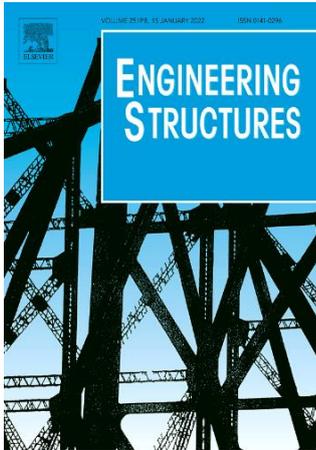


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Special Issue in **Computational Methods for Stochastic Engineering Dynamics**



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Timeline

- Paper submission open: **May 1, 2023**
- Paper submission close: **February 15, 2024**
- Paper acceptance completed: **July 15, 2024**

Ever-increasing computational capabilities, novel signal processing techniques, advanced experimental setups, and progress in emerging and transformative technologies have contributed to a highly complex mathematical modeling of the governing equations of diverse dynamical systems. In fact, irrespective of the scale of the problem, persistent challenges in the field of stochastic engineering dynamics exist. Indicatively, these pertain to high dimensionality, complex nonlinear/hysteretic behaviors, as well as to non-white and non-Gaussian stochastic excitation modeling. Clearly, the development of versatile solution techniques that exhibit both high accuracy and low computational cost is critical for addressing these challenges, and for advancing the field of stochastic engineering dynamics. The objective of the proposed special issue will be to present recent advances, and to discuss current and emerging multi-disciplinary approaches in the field. Specific contributions related both to fundamental research and to engineering applications of stochastic dynamics. A non-exhaustive list includes **nonlinear stochastic dynamics; joint time-frequency analysis tools; sparse representations; compressive sampling and data driven approaches; uncertainty quantification methods; structural systems and signal processing; stochastic/fractional calculus; stochastic model/dimension reduction techniques; Monte Carlo simulation methods; structural safety and stochastic structural design; performance-based engineering methodologies; risk/reliability assessment applications.**

The prospective authors are encouraged to submit their manuscripts online to **Engineering Structures** through link: <https://www.editorialmanager.com/engstruct>. When submitting your manuscript, please choose the special issue “**VSI: Stochastic Dynamics**” from the choice of submission types. The manuscripts will go through the regular peer review process before being accepted. Please visit the journal website <https://www.journals.elsevier.com/engineering-structures> for additional instructions.

The submission opens on May 1, 2023. The special issue articles are published in regular issues as soon as they are available, and simultaneously being grouped online under a specific special issue link, which is easily accessible and navigable on *ScienceDirect*. Please note that papers solicited through this call will undergo standard journal peer review process and will be indexed for citations like other regular journal papers.