youtube.com/watch?v=68gB1UYJrPA

The number of participants in the seminar was about 120. As it was a webinar, there were participants from throughout the world, mainly from Asia. The seminars can be viewed on the JSCE YouTube channel. In the seminar, Prof. Fabio introduced the early bridge assessment and risk-based prioritization for the infrastructures. He also presented the experimental validation of computational models on existing bridges. Prof. Akiyama introduced the lesson learnt from past large earthquakes in Japan and emphasize the importance of resilience and sustainability of bridges and bridge networks under multiple hazards. He presented his latest results regarding the structural performance assessment of aging RC members based on observational corrosion crack width using machine learning. In the panel discussion, the validity and reliability of life cycle models and prospective of the lifecycle bridge engineering.

The report of the past seminars is below.
First & Second Seminar
http://www.jsce.or.jp/committee/concrete/e/newsletter/newsletter63/Newsletter63_files/FCT.pdf
Third Seminar
https://www.jsce.or.jp/committee/concrete/e/newsletter/newsletter65/index_files/data/report.pdf
Fourth Seminar
https://www.jsce.or.jp/committee/concrete/e/newsletter/newsletter67/index_files/FCT_JointSeminar/4th_FCT_Report.pdf

YouTube channel.
First seminar: https://www.youtube.com/watch?v=IP65Dudd6tk
Second seminar: https://www.youtube.com/watch?v=ArU-x-oyGig
Third seminar: https://www.youtube.com/watch?v=hwfl7mrs7-I
Fourth seminar: https://www.youtube.com/watch?v=SLrs46PqG7Y&t=3s