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Advances in Rotordynamics

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Deadline for manuscript submissions:
closed (20 October 2019)

Message from the Guest Editor

The dynamics of rotating machinery have been extensively investigated. To date, longer rotating shafts, higher rotating velocity, higher fluid pressure, and generally high performances are required. For this purpose, a deep understanding and a more accurate modeling of the rotating machinery dynamical behavior is needed, especially in terms of the resultant vibrations and stability issues.

The presence of fluid-lubricated journal bearings, squeeze-film dampers, rolling element bearings, fluid seals, impeller blades, or, in general, of destabilizing nonlinear forces requires more and more detailed theoretical models validated by using good-concept test rigs in order to provide a correct machine design and maintenance.

This SI focuses on the advances in rotordynamics with particular reference to the modeling of nonlinear effects rising up with shaft rotation. We welcome research and reviews on the nonlinear phenomena in rotordynamics, dynamic analysis and stability, fluid–structure interactions in rotordynamics, rotor vibration control using active and semi-active methods, condition monitoring, diagnostics and prognostics of rotors, fluid film bearings and seals, and so on.

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Message from the Editor-in-Chief

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.

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