



# IALCCE 2012

Third International Symposium  
on Life-Cycle Civil Engineering

3 - 6 October 2012  
Hofburg Palace, Vienna, Austria

## IALCCE

The Symposium is organized on behalf of International Association for Life-Cycle Civil Engineering (IALCCE) under the auspices of the University of Natural Resources and Life Sciences. IALCCE ([www.ialcce.org](http://www.ialcce.org)) is a young Association founded in October 2006. Its activities encompass all aspects of life-cycle assessment, design, maintenance, rehabilitation, and monitoring of civil engineering systems.

The International Symposium on Life-Cycle Civil Engineering is a biennial event. In 2012, Austria will host the Symposium for the first time. The IALCCE 2012 Symposium provides an opportunity for academics, engineers, architects, and builders from Austria, Europe, and around the world to keep themselves up to date with latest developments in the field of life-cycle civil engineering.

## Special - Sessions SS 1-4:

### Probabilistic Durability Assessment of Concrete Structures

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One of the methods of carrying out the performance-related design of concrete structures is the use of predictive models. Such models are needed to specify the performance characteristics of the material and to estimate how its resistance will change over time.

It is of great importance to check the probability limit conditions and assessing the service life - an important aspect, i.e. the aspect of time is introduced. This means that structures should be designed/assessed for structural safety and serviceability for a defined number of years. Therefore the probabilistic safety format is introduced as an alternative for partial factor design. The broader choice of computational models is useful.

Moreover, the readiness of effective models for both the initiation as well as the propagation period may enable to verify the SLS and/or ULS for concrete structure in different time steps considering the change of performance in time due to degradation.

The usefulness of effective degradation modeling and hence a reliable assessment for durability may bring positive economical and sustainability impacts. The developed software tool may serve to facilitate the effective decision making of designers and clients.

The aim of proposed session is to discuss the possibility of computational modeling and all related aspects of probabilistic durability assessment of concrete structures.