Call for Chapters for IGI Book

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Hybrid Algorithms for Service, Computing and Manufacturing Systems: Routing, Scheduling and Availability Solutions

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PDF version of this Call for Chapters

CALL FOR CHAPTERS - IGI GLOBAL

- 2-5 Page Proposal Deadline: **April 15th, 2010 (extended)**
- Book Title: ***Hybrid Algorithms for Service, Computing and Manufacturing Systems: Routing, Scheduling and Availability Solutions***
- Keywords: Combinatorial problems, heuristics & metaheuristics, vehicle routing, scheduling, system reliability and availability.
- A book edited by **IGI Global** http://www.igi-global.com
- Editors:

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INTRODUCTION

One of the emergent research areas during the last years is the development of new hybrid algorithms and software applications aimed at solving complex real-life challenges in which sustainability and environmental issues as of high relevance for strategic, tactical and operational management such as those associated with routing, scheduling and availability problems. Most of these problems are considered to be NP-hard, which means that an efficient approach can be built only by combining knowledge from different areas such as Computer Science, Operations Research, Artificial Intelligence and Applied Mathematics. At the same time, these problems present important challenges for strategic sectors in any developed country such as industry and services. This book has two main purposes: (1) to provide insights and understanding into the theoretical and methodological development of hybrid algorithms for solving routing, scheduling and availability issues, and (2) to provide insights and understanding into current and future trends regarding real-life applications of these algorithms.

OVERALL OBJECTIVES OF THE BOOK

The aim of this book is to guide academics and practitioners with the latest research developments and applications in routing, scheduling and reliability/availability issues. The objectives of this book are:

- To share theoretical and/or applied developments on the solution of complex realistic routing, scheduling and availability problems.
- To identify and publish worldwide best practices regarding the applications of efficient and effective hybrid algorithms to solve routing, scheduling and availability problems.
- To forecast emerging research opportunities and tendencies regarding the development and application of hybrid algorithms to solve operations scheduling, routing and availability problems in complex service, computer and manufacturing systems.
- To provide the academic community with a base text that could serve as a reference in teaching and research on scheduling, routing, availability and logistics and supply chain management.
- To present up-to-date research work on how novel hybrid methodologies from Operations Research, Computer Science and Artificial Intelligence can be applied to improve enterprises' competitiveness in globalized economies.

TARGET AUDIENCE

The book will be useful for academics involved in the solution of routing, scheduling, reliability/availability problems, faculty teaching applications of discrete mathematics, computer science, operations research, decision sciences logistics and operations management at graduate and undergraduate levels. The book will also be potentially useful for senior year undergraduate or postgraduate students in Computer Sciences, Operations Research, Decision Sciences, Industrial Engineering, Operations Management and

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Discrete Mathematics. Practitioners (including managers of operations in companies) will also benefit from the book.

RECOMMENDED TOPICS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- Heuristics, meta-heuristics and hybrid procedures for scheduling, routing and availability problems
- Scheduling in flexible and complex shop configurations
- Scheduling with precedence constraints, batching, setups and further technological constraints either with a single (regular or non-regular) and multi-criteria objectives
- Robust scheduling
- Routing, scheduling and availability issues in computing systems
- Routing and scheduling in supply chain management and design
- Manufacturing and service network design
- Inventory routing
- Online scheduling in transportation
- Optimization methods for multi-modal freight
- Sustainable and ecological issues in scheduling and routing systems

SUBMISSION PROCEDURE

Researchers and practitioners are invited to submit on or before **April 15th, 2010**, a **2-5 page manuscript proposal (MS Word)** clearly explaining the mission and concerns of the proposed chapter. Authors of accepted proposals will be notified by **May 15th, 2010** about the status of their proposals and sent chapter organizational guidelines. Full chapters are expected to be submitted by **August 1st, 2010**. All submitted chapters will be reviewed on a **double-blind review** basis. The book is scheduled to be published by IGI Global, http://www.igi-global.com, publisher of the IGI Publishing (formerly Idea Group Publishing), Information Science Publishing, IRM Press, CyberTech Publishing, Information Science Reference (formerly Idea Group Reference), and Medical Information Science Reference imprints.

Inquiries and submissions can be forwarded by e-mail to **jairo.montoya(@)unisabana.edu.co**

IMPORTANT DATES

- 2-5 Page Proposal Deadline: **April 15th, 2010 (extended)**
- Proposal acceptance: May 15th, 2010
- Full Chapters Deadline: **August 1st, 2010**
- Review Results: October 15th, 2010
- Revised Chapters Deadline: **November 15th, 2010**
- Notification of final acceptation/rejection: December 1st, 2010
- Camera-ready: **January 2nd, 2011**

EDITORIAL ADVISORY BOARD

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