

Virtual Session 2: Open-source Digital Tools for Civil Engineering

The engineering profession is constantly evolving, and the integration of digital tools is transforming our field. This session aims to explore how open-source digital technologies can enhance our work. An open-source Python-based tool developed within *fib* Task Group 2.14 “Open-source code development by the *fib*” will be presented, followed by a discussion on how open-source digital tools can be leveraged in our everyday activities as structural engineers.

Topics of Interest:

- Presentation of the Python tool developed within *fib* TG 2.14.
- Demonstration of integrating the Python tool with other open-source tools.
- Discussion on open-source digital tools for solving engineering challenges.

Guest Speakers:



Dr. Diego Alejandro Talledo is assistant professor at University Iuav of Venice, Italy. His research interests include numerical analyses of reinforced concrete structures, including the effect of environmental damage, seismic analysis of concrete and masonry structures, the vulnerability of historical buildings, numerical models for CLT constructions, and monitoring of the built environment using satellite data. Diego is co-covener of *fib* TG 2.14.



Dr. Morten Engen is a civil engineer at Multiconsult in Oslo, Norway, where he is involved in a broad range of projects related to design of concrete structures for energy, industry, and transportation both onshore and offshore, in all stages from concept development to maintenance and repair. Morten develops and maintains a range of internal digital tools for automating the design process. He also has a position as Adjunct Associate Professor at NTNU in Trondheim, Norway, where he is lecturing and supervising student projects. Morten is convener of *fib* TG 2.14.

Moderator:



Dr. Nikola Tošić is associate professor at the Universitat Politècnica de Catalunya in Barcelona, Spain. His research interests include sustainable construction, the use of recycled and waste materials in concrete structures, serviceability of concrete structures and design code development. He is the convener of TG4.7 Structural Applications of Recycled Aggregate Concrete – Properties, Modeling, and Design.

Date and time: Thursday, June 5, 2025, from 1:00 PM to 3:00 PM.

Link for the virtual session: <https://urlr.me/!session2ymfib>

Write an email to ymfib2025@afgc.asso.fr to confirm your attendance.