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PRESS RELEASE

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The IABSE 2007 Outstanding Paper Award to Fiammetta Venuti, Luca Bruno, and Paulo Napoli, Italy

The IABSE 2007 Outstanding Paper Award has been conferred to Fiammetta Venuti, Luca Bruno, and Paulo Napoli, Italy for their Paper:

“Pedestrian Lateral Action on lively Footbridges: A New Load Model”

published in *Structural Engineering International*, August 2007 (p. 236-241).

The Award Presentation will take place on September 17, 2008, at the Opening Ceremony of the IABSE Congress Chicago 2008 ‘Creating and Renewing Urban Structures - Tall Buildings, Bridges and Infrastructure’.

The IABSE Outstanding Paper Award is presented each year in recognition of an outstanding paper published in the IABSE Journal *Structural Engineering International*, encouraging and rewarding contributions of the highest quality. This time, the Outstanding Paper Award Committee was chaired by Professor Leo Wagemans, The Netherlands.

This paper proposes a new load model to predict the lateral force exerted by pedestrians walking on lively footbridges. The aim of the model is to take into account some important features of the synchronous lateral excitation phenomenon, which so far has not been fully understood or modeled. The proposed load model was tested with reference to two crowd events that were recorded on the T-bridge in Japan (1993) and on the Millennium Bridge in London (2001). The results obtained with the presented model are compared to results predicted by other load models found in literature and are then further discussed.

Because of its versatility, the model can be used for different purposes and with different degrees of accuracy: during the preliminary design phase, it allows the worst load scenario to be outlined if the expected values of crowd density and deck velocity are *a priori* chosen. In the final design phase, it can be used to determine the load that should be applied to the structural model or to a complete computational simulation of the crowd-structure interaction. Once the footbridge has been built, the model is able to define the pedestrian force on the basis of the deck velocity and crowd density measured *in situ* during actual events.



The International Association for Bridge and Structural Engineering (IABSE) comprises 4'000 members in 100 countries. Founded in 1929, IABSE deals with all aspects of planning, design, construction, maintenance and repair of civil engineering structures. To fulfil its mission, IABSE organises conferences and publishes a quarterly journal, Structural Engineering International, as well as books and reports. The Association has a number of technical groups and presents awards in recognition of outstanding contributions in the domain of structural engineering.

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