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Editorial

The fourth issue of *JNM@S* contains a fair balance between theory and computation, reflecting on a sizable portion of the state of art by the end of 2012.

The paper by *M. A. Diop et al* employs the theory of resolvent operators to demonstrate the existence of mild solutions to some neutral stochastic partial functional integrodifferential equations, under Carathéodory-type conditions. These equations arise in many areas of applied mathematics,

Random metrics on finite metric spaces are addressed in the paper by *M. Zahri*, which proves that split metrics of finite sets $\{1, 2, \ldots, n\}$ are extremal pseudometrics, and only for $n \leq 4$ they are the unique extremal rays. New algorithms are proposed in this paper and are complemented by numerical simulations and geometric comparisons of random metrics to the Euclidean metric. A particular Markov chain, associated with the first-passage percolation process and properties of its stationary distribution, is used in the paper by *H. Renlund* to determine the asymptotic speed of the first-passage percolation process on some ladder-like graphs. A percolation process when the times associated with different edges are independent and exponentially distributed, but not necessarily all with the same mean.

The paper by *Xh. Z. Krasniqi* reports on proofs for two theorems on the degree of approximation of functions belonging to some Lipschitz classes by $(E, q)(C, \alpha, \beta)$ means. Moreover, four papers in this issue focus on problems in solving nonlinear deterministic equations. *P. K. Srivastava et al* develop a non-polynomial quintic spline to construct numerical algorithms for solving a family nonlinear fourth-order boundary-value problems (BVPs) with two-point boundary conditions. Second, the paper by *J. R. Sharma et al* presents an easily applicable scheme for constructing one-point third order iterative formulae for the computation of real or complex solutions of these equations. The scheme is capable of regenerating almost all available one-point third order methods. Third, the paper by *R. Thukral* reports on new derivative-free methods with $2k$ and Fibonacci number order of convergence for solution of nonlinear equations. The implementation of these new derivative-free methods is shown using different numerical examples. Finally, higher dimensional systems of nonlinear equations are addressed in the paper by *M. Y. Waziri et al*, which develops an efficient diagonal updating scheme for solving large scale systems of nonlinear equations. The rationale behind this approach is to improve the current Jacobian inverse approximation by a diagonal matrix.

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