DESCRIPTION

This journal provides a forum for scholarly work dealing primarily with probabilistic and statistical approaches to contemporary solid/structural and fluid mechanics problems encountered in diverse technical disciplines such as aerospace, civil, marine, mechanical, and nuclear engineering. The journal aims to maintain a healthy balance between general solution techniques and problem-specific results, encouraging a fruitful exchange of ideas among disparate engineering specialities.

From time to time, review papers will be published to provide research and development oriented readers with state-of-the-art analyses of various areas of current interest. In addition, occasional papers of tutorial nature help enhance practice oriented readers’ knowledge of the basic probabilistic and statistical techniques that are essential in present-day engineering practice design.

In consultation with the editors, distinguished members of the probabilistic mechanics community may serve as guest editors for a special issue dedicated to a particular theme.

Fields Covered:

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- Damage-tolerant and durability design of aircraft
- Load spectra characterisation
- Random vibration of aerospace structures

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- Geotechnical applications
- Natural hazards such as earthquakes, hurricanes, and waves
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- Offshore structures response to wind-induced waves
- Ship motion in a random sea

Mechanical engineering:
- Fatigue design
- Mechanical systems response/control
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• Vibration isolation

**Nuclear engineering:**
• Probabilistic risk assessment
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Common to all disciplines:
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• Damage mechanics
• Monte Carlo simulation
• Random fields
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• Stochastic optimization
• System reliability.

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