Special Issue on Mathematical and Heuristic Modeling and Optimization of Energy Systems, Part 1

Guest Editorial Preface

N. I. Voropai, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Research Articles

1 Optimization Models and Methods Developed at the Energy Systems Institute
   N.I. Voropai, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   V.I. Zorkaltsev, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

16 Modeling of Nonlinear Dynamic Systems with Volterra Polynomials: Elements of Theory and Applications
   A. S. Apartsev, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   S. V. Solodusha, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   V. A. Spiryaev, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

44 Integral Models of Developing Electric Power Systems
   E. V. Markova, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   I. V. Sidler, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   V. V. Trufanov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

59 Optimal Expansion and Reconstruction of Heat Supply Systems: Methodology and Practice
   V. A. Stennikov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   T. B. Oshchepkova, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   N. V. Stennikov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

80 New Results in Development of Methods for Optimization of Heat Supply System Parameters and Their Software Implementation
   E. A. Barakhtenko, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   T. B. Oshchepkova, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   D. V. Sokolov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   V. A. Stennikov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

100 Optimization of Developing Heat Supply System in Competitive Market Environment
   V. A. Stennikov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   O. V. Khamisov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   A. V. Penkovsky, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

120 Methods for Comprehensive Analysis of Heat Supply Reliability
   V. A. Stennikov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia
   I. V. Postnikov, Energy Systems Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Book Review

143 Technology and Energy Sources Monitoring: Control, Efficiency, and Optimization
   Pratiksha Saxena, Department of Applied Sciences, Gautam Buddha University, Greater Noida, Uttar Pradesh, India

Copyright

The International Journal of Energy Optimization and Engineering (IJEOE) (ISSN 2160-9500; eISSN 2160-9543), Copyright © 2013 IGI Global. All rights, including translation into other languages reserved by the publisher. No part of this journal may be reproduced or used in any form or by any means without written permission from the publisher, except for noncommercial, educational use including classroom teaching purposes. Product or company names used in this journal are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark. The views expressed in this journal are those of the authors but not necessarily of IGI Global.