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THE SCHOOL OF BRIDGE DESIGN IN ECAMPUS, COMO, ITALY

Enzo SIVIERO

Chancellor
University Ecampus,
Novedrate, Como (Italy)

siviero@esap.it

Alberto ZANCHETTIN

Civil Engineer
SAICO Ingegneria
Venice, Italy

alberto.zanchettin@saicoingegneria.it

Summary

A school of bridge design was founded more than twenty years ago at IUAV University of Architecture in Venice by Prof. Enzo Siviero. The group of researchers involved, mostly phd doctors, were active in bridge design, research on structural architecture, promotion of international conferences and finally on didactics.

During the years the course of 'Theory and design of bridges' has been chosen by more than 1000 students and was among the most appreciated modules of IUAV University. In year 2009, the course was held in parallel with Tongji University of Shanghai, thanks to an agreement between the professors in charge, which lead to an exchange of students during the academic year.

The scientific approach to the design of bridges, taught to students of architecture, lead to extremely interesting results: many structures were designed joining aesthetics, innovation, structural feasibility and economy of realization.

The aforementioned experiences will be used to establish a new school of bridge design at the university Uniecampus in Novedrate (Como, Italy), with the goal to create an hub for bridge design, conference organization and a venue for international exhibitions.

Keywords: bridge design; aesthetics; structural concepts; urban planning; new materials

1. The schools of bridge design in Venice and in Novedrate, Como

Around twenty years ago professor Siviero, head of the department of construction in architecture (DCA) at IUAV University of Architecture in Venice, decided to establish a group of work aiming at conjugating different "worlds" that often act separately and avoid mutual dialogue: didactics, research and professional activity.

With particular reference to the Structural Architecture and more specifically to the topic of bridge design DCA has given life to a cultural process where students and professionals, by means of research agreements between Universities and private and public companies gave their contribution in a mutual exchange of ideas .

During the years, more than 750 degree thesis were developed. Each thesis consisted on the design of a bridge, paying great attention to the structural implications of different architectonical choices.

The synergy among didactics, research and professional activity, was presented to the students who, together with professors and assistants permit the progress of research and offer the results of their work to the professional world.

During the years, the school has gained importance and international recognition, thanks to the organization of international conferences in Venice, such as “Footbridge 2005”, and “IASS 2007” and to numerous participations of its members to congresses and symposia. Many of the students have been awarded with recognitions such as the ACAI prize and the ECCS prize for steel structures design .

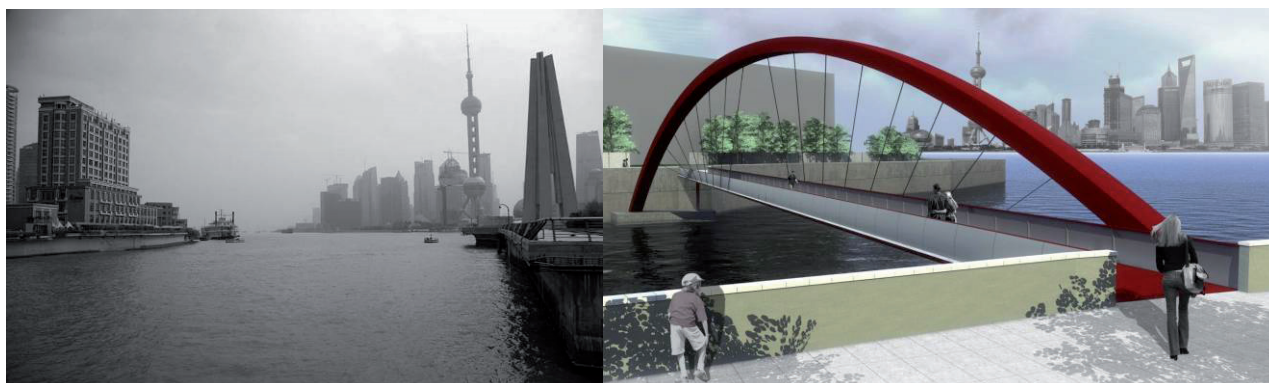


Fig. 1: Proposal for a footbridge on the promenade on the Suzhou River, Pudong, Shanghai



Fig. 2: Proposal for a footbridge above Vajont dam, Erto, Italy

Teaching bridge design is extremely important, both in Engineering and Architecture faculties. Bridges are “naked” structures, where form follows function.

Parallel experiences at Tonji University in Shanghai and at IUAV University of Venice demonstrate that, employing the same language of structural architecture, extremely interesting results can be reached for students of any kind of design education.

The school of bridges at IUAV University in Venice has been an highly successful experience, in terms of academic recognition, organization of conferences, international exhibitions; national and international prizes have been awarded to its students during the years.

With the same goals mentioned above, which are to conjugate didactics, research and professional activity a new school of bridge design is going to be established in Novedrate, Como (Italy), at the University Ecampus. Enzo Siviero, Chancellor of the University, is building a new team of students, professors and designers which intend to promote again the themes of aesthetics joined with economic and structural feasibility, convinced that employing the common language of structural architecture bridge design can be an amazing task for students , architects, engineers and designers of all types.