

IALCCE 2020

The Seventh International Symposium on Life-Cycle Civil Engineering

27-30 October 2020, Shanghai, China



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Life-Cycle Civil Engineering*

Nowadays, people have realized the importance of creating a sustainable society to avoid or alleviate problems like climate change, environmental pollution or economic crisis. Therefore, the life-cycle thinking of civil engineering is discussed more and more frequently.

Civil engineering is mainly focused on design and construction during the past days, but contemporary society needs civil engineering to pay attention to more aspects, such as inspection, monitoring, repair, maintenance and optimal management of structures and infrastructures, in order to effectively manage the function of these structures throughout their lifetime. Considering these needs, the objective of the International Association for Life-Cycle Civil Engineering (IALCCE) is to promote international cooperation in this field of expertise to enhance the welfare of society. Its mission is to become the premier international organization for the advancement of the life-cycle civil engineering.

Previous editions of the bi-annual IALCCE symposium took place in Varenna, Lake Como (2008), Taipei (2010), Vienna (2012), Tokyo (2014), Delft (2016) and Ghent (2018). The Seventh International Symposium on Life Cycle Civil Engineering (IALCCE 2020) will be organized on behalf of IALCCE under the auspices of Tongji University in Shanghai (China) on October 27-30, 2020.

All major aspects of life-cycle engineering are addressed, with special focus on structural damage processes, life-cycle design, inspection, monitoring, assessment, maintenance and rehabilitation, life-cycle cost of structures and infrastructures, life-cycle performance of special structures, and life-cycle oriented computational tools.

We are looking forward to welcome all of you in Shanghai in 2020!

Special Session SS-13:

Innovative Multilevel Strategies for Improving Structural Assessment and Lifetime Prediction of Concrete Structures

Objective of the Special Session SS-13



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Limited financial resources together with the pursuit of sustainable management of existing bridges imply the need to use optimised assessment strategies that respect different construction methods and design analyses. In practice, however, the assessment usually follows conservative approaches recommended in the codes and more advanced and modern methods, widely employed by researchers, are rarely used. Therefore, it is important to develop robust practical methods and guidelines for refined assessment of civil engineering systems.

The objective of this Special Session is to present the latest innovative multi-level strategies and approaches associated with the assessment and lifetime prediction of concrete structures. In addition, the scope of this Special Session is to discuss, present and propose coupling strategies for the multilevel assessment of existing concrete structures. Such strategies include, for example, nonlinear finite element (NLFE) analysis, modern testing and monitoring methods, safety concepts etc.