
This interdisciplinary graduate text gives a full, explicit, coherent and up-to-date account of the modern theory of neural information processing systems and is aimed at student with an undergraduate degree in any quantitative discipline (e.g.
computer science, physics, engineering, biology, or mathematics). The book covers all the major theoretical developments from the 1940s to the present day, using a uniform and rigorous style of presentation and of mathematical notation. The text starts with simple model neurons and moves gradually to the latest advances in neural processing. An ideal textbook for postgraduate courses in artificial neural networks, the material has been class-tested. It is fully self contained and includes introductions to the various discipline-specific mathematical tools as well as multiple exercises on each topic.

**Theory Neural Information Processing Systems Related Books**

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<th>Title</th>
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<tr>
<td>Neural Information Processing</td>
<td>The two volume set LNCS 4984 and LNCS 4985 constitutes the thoroughly refereed post-conference proceedings of the 14th International Conference on Neural Information Processing, ICONIP 2007, held in Kitakyushu, Japan, in November 2007, jointly with BRAINIT 2007, the 4th International Conference on Brain-Inspired Information Technology. The 228 revised full papers presented were carefully reviewed and selected from numerous ordinary paper submissions and 15 special organized sessions. The 116 pap...</td>
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<tr>
<td>Information Theory and Network Coding (Information Technology: Transmission, Processing and Storage)</td>
<td>This book is an evolution from my book A First Course in Information Theory published in 2002 when network coding was still at its infancy. The last few years have witnessed the rapid development of network coding into a research field of its own in information science. With its root in information theory, network coding has not only brought about a paradigm shift in network communications at large, but also had significant influence on such specific research fields as coding theory, networking, swit...</td>
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<td>Design Research in Information Systems: Theory and Practice (Integrated Series in Information Systems)</td>
<td>It is 5 years since the publication of the seminal paper on Design Science in Information Systems Research by Hevner, March, Park, and Ram in MIS Quarterly and the initiation of the Information Technology and Systems department of the Communications of AIS. These events in 2004 are markers in the move of design science to the forefront of information systems research. A sufficient interval has elapsed since then to allow assessment of from where the eld has come and where it should go. Design sci...</td>
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<td>Wireless Networks, Information Processing and Systems</td>
<td>Covers the proceedings of the First International Multi Topic Conference, IMTIC 2008, held in Jamshoro, Pakistan, in April 2008. This book includes such topics as wireless sensor networks, satellite communication, grid computing, tracking, remote sensing, data mining, bioinformatics as well as legal and ethical issues in IT.</td>
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<tr>
<td>Natural Language Processing and Information Systems</td>
<td>NLDB 2005, the 10th International Conference on Applications of Natural Language to Information Systems, was held on June 15-17, 2005 at the University of Alicante, Spain. Since the first NLDB conference in 1995 the main goal has been to provide a forum to discuss and disseminate research on the integration of natural language resources in information system engineering. The development and convergence of computing, telecommunications and information systems has already led to a revolution in the...</td>
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<tr>
<td>R-Trees: Theory and Applications (Advanced Information and Knowledge Processing)</td>
<td>Space support in databases poses new challenges in every part of a database management system &amp; the capability of spatial support in the physical layer is considered very important. This has led to the design of spatial access methods to enable the effective &amp; efficient management of spatial objects. R-trees have a simplicity of structure &amp; together with their resemblance to the B-tree, allow developers to incorporate them easily into existing database management systems for the support of spat...</td>
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The latest edition of this classic is updated with new problem sets and material. The Second Edition of this fundamental textbook maintains the book’s tradition of clear, thought-provoking instruction. Readers are provided once again with an instructive mix of mathematics, physics, statistics, and information theory. All the essential topics in information theory are covered in detail, including entropy, data compression, channel capacity, rate distortion, network information theory, and hypothesis...

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Transactional Information Systems is the long-awaited, comprehensive work from leading scientists in the transaction processing field. Weikum and Vossen begin with a broad look at the role of transactional technology in today's economic and scientific endeavors, then delve into critical issues faced by all practitioners, presenting today's most effective techniques for controlling concurrent access by multiple clients, recovering from system failures, and coordinating distributed transactions. Th...

Networks and Grids: Technology and Theory (Information Technology: Transmission, Processing and Storage)

This useful volume adopts a balanced approach between technology and mathematical modeling in computer networks, covering such topics as switching elements and fabrics, Ethernet, and ALOHA design. The discussion includes a variety of queueing models, routing, protocol verification and error codes and divisible load theory, a new modeling technique with applications to grids and parallel and distributed processing. Examples at the end of each chapter provide ample material for practice. This book...

Handbook of Neural Network Signal Processing

The use of neural networks is permeating every area of signal processing. They can provide powerful means for solving many problems, especially in nonlinear, real-time, adaptive, and blind signal processing. The Handbook of Neural Network Signal Processing brings together applications that were previously scattered among various publications to provide an up-to-date, detailed treatment of the subject from an engineering point of view. The authors cover basic principles, modeling, algorithms, arc...

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Neural Information Processing Systems Impact Factor

Neural Information Processing Journal