Network Flows - Theory, Algorithms, and Applications

An introduction to network flows discusses paths, algorithms, shortest paths, maximum flows, minimum cost flows, convex cost flows, generalized flows, and other topics.

The Algorithm Design Manual

This newly expanded and updated second edition of the best-selling classic continues to take the "mystery" out of designing algorithms, and analyzing their efficacy and efficiency. Expanding on the first edition, the book now serves as the primary textbook of choice for algorithm design courses while maintaining its status as the premier practical reference guide to algorithms for programmers, researchers, and students. The reader-friendly Algorithm Design Manual provides straightforward access to combinatorial algorithms technology, stressing design over analysis. The first part, Techniques, provides accessible instruction on methods for designing and analyzing computer algorithms. The second part, Resources, is intended for browsing and reference, and comprises the catalog of algorithmic resources, implementations and an extensive bibliography. NEW to the second edition: • Doubles the tutorial material and exercises over the first edition • Provides full online support for lecturers, and a completely updated and improved website component with lecture slides, audio and video • Contains a unique catalog identifying the 75 algorithmic problems that arise most often in practice, leading the reader down the right path to solve them • Includes several NEW "war stories" relating experiences from real-world applications • Provides up-to-date links leading to the very best algorithm implementations available in C, C++, and Java.

Smart and Digital Cities - From Computational Intelligence to Applied Social Sciences

This book presents up-to-date information on the future digital and smart cities. In particular, it describes novel insights about the use of computational intelligence techniques and decentralized technologies, covering urban aspects and services, cities governance and social sciences. The topics covered here range from state-of-the-art computational techniques to current discussions regarding drones, blockchain, smart contracts and cryptocurrencies. The idealization of this material emerged with a journey of free knowledge exchange from a diverse group of authors, who met each other through four different events (workshops and special sessions) organized with the purpose of boosting the concepts surrounding smart cities. We believe that this book comprises innovative and precise information regarding state-of-the-art applications and ideas for the future of cities and society. It will surely be useful not only for the academic community but also to the industry professionals and city managers.

Network Flows

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knowledge base of civilization as we know it. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. To ensure a quality reading experience, this work has been proofread and republished using a format that seamlessly blends the original graphical elements with text in an easy-to-read typeface. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

**Networking -- ICN 2005 - 4th International Conference on Networking, Reunion Island, France, April 17-21, 2005, Proceedings**

The International Conference on Networking (ICN 2005) was the fourth conference in its series aimed at stimulating technical exchange in the emerging and important field of networking. On behalf of the International Advisory Committee, it is our great pleasure to welcome you to the proceedings of the 2005 event. Networking faces dramatic changes due to the customer-centric view, the venue of the next generation networks paradigm, the push from ubiquitous networking, and the new service models. Despite legacy problems, which researchers and industry are still discovering and improving the state of the art, the horizon has revealed new challenges that some of the authors tackled through their submissions. In fact, ICN 2005 was very well perceived by the international networking community. A total of 651 papers from more than 60 countries were submitted, from which 238 were accepted. Each paper was reviewed by several members of the Technical Program Committee. This year, the Advisory Committee reevaluated various accepted papers after the reviews had been incorporated. We perceived a significant improvement in the number of submissions and the quality of the submissions. The ICN 2005 program covered a variety of research topics that are of current interest, starting with Grid networks, multicasting, TCP optimizations, QoS and security, emergency services, and network resiliency. The Program Committee selected also three tutorials and invited speakers that addressed the latest research results from the international industries and academia, and reports on findings from mobile, satellite, and personal communications related to 3rd- and 4th-generation research projects and standardization.

**Graph Drawing - 14th International Symposium, GD 2006, Karlsruhe, Germany, September 18-20, 2006, Revised Papers**

This book constitutes the thoroughly refereed post-proceedings of the 14th International Symposium on Graph Drawing, GD 2006, held in Karlsruhe, Germany. The 33 revised full papers and 5 revised short papers presented together with 2 invited talks, 1 system demo, 2 poster papers address all current aspects in graph drawing, ranging from foundational and methodological issues to applications for various classes of graphs in a variety of fields.

**Integration of AI and OR Techniques in Constraint Programming for**

This book constitutes the refereed proceedings of the 6th International Conference on Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems, CPAIOR 2009, held in Pittsburgh, PA, USA, in May 2009. The 20 revised full papers and 10 extended abstracts presented together with 2 invited talks were carefully reviewed and selected from 65 submissions. The papers describe current research in the fields of constraint programming, artificial intelligence, and operations research and present new techniques or new applications in combinatorial optimization, thus exploring ways of solving large-scale, practical optimization problems through integration and hybridization of the fields' different techniques.

Integration of AI and OR Techniques in Constraint Programming - 11th International Conference, CPAIOR 2014, Cork, Ireland, May 19-23, 2014, Proceedings

This book constitutes the proceedings of the International Conference on the Integration of Artificial Intelligence (AI) and Operations Research (OR) Techniques in Constraint Programming, CPAIOR 2014, held in Cork, Ireland, in May 2014. The 33 papers presented in this volume were carefully reviewed and selected from 70 submissions. The papers focus on constraint programming and global constraints; scheduling modelling; encodings and SAT logistics; MIP; CSP and complexity; parallelism and search; and data mining and machine learning.

Effective Surveillance for Homeland Security - Balancing Technology and Social Issues

Effective Surveillance for Homeland Security: Balancing Technology and Social Issues provides a comprehensive survey of state-of-the-art methods and tools for the surveillance and protection of citizens and critical infrastructures against natural and deliberate threats. Focusing on current technological challenges involving multi-disciplinary problem analysis and systems engineering approaches, it provides an overview of the most relevant aspects of surveillance systems in the framework of homeland security. Addressing both advanced surveillance technologies and the related socio-ethical issues, the book consists of 21 chapters written by international experts from the various sectors of homeland security. Part I, Surveillance and Society, focuses on the societal dimension of surveillance—stressing the importance of societal acceptability as a precondition to any surveillance system. Part II, Physical and Cyber Surveillance, presents advanced technologies for surveillance. It considers developing technologies that are part of a framework whose aim is to move from a simple collection and storage of information toward proactive systems that are able to fuse several information sources to detect relevant events in their early incipient phase. Part III, Technologies for Homeland Security, considers relevant applications of surveillance systems in the framework of homeland security. It presents real-world case studies of how innovative technologies can be used to effectively improve the
security of sensitive areas without violating the rights of the people involved. Examining cutting-edge research topics, the book provides you with a comprehensive understanding of the technological, legislative, organizational, and management issues related to surveillance. With a specific focus on privacy, it presents innovative solutions to many of the issues that remain in the quest to balance security with the preservation of privacy that society demands.

**Competitive Programming in Python - 128 Algorithms to Develop your Coding Skills**

Want to kill it at your job interview in the tech industry? Want to win that coding competition? Learn all the algorithmic techniques and programming skills you need from two experienced coaches, problem setters, and jurors for coding competitions. The authors highlight the versatility of each algorithm by considering a variety of problems and show how to implement algorithms in simple and efficient code. Readers can expect to master 128 algorithms in Python and discover the right way to tackle a problem and quickly implement a solution of low complexity. Classic problems like Dijkstra's shortest path algorithm and Knuth-Morris-Pratt's string matching algorithm are featured alongside lesser known data structures like Fenwick trees and Knuth's dancing links. The book provides a framework to tackle algorithmic problem solving, including: Definition, Complexity, Applications, Algorithm, Key Information, Implementation, Variants, In Practice, and Problems. Python code included in the book and on the companion website.

**Unifying Diversity -- A classic example of Reusability**

Unifying Diversity -- A classic example of Reusability

Ltd. Sandeep Ahuja, SiRF Technology India Pvt ... several approaches are tried and reusability has emerged as a more comprehensive solution. Different teams, different domains and different locations ...  

**Addressing Technical Debt With CX Modernization In Mind**

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Certainty: You know exactly what you’re getting when you license a pre-built solution ... Depending on your setup, this could be a manual, time-consuming process. • User Adoption Curves ...