

## **Civil-Comp 2023**

### **Special Session**

## **Seventeenth International Conference on Civil, Structural and Environmental Engineering Computing Pécs, Hungary 28-31 August 2023**

### **Special Session: CC-S11**

**Session title: Buckling, Free Vibration and Response of Continuous Systems**

**Organizer: Professor Ranjan Banerjee**

The session is focused on linear and nonlinear analysis of buckling, free vibration, and response characteristics of continuous structures. Developments of advanced theories and their applications as well as experimental investigations on fundamental structural elements such as bars, beams, membranes, plates, and shells are of primary importance, but additionally, papers dealing with assemblies of these elements will be given due consideration. Wave propagation problems and innovative ideas on the development of damping models will also be considered. Moreover, structures or structural elements made of advanced anisotropic materials are expected to feature in the session. The approaches used may range from that of the solution arising from the governing differential equations, computational and/or numerical analysis and validation of results by experimental techniques, amongst others. However, to provide a greater and improved understanding of the physics of the problems related to buckling, free vibration and response, emphasis should be ideally given to accurate, and efficient solutions using exact methods wherever possible, for example, the transfer matrix, Green functions, differential transform, dynamic stiffness, and spectral element methods. Interdisciplinary investigations providing current developments in the areas and pilot studies with significant preliminary results will be particularly welcome.

#### **Attendance and Chair:**

Session Chairman: Professor Ranjan Banerjee, School of Science and Technology,  
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