



Springer

1st  
edition

2010, XVI, 317 p.

**Printed book**

Hardcover

**Printed book**

Hardcover

ISBN 978-3-642-03513-5

£ 109,99 | CHF 153,50 | 129,99 € |  
142,99 € (A) | 139,09 € (D)

Available

**Discount group**

Science (SC)

**Product category**

Monograph

**Other renditions**

Softcover

ISBN 978-3-642-42537-0

**Computer Science : Computer Communication Networks**

Vu, Q.H., Lupu, M., Ooi, B.C.

# Peer-to-Peer Computing

**Principles and Applications**

Peer-to-peer (P2P) technology, or peer computing, is a paradigm that is viewed as a potential technology for redesigning distributed architectures and, consequently, distributed processing. Yet the scale and dynamism that characterize P2P systems demand that we reexamine traditional distributed technologies. A paradigm shift that includes self-reorganization, adaptation and resilience is called for. On the other hand, the increased computational power of such networks opens up completely new applications, such as in digital content sharing, scientific computation, gaming, or collaborative work environments. In this book, Vu, Lupu and Ooi present the technical challenges offered by P2P systems, and the means that have been proposed to address them. They provide a thorough and comprehensive review of recent advances on routing and discovery methods; load balancing and replication techniques; security, accountability and anonymity, as well as trust and reputation schemes; programming models and P2P systems and projects. Besides surveying existing methods and systems, they also compare and evaluate some of the more promising schemes. The need for such a book is evident. It provides a single source for practitioners, researchers and students on the state of the art. For practitioners, this book explains best practice, guiding selection of appropriate techniques for each application. For researchers, this book provides a foundation for the development of new and more effective methods. For students, it is an overview of the wide range of advanced techniques for realizing effective P2P systems, and it can easily be used as a text for an advanced course on Peer-to-Peer Computing and Technologies, or as a companion text for courses on various subjects, such as distributed systems, and grid and cluster computing.

**Order online at [springer.com/booksellers](http://springer.com/booksellers)****Springer Nature Customer Service Center GmbH**

Customer Service

Tiergartenstrasse 15-17

69121 Heidelberg

Germany

T: +49 (0)6221 345-4301

[row-booksellers@springernature.com](mailto:row-booksellers@springernature.com)

ISBN 978-3-642-03513-5 / BIC: UKN / SPRINGER NATURE: SCI13022

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.