Foreword

Structural Health Monitoring (SHM) is defined as the use of an on–structure sensing system to monitor the performance of the structure and evaluate its health state. For the last two decades SHM has been attracting enormous research efforts around the world because it targets at monitoring structural conditions to prevent catastrophic failure, and to provide quantitative data for engineers and infrastructure owners to design reliable structures and economical asset management plans. SHM has been accepted as a justified effort for civil structures. It is a worldwide trend to install a SHM system on a significant structure, e.g. Burj Khalifa tower in Dubai, Huey P. Long Bridge in USA, Haram Grand Mosque Expansion in Saudi Arabia, Millau Viaduct bridge in France. This special issue on Structural Health Monitoring of the Electronic Journal of Structural Engineering has brought together papers from researchers, civil engineers, designers, as well as responsible persons from government and road/highway authorities who have been working in this area for improving the service life, safety and reliability of civil structures.

As co-editors of this special issue, we are delighted to see that the present special issue sufficiently addresses all key challenges in structural heath monitoring with a number of practical case studies and real applications. This issue also serves as a comprehensive resource to gain more knowledge for monitoring of the building environment using different sensing techniques.

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