

Proposed Special Session Title: 'Modelling Rocking Systems'

Convenors:

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Description:

There are numerous applications in earthquake engineering where rigid and flexible bodies are subjected to rocking motion. These include the response of unanchored components to excitations as well as the design of articulated structures that employ rocking as an isolation mechanism. The applications span a wide range of scales and materials, and feature different constraints and requirements. Consequently, a 'one size fits all' approach does not exist when modelling rocking systems. This special session aims to attract recent analytical and numerical contributions which feature the modelling of rocking motion for different applications. The special session will provide an opportunity to discuss the wide range of modelling approaches employed in research and practice, for instance in the treatment of impact and friction at rocking interfaces, the idealisation of structure and support medium deformability, and the integration of seismic modification devices. Discussions on the influence of modelling choices on critical engineering decisions for specific applications are encouraged. Experimental studies which support further understanding of rocking behaviour are also welcome.