

CALL FOR PAPERS

The Fourth International Workshop on Three-way Decisions, Uncertainty, and Granular Computing

www.ijcrs2016.cl

The 2016 International Joint Conference on Rough Sets
October 7-11, 2016
Santiago de Chile, Chile

Brief Description

Three-way decisions (3WD) play an essential role in real world decision-making and information processing tasks in many fields, such as medical sciences, business and management science, psychology, cognitive science, computer science, engineering, etc. A theory of three-way decisions, introduced by Yiyu Yao, aims at a unified, discipline-independent framework to study fundamental notions, concepts and applications of decision-making with three options that have been widely used either explicitly or implicitly across many areas. In particular, three-way decisions have been successfully used for interpreting rough set three regions, decision analysis with uncertainty, cluster analysis, information filtering, Web-based support systems, multi-criteria classification and multi-view decision models.

The First International Symposium on Three-way Decisions and Granular Computing (ISTDGC 2013) was successfully held in Chengdu, China in 2013. The Second International Workshop on Three-way Decisions, Uncertainty, and Granular Computing (TWDUG 2014) was successfully held in Shanghai, China in 2014. The Third International Workshop (TWDUG 2015) was held in Tianjin in 2015 at the International Joint Conference on Rough Sets (IJCRS 2015). The fourth international workshop will be held Santiago de Chile in 2016 at the International Joint Conference on Rough Sets (IJCRS 2016). In the workshop, we would like to stimulate an intensive discussion on 3WD and to focus on the interaction and integration of three-way decisions, theories of uncertainty and granular computing. We warmly invite you to participate by submitting and presenting original and unpublished research work. The joint effort of the members of the workshop is to evaluate future directions of 3WD.

More information about three-way decisions can be found at: <http://www2.cs.uregina.ca/~twd/>

TOPICS (OPEN LIST)

- Foundations of three-way decisions
 - Philosophical foundations of three-way decisions
 - Cognitive foundations of three-way decisions
 - Logical foundations and three-way reasoning
 - Theories and models of three-way decisions
 - Three-way decisions spaces
 - Three-way computing and processing

- Connections of three-way decisions and other theories
 - Three-way decisions, rough sets, fuzzy sets, and interval sets
 - Three-way decisions and three-valued logic
 - Three-way formal concept analysis
 - Three-way decisions, orthopairs and the square of opposition
 - Game-theoretic rough sets

- Three-way decisions and granular computing
 - Three-way decisions and soft computing
 - Three-way decisions and big data/cloud computing
 - Three-way cluster analysis
 - Pattern recognition based on three-way decisions
 - Data mining/Rule induction based on three-way decisions
 - Three-way decisions and multi-scale analysis

- Models, methods and applications of three-way decisions
 - Uncertainty and three-way decisions
 - Three-way recommender system
 - Three-way decisions in management sciences
 - Three-way decisions and engineering
 - Applications of three-way decisions

PAPER SUBMISSION

Authors can decide between two submission types: 10-page papers (prepared in Springer's LNCS style: <http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>) or one-page abstracts. Accepted and registered 10-page papers presented at the workshop will be included in the conference proceedings published by Springer and indexed in Web of Science. One-page abstracts will be made available in an abstract booklet. Both types of submissions will be treated as equally important while preparing a schedule of workshop presentations. The authors are invited to submit their papers and abstracts via the IJCRS 2016 electronic paper submission system (<https://www.easychair.org/conferences/?conf=ijcrs2016>) and send a copy to Dr. Dun Liu (liudun@swjtu.edu.cn) at the same time.

We welcome research work related to three-way decisions methods and applications. Authors of the best papers will be invited to submit substantially extended versions to special issues in international journals.

IMPORTANT DATES

Submissions of 10-page-long papers due	20.05.2016
Submissions of one-page-long extended abstracts due	20.06.2016
Early conference registration due	01.07.2016

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We look forward to meeting with you in Santiago de Chile, Chile!