

## Preface

In this issue, we present papers on soft computing and modelling approaches for complex systems and signal processing. This issue includes nine papers selected after peer review process. A summary of papers is as follows.

“UML Behavioral Refactoring for the Specification of Complex Software Systems,” by M.T. Chitra and S. Elizabeth, proposes a generic framework for effective code generation from UML models which serves as an interchange format to combine both structural and behavioral constraints of associated system objects to facilitate consistent source code generation.

“Accuracy of Artificial Neural Network Models of Software Reliability Growth –A Survey,” by M. K. Saley and S. Sreedharan, discusses predicting errors of Artificial Neural Networks-based Software Reliability Growth Models (ANN SRGM). This survey concludes that ANN SRGM is better than statistical models for reliability prediction.

“Statistical and alignment based methods for comparison of non-coding DNA sequences,” by Kouser and L. Rangarajan, proposes few techniques that capture the information regarding the arrangement of the motifs to assist in the analysis of the promoter sequences.

“On Rate Adjustment Mechanism for Reliable Multicast Transmission in ForCES,” by L. Gong, Y. Wang, and C. Li discusses the issues of the reliable multicast rate adjustment mechanisms within Forward and Control Element Separation (ForCES), and proposes a rate adjustment mechanism of control unit. The paper also presents a design of a congestion feedback mechanism based on the feedback representative set.

“Electronic system for orientation control and obstacle avoidance for underwater glider without a rudder,” by Y. N. Patil, V. S. Aneesh, M. T. Abhilash, and S. Kadlag, proposes an approach for achieving better propagation of autonomous underwater gliders with the help of orientation sensors.

“A New Approach to Adaptive Power Line Interference Removal,” by A. R. Kasetwar and S. M. Gulhane, conducts a study on various methods for power line interference (PLI) removal for biomedical signal processing. Few algorithms are analyzed for their applications in adaptive power line interference removal.

“Development of Dual-Actuated Stage for Positioning Applications,” by P. Niranjan, K. V. S. S. S. S. Sairam, and S. Karinka, presents and validates a model for describing the nonlinearity of the piezoelectric actuator.

“Concatenated Tabla Sound Synthesis to Help Musicians,” by U. K. Roy proposes a scheme to synthesize pre-recorded tabla sounds to help musicians.

“Chronological Advancement in Compiler Design: A Review”, by A. Verma and N. Bakshi carries out a brief survey on key properties of compiler courses in some universities.

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