

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-15:

Innovative Inspection (Monitoring), Evaluation and Strengthening Technique for Existing Bridges

Objective of the Special Session SS-15



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Innovative techniques of inspection (monitoring), evaluation and strengthening play significant roles throughout the life cycle of existing bridges. These techniques affect maintenance strategies and inspection intervention and cost. The objective of this session is to highlight the new progress of these techniques, both in scientific research and practice. It provides the opportunity to propagandize and discuss innovative techniques regarding inspection (monitoring), evaluation and strengthening techniques of existing bridges, which related but not limited to the following topics.

- Innovative inspection (monitoring) methodologies and techniques such as laser scanning and photogrammetry, 3D object recognition/ modeling, impact echo, electrical resistivity, ultrasonic surface waves, ground penetrating radar, and other innovative methods.
- Technological convergence, advanced methods and concepts such as sharing, data modeling, AI and IoT applications in evaluations for existing bridges.
- Innovative strengthening techniques such as cold strengthening, composite strengthening and other methods.