Special Issue

New Challenges in Bridge Wind Engineering

Message from the Guest Editors

Bridge wind engineering aims to study the static effects and dynamic response of bridges that may occur in various wind environments, to provide solutions for the design, construction, and maintenance of bridge structures and to provide for the service throughout their life cycle. The dynamic response of large span flexible bridges and flexible members in bridges under wind loads is significant and needs to be focused on the study of wind resistance performance. The content includes the characteristics of natural wind; wind load distribution law of large-span bridges; the response of bridge structures under wind load; the mechanism and characteristics of different types of wind-induced vibration, such as vortex vibration, fluttering, buffeting, and rain-wind induced vibration; control methods of wind-induced vibration, including structural measures, mechanical measures, aerodynamic measures, etc.; the influence of extreme wind environments on bridge structure, etc. With theoretical analysis, field measurements, wind tunnel experiments, and numerical simulations, some new breakthroughs have been achieved.

Guest Editors

Prof. Dr. Wenli Chen

Dr. Donglai Gao

Dr. Wen-Han Yang

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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