



Statistical Integrated Circuit Design

Guest Editor:

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Message from the Guest Editor

Recent advances in electron device fabrication technology to obtain tiny, fast, and low-power integrated circuits (ICs) have caused continuous reduction in the feature size of the devices.

Therefore, at the nanometer geometries used in current technologies, investigating the statistical behavior of integrated devices becomes of paramount importance in IC design.

The aim of this Special Issue is to publish original research articles that cover recent advances in the theory and application of statistical design of ICs.

Potential topics include, but are not limited to, the following:

- Atomistic level device modeling;
- Device mismatch modeling;
- IC design strategies at schematic and layout level;
- The mathematical approach to stochastic process variations;
- Mathematical modeling and numerical methods for statistical simulation;
- The Montecarlo, quasi-Montecarlo, and non-Montecarlo techniques;
- Parametric yield estimation and minimization;
- Statistical timing analysis;
- Statistical simulation tools.





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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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