

**Lecture Notes in  
Operations Research**

**10**

Series Editors:  
Ding-Zhu Du and Xiang-Sun Zhang

**OPERATIONS RESEARCH  
AND ITS APPLICATIONS**

The Eighth International Symposium, ISORA'09  
Zhangjiajie, China, September 20–22, 2009  
Proceedings

Edited by  
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## ABOUT ISORA 2009

### THEME AND SCOPE

The 8th International Symposium on Operations Research and Its Applications (ISORA 2009), organized by Asia-Pacific Operations Research Center (APORC) under APORS and the Chinese Academy of Sciences (CAS), will be held in Zhangjiajie, China from September 20 to 22, 2009. Co-sponsors of ISORA 2009 include the National Natural Science Foundation of China, Nazan University of Japan, and Changsha University of Science and Technology. The organizing committee appreciates their financial support and organizational assistance.

ISORA is a series international symposium with goals to provide an international forum for scientists, researchers, educators, and practitioners in OR/MS to exchange ideas and approaches, to present research findings and state-of-the-art solutions, to share experiences on potentials and limits, and to open new avenues of research and developments, on all issues and topics related to the theories and applications of Operations Research. The previous 7 ISORAs under the support of CAS and National Science Foundation of China (NSFC) were very successful and attracted many international scholars.

The theme of ISORA 2009 focuses on OR Application in real world and urban OR. We are particularly interested in submissions that report on experimental and applied research motivated by real-world problems. Theoretical and applied papers are expected to show convincingly the usefulness and efficiency of OR methods and algorithms discussed in a practical setting. Typical, but not exclusive, topics of interest are:

- Optimization Theory & Applications
- Algorithm Analysis and Design
- Approximation Algorithms
- Graph Theory
- Combinatorics
- Logistics Management
- OR Methods in Bioinformatics
- Applications in Industry, Service, Finance, Business and Biology
- Urban Operations Research

## **PROGRAM COMMITTEE**

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## **PROCEEDING PAPERS AND CONTRIBUTING AUTHORS**

In Proceedings of the Eighth International Symposium on Operations Research and its Applications (ISORA 2009), the papers are indexed by ISTP (Index to Scientific & Technical Proceedings).

Sixty one papers in this volume cover wide range of operations research and its applications. Authors of these papers come from China mainland, Japan, Hong Kong, Korea, Philippines, Germany, Portugal, France. Many active researchers in various areas contributed their overview and introduction in their fields besides specific deep research achievements. During the symposium, focusing sessions are organized such as in urban OR, policy study, logistics, supply chain management, scheduling, queueing, network optimization, bioinformatics, and management science.

ISORA 2009 is held in Zhangjiajie, a must-see UNESCO World Heritage area known as world geological park in central-south China. We hope all the participants will enjoy very much not only the academic exchange, but also the beautiful trip of Zhangjiajie.

## **AVAILABILITY**

The electronic version of the proceedings can be downloaded from the web sites of ORSC and APORC.

ORSC: <http://www.orsc.org.cn>

APORC: <http://www.aporc.org>