

Thematic sessions

Early thin concrete shells - players, impulses, and effects

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Within recent years, profound research has been carried out on the history of thin concrete shell construction and important shell designers. However, the scientific community concentrated its efforts mainly on a handful of personalities and countries. Many important aspects in the development of this structural invention and numerous fascinating structures, therefore, remain widely unknown.

This state of facts is especially true for the early history of thin concrete shell constructions before the end of the Second World War, which is regularly only treated as a kind of overture for the great times of shell design in the 1950s/1960s. Overlooked has been especially the potential of early thin concrete shell constructions' development to offer a better understanding of the impact of impulses from individuals or groups on the progress of world-wide knowledge on structural inventions. Having been handled only by a limited amount of specialists, early shells are virtually predestined to provide a deeper insight into the conditions and paths obstructing or supporting the transfer of new ideas in structural engineering. Furthermore, they offer the chance to analyse the broadening of the scopes of application as well as the development of the architects' interest for new kinds of engineering structures.

Given this point of departure, this session invites scholars to propose papers addressing topics from the following fields: biographical studies of important contributors (engineers, architects, building companies) to the development of thin concrete shell design in the first half of the twentieth century; examinations of buildings or building groups comprising shell structures planned before 1945; analyses of the impulses from individuals or groups on the development of thin shell structures and/or evaluation of the conditions that obstructed or supported the transfer of this new knowledge; surveys on the scopes of application and the creation of new concepts or forms within the early development of thin concrete shell design.