

Special Issue

Mathematical Foundations of Reliability Theory with Applications in Engineering and Applied Statistics

Message from the Guest Editors

Topics of interest include, but are not limited to, the following:

- Foundations of reliability mathematics:
 - Renewal and renewal-reward theory;
 - Stochastic processes in reliability analysis;
 - Distributional methods: survival, hazard, and cumulative failure models;
 - Asymptotic expansions, Laplace-type methods, and error bounds;
- Maintenance and optimization policies:
 - Short- and long-horizon maintenance strategies;
 - Cost-per-unit-time and replacement policies;
 - Block and group maintenance for modular systems;
 - Age-dependent and state-dependent policies.
- Statistical modeling and inference:
 - Parametric and nonparametric methods in reliability data analysis;
 - Goodness-of-fit and model selection for lifetime distributions;
 - Bayesian approaches to reliability and failure prediction;
 - Reliability in the presence of censored and grouped data.
- Applications in engineering and applied sciences:
 - Reliability of energy systems and renewable technologies;
 - Reliability in electrical and electronic engineering;
 - Survival and reliability models in biostatistics;
 - Reliability under uncertainty, risk analysis, and decision theory.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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