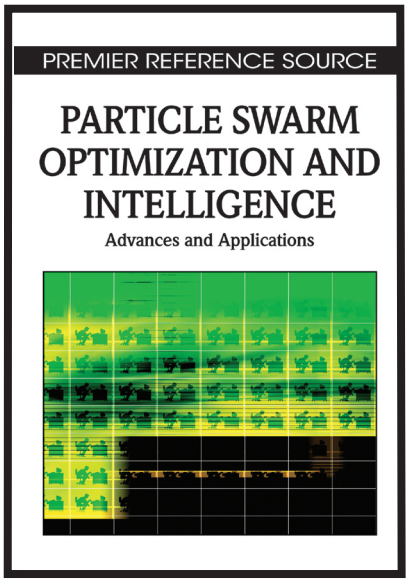
Information Science

REFERENCE

The premier reference source for computer science and information technology management

New Release January 2010

Particle Swarm Optimization and Intelligence: Advances and Applications



By: Konstantinos E. Parsopoulos, University of Ioannina, Greece & Michael N. Vrahatis, University of Patras, Greece

13-digit ISBN: 978-1-61520-666-7
378 pages; 2010 Copyright
Price: US $180.00 (hardcover*)
Perpetual Access: US $270.00
Print + Perpetual Access: US $360.00
Illustrations: figures, tables (8 1/2" x 11")
Translation Rights: World

*Paperback is not available.

Since its initial development, particle swarm optimization has gained wide recognition due to its ability to provide solutions efficiently, requiring only minimal implementation effort.

Particle Swarm Optimization and Intelligence: Advances and Applications examines modern intelligent optimization algorithms proven as very efficient in applications from various scientific and technological fields. Providing distinguished and unique research, this innovative publication offers a compendium of leading field experiences as well as theoretical analyses and complementary techniques useful to academicians and practitioners.

"This book provides a unified presentation of the most established PSO variants, from early precursors to concurrent state-of-the-art approaches."

- Konstantinos E. Parsopoulos, University of Ioannina, Greece & Michael N. Vrahatis, University of Patras, Greece

Subject:
Artificial Intelligence; Swarm Intelligence; Machine Learning; Particle Swarm Optimization

Market:
This essential publication will be invaluable to academic and research libraries as well as graduate and undergraduate students interested in particle swarm optimization and relative approaches. This book will also be a useful reference for researchers and scientists that employ heuristic algorithms for problem solving in science and engineering.

Excellent addition to your library! Recommend to your acquisitions librarian.

www.info-sci-ref.com

Particle Swarm Optimization and Intelligence: Advances and Applications

By: Konstantinos E. Parsopoulos, University of Ioannina, Greece & Michael N. Vrahatis, University of Patras, Greece

Table of Contents

About the Authors:

Konstantinos E. Parsopoulos received his Diploma in Mathematics, with specialty in Computational Mathematics and Informatics, in 1998 from the Department of Mathematics, University of Patras, Greece, and his PhD degree in Intelligent Computational Optimization in 2005 from the Departments of Mathematics and Computer Engineering & Informatics, University of Patras, Greece. He served as a Lecturer with the Department of Mathematics, University of Patras, Greece, from May 2008 to September 2009. He is currently an Assistant Professor with the Department of Computer Science, University of Ioannina, Greece. His research is focused on Intelligent Computational Optimization algorithms with an emphasis on Swarm Intelligence and Evolutionary Computation approaches. He has served as a member of the editorial board of 2 international scientific journals, as well as of the technical and program committee in 13 international conferences. Also, he has served as reviewer for 24 scientific journals, as well as for the Portuguese Foundation for Science and Technology (FCT). He has participated in national and international research projects, and he is a member of ACM and IEEE since 2005 and 1999, respectively.

Michael N. Vrahatis received his PhD in Computational Mathematics (1982) from the University of Patras, Greece. His work includes topological degree theory, systems of nonlinear equations, numerical and intelligent optimisation, data mining and unsupervised clustering, cryptography and cryptanalysis as well as computational and swarm intelligence. He is a Professor of Computational Mathematics in the University of Patras, since 2000 and serves as Director of the Computational Intelligence Laboratory of the same Department (since 2004). He is/was a member of the editorial board of eight international journals. His work consists of over 330 publications (122 papers in refereed international scientific journals, and 209 papers in books, edited volumes and conference proceedings) that has been cited by researchers over 3500 times (co-authors citations excluded).