

Fabio Biondini, Italy, Dan M. Frangopol, USA, P. Giorgio Malerba, Italy

Prof. Manfred A. Hirt, President of the IABSE, presented the 2006 Outstanding Paper Award at the Opening Session of the IABSE Symposium 'Improving Infrastructure Worldwide – Bringing People Closer' on September 19, 2007 to Messrs Fabio Biondini, Dan M. Frangopol and P. Giorgio Malerba for their Paper:

'Time-Variant Structural Performance of the Certosa Cable-Stayed Bridge'
published in Structural Engineering International, August 2006.

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 James Garrett, USA.

The article is concerned with the cable-stayed bridge in Certosa built in Milan, Italy. Since the pylons showed signs of damage, a rehabilitation was carried out after fifteen years of service life. In order to investigate the effectiveness of the rehabilitation, a procedure to analyse both, the local attack of diffusives and the global effects on the overall performance was applied. Both the deterministic and probabilistic time-variant structural performances were analysed with respect to proper indicators considering two separate cases: without and with rehabilitation. The direct comparison of these results clearly demonstrates that the adopted intervention enhances the structural performance over time.