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Preface

Volume XX of the *Transactions on Rough Sets* (TRS) is a continuation of a number of research streams that have grown out of the seminal work of Zdzisław Pawlak[1] during the first decade of the twenty-first century.

The paper co-authored by Javad Rahimipour Anaraki, Saeed Samet, Wolfgang Banzhaf, and Mahdi Eftekhari introduces a new hybrid merit based on a conjunction of correlation feature selection and fuzzy-rough feature selection methods. The new merit selects fewer redundant features and finds the most relevant features resulting in reasonable classification accuracy. The paper co-authored by Mohammad Azad, Mikhail Moshkov, and Beata Zielosko presents a study of a greedy algorithm for construction of approximate decision rules. This algorithm has polynomial time complexity for binary decision tables with many-valued decisions. The proposed greedy algorithm constructs relatively short α-decision rules. The paper by Mani presents algebraic semantics of proto-transitive rough sets. Proto-transitivity, according to the author, can be considered as a possible generalization of transitivity that happens often in the context of applications. The paper by Piero Pagliani presents a uniform approach to previously introduced covering-based approximation operators from the point of view of pointless topology. The monograph authored by Mohammad Aquil Khan is devoted to the study of multiple-source approximation systems, evolving information systems, and corresponding logics based on rough sets.

The editors would like to express their gratitude to the authors of all submitted papers. Special thanks are due to the following reviewers: Jan Bazan, Chris Cornelis, Davide Cuicci, Ivo Düntsch, Soma Dutta, Jouni Järvinen, Richard Jensen, Pradipta Maji, Sheela Ramanna, Zbigniew Suraj, and Marcin Wolski.

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August 2016

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[1] See, *e.g.*, Pawlak, Z., A Treatise on Rough Sets, *Transactions on Rough Sets* IV, (2006), 1–17. See, also, Pawlak, Z., Skowron, A.: Rudiments of rough sets, *Information Sciences* 177 (2007) 3–27; Pawlak, Z., Skowron, A.: Rough sets: Some extensions, *Information Sciences* 177 (2007) 28–40; Pawlak, Z., Skowron, A.: Rough sets and Boolean reasoning, *Information Sciences* 177 (2007) 41–73.

LNCS Transactions on Rough Sets

The *Transactions on Rough Sets* series has as its principal aim the fostering of professional exchanges between scientists and practitioners who are interested in the foundations and applications of rough sets. Topics include foundations and applications of rough sets as well as foundations and applications of hybrid methods combining rough sets with other approaches important for the development of intelligent systems. The journal includes high-quality research articles accepted for publication on the basis of thorough peer reviews. Dissertations and monographs of up to 250 pages that include new research results can also be considered as regular papers. Extended and revised versions of selected papers from conferences can also be included in regular or special issues of the journal.

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