

# 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!

### Mini-Symposium MS-3:

Vibration-Based Structural Health Monitoring, Damage Identification and Residual Lifetime Estimation

### Objective of the Mini-Symposium MS-3



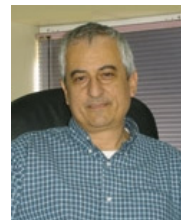
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A main goal of vibration-based structural health monitoring and damage identification is assessed structural condition via vibration signatures. For civil structures response-only data is often used due to difficulties associated with forced excitation of large structures. This followed by inference of grey/black-box models, or updating of physics-based models. This mini-symposium welcomes novel contributions on vibration-based structural health monitoring, damage identification and parameter, input and load estimation, using black-box as well as physics-based models. Relevant topics include linear and nonlinear system identification, parameter and state estimation, model updating and correlation, optimal experiment design, and the exploration of novel sensing techniques.