Advances in Rough Set Theory

Preface

This issue of Fundamenta Informaticae contains selected and extended papers from the first International Workshop on Rough Set Theory (RST) held in Milano in May 2009. The workshop was open to wide discussions on fundamental, theoretical, and philosophical issues about rough set theory. In order to maintain this feature, we invite the readers to leave their comments on papers at the workshop-serie web site: `www.rstworkshop.tk`.

The papers cover a wide range of theoretical issues in rough sets, including both new results and critical surveys. Specifically, two papers are on the topic of topologies in rough sets: Monadic Algebras: a Standpoint on Rough Sets, by M. Wolski and Foundational and Mathematical Investigation of Roughness Theory, by G. Cattaneo. New results and issues with respect to the interpretation of rough sets are given in Rough Sets, Coverings and Incomplete Information, by I. Couso, D. Dubois and Two Semantic Issues in a Probabilistic Rough Set Model, by Y. Yao. A new model connecting rough sets with game theory is proposed in the paper Game-Theoretic Rough Sets, by J. Herbert, J.T. Yao and the model of orthogonal pair of sets is used to link several paradigms in uncertainty management in Orthopairs: a simple and widely used way to model uncertainty, by D. Ciucci. Finally, two papers deal with fuzzy rough sets, linking them with textures in Textures and Fuzzy Rough Set, by M. Diker and studying algebras in infinite universes in the work On Some Mathematical Structures of T-Fuzzy Rough Set Algebras in Infinite Universes of Discourse, by W. Wu.

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