



# Energy efficient distributed computing systems /

Zomaya, Albert Y.  
Lee, Young-Choon (1973-)

Wiley,  
©2012

Electronic books Llibres electrònics

Monografía

"The energy consumption issue in distributed computing systems raises various monetary, environmental and system performance concerns. Electricity consumption in the US doubled from 2000 to 2005. From a financial and environmental standpoint, reducing the consumption of electricity is important, yet these reforms must not lead to performance degradation of the computing systems. These contradicting constraints create a suite of complex problems that need to be resolved in order to lead to 'greener' distributed computing systems. This book brings together a group of outstanding researchers that investigate the different facets of green and energy efficient distributed computing. Key features: One of the first books of its kind Features latest research findings on emerging topics by well-known scientists Valuable research for grad students, postdocs, and researchers Research will greatly feed into other technologies and application domains"--

<https://rebiunoda.pro.baratznet.cloud:38443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMjYxMzcNTQ>

---

**Título:** Energy efficient distributed computing systems edited by Albert Y. Zomaya, Young Choon Lee

**Editorial:** Hoboken, N.J. Wiley ©2012

**Descripción física:** 1 online resource (813 pages) illustrations

**Mención de serie:** Wiley series on parallel and distributed computing Wiley series on parallel and distributed computing 88

**Bibliografía:** Includes bibliographical references and index

**Contenido:** Chapter 1. Power Allocation and Task Scheduling on Multiprocessor Computers with Energy and Time Constraints -- Chapter 2. Power-Aware High Performance Computing -- Chapter 3. Energy Efficiency in HPC Systems -- Chapter 4. A Stochastic Framework for Hierarchical System-Level Power Management -- Chapter 5. Energy-Efficient Reservation Infrastructure for Grids, Clouds, and Networks -- Chapter 6. Energy-Efficient Job Placement on Clusters, Grids, and Clouds -- Chapter 7. Comparison and Analysis of Greedy Energy-Efficient Scheduling Algorithms for Computational Grids -- Chapter 8. Toward Energy-Aware Scheduling Using Machine Learning -- Chapter 9. Energy Efficiency Metrics for DATA Centers -- Chapter 10. Autonomic Green Computing in Large-Scale Data Centers -- Chapter 11. Energy and Thermal Aware Scheduling in Data Centers -- Chapter 12.

QOS-Aware Power Management in Data Centers -- Chapter 13. Energy-Efficient Storage Systems for Data Centers -- Chapter 14. Autonomic Energy/Performance Optimizations for Memory in Servers -- Chapter 15. ROD: A Practical Approach to Improving Reliability of Energy-Efficient Parallel Disk Systems -- Chapter 16. Embracing the Memory and I/O Walls for Energy-Efficient Scientific Computing -- Chapter 17. Multiple Frequency Selection in DVFS-Enabled Processors to Minimize Energy Consumption -- Chapter 18. The Paramountcy of Reconfigurable Computing -- Chapter 19. Workload Clustering for Increasing Energy Savings on Embedded MPSoCS -- Chapter 20. Energy-Efficient Internet Infrastructure -- Chapter 21. Demand Response in the Smart Grid: A Distributed Computing Perspective -- Chapter 22. Resource Management for Distributed Mobile Computing -- Chapter 23. An Energy-Aware Framework for Mobile Data Mining -- Chapter 24. Energy Awareness and Efficiency in Wireless Sensor Networks: From Physical Devices to the Communication Link -- Chapter 25. Network-Wide Strategies for Energy Efficiency in Wireless Sensor Networks -- Chapter 26. Energy Management in Heterogeneous Wireless Health Care Networks

**Lengua:** English

**Copyright/Depósito Legal:** 807035295 808670358 817807136 961487732 962623784 965980641 988435830  
992027314 1037785745 1038624944 1045537102 1066511898 1077276142 1081276337 1087479245  
1153549663 1156914678 1164892618 1166217756 1166474831 1170459408 1171360224

**ISBN:** 9781118342015 electronic bk.) 1118342011 electronic bk.) 9781118341988 electronic bk.) 1118341988  
electronic bk.) 1283546019 9781283546010 9780470908754 hardback) 0470908750 hardback) 9786613858467  
6613858463 1118342003 9781118342008

**Materia:** Computer networks- Energy conservation Electronic data processing- Distributed processing- Energy conservation Green technology Electrical & Computer Engineering Engineering & Applied Sciences Telecommunications COMPUTERS- Client-Server Computing. Green technology. Ordinadors, Xarxes d'- Estalvi d'energia. Informática- Estalvi d'energia. Ecotecnología. Energía (Física)- Estalvi.

**Autores:** Zomaya, Albert Y. Lee, Young-Choon ( 1973-)

**Enlace a formato físico adicional:** Print version Zomaya, Albert Y. Energy efficient distributed computing systems. Hoboken, N.J. : Wiley, ©2012 9780470908754 (DLC) 2011042246 (OCOlc)744299290

**Punto acceso adicional serie-Título:** Wiley series on parallel and distributed computing 88

---

## Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- [informa@baratz.es](mailto:informa@baratz.es)