

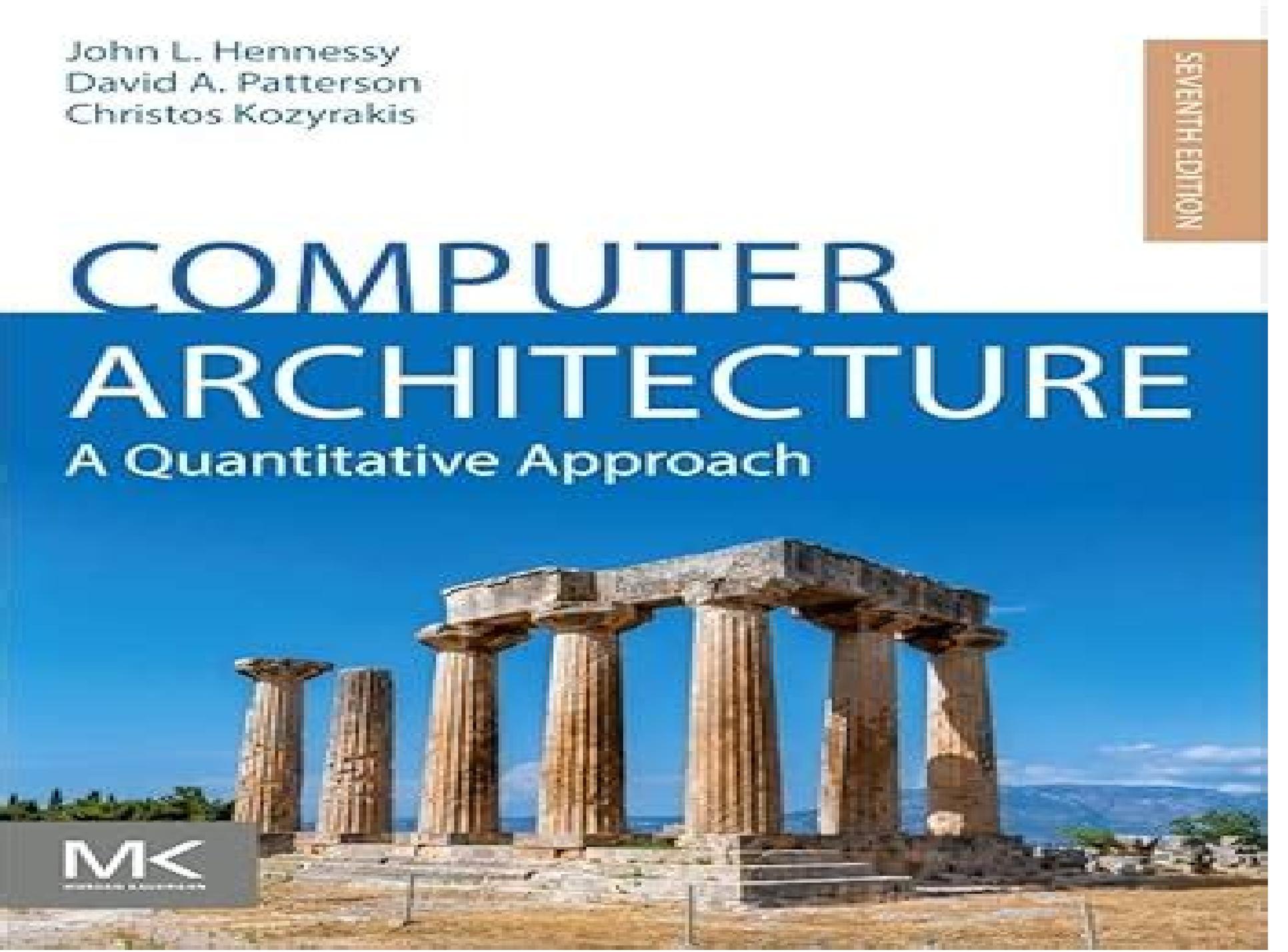
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**Yi-Tong Ma**



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**Computing Handbook, Third Edition** Teofilo Gonzalez, Jorge Diaz-Herrera, Allen Tucker, 2014-05-07 Computing Handbook Third Edition Computer Science and Software Engineering mirrors the modern taxonomy of computer science and software engineering as described by the Association for Computing Machinery ACM and the IEEE Computer Society IEEE CS Written by established leading experts and influential young researchers the first volume of this popular handbook examines the elements involved in designing and implementing software new areas in which computers are being used and ways to solve computing problems The book also explores our current understanding of software engineering and its effect on the practice of software development and the education of software professionals Like the second volume this first volume describes what occurs in research laboratories educational institutions and public and private organizations to advance the effective development and use of computers and computing in today s world Research level survey articles provide deep insights into the computing discipline enabling readers to understand the principles and practices that drive computing education research and development in the twenty first century *Computing Handbook* Allen Tucker, Teofilo Gonzalez, Heikki Topi, Jorge Diaz-Herrera, 2022-05-29 This two volume set of the Computing Handbook Third Edition previously the Computer Science Handbook provides up to date information on a wide range of topics in computer science information systems IS information technology IT and software engineering The third edition of this popular handbook addresses not only the dramatic growth of computing as a discipline but also the relatively new delineation of computing as a family of separate disciplines as described by the Association for Computing Machinery ACM the IEEE Computer Society IEEE CS and the Association for Information Systems AIS Both volumes in the set describe what occurs in research laboratories educational institutions and public and private organizations to advance the effective development and use of computers and computing in today s world Research level survey articles provide deep insights into the computing discipline enabling readers to understand the principles and practices that drive computing education research and development in the twenty first century Chapters are organized with minimal interdependence so that they can be read in any order and each volume contains a table of contents and subject index offering easy access to specific topics The first volume of this popular handbook mirrors the modern taxonomy of computer science and software engineering as described by the Association for Computing Machinery ACM and the IEEE Computer Society IEEE CS Written by established leading experts and influential young researchers it examines the elements involved in designing and implementing software new areas in which computers are being used and ways to solve computing problems The book also explores our current understanding of software

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Computer Architecture John L. Hennessy, David A. Patterson, 2006-11-03 The era of seemingly unlimited growth in processor performance is over single chip architectures can no longer overcome the performance limitations imposed by the power they consume and the heat they generate Today Intel and other semiconductor firms are abandoning the single fast processor model in favor of multi core microprocessors chips that combine two or more processors in a single package In the fourth edition of Computer Architecture the authors focus on this historic shift increasing their coverage of multiprocessors and exploring the most effective ways of achieving parallelism as the key to unlocking the power of multiple processor architectures Additionally the new edition has expanded and updated coverage of design topics beyond processor performance including power reliability availability and dependability CD System Requirements PDF Viewer The CD material includes PDF documents that you can read with a PDF viewer such as Adobe Acrobat or Adobe Reader Recent versions of Adobe Reader for some platforms are included on the CD HTML Browser The navigation framework on this CD is delivered in HTML and JavaScript It is recommended that you install the latest version of your favorite HTML browser to view this CD The content has been verified under Windows XP with the following browsers Internet Explorer 6 0 Firefox 1 5 under Mac OS X Panther with the following browsers Internet Explorer 5 2 Firefox 1 0 6 Safari 1 3 and under Mandriva Linux 2006 with the following browsers Firefox 1 0 6 Konqueror 3 4 2 Mozilla 1 7 11 The content is designed to be viewed in a browser window that is at least 720 pixels wide You may find the content does not display well if your display is not set to at least 1024x768 pixel resolution Operating System This CD can be used under any operating system that includes an HTML browser and a PDF viewer This includes Windows Mac OS and most Linux and Unix systems Increased coverage on achieving parallelism with multiprocessors Case studies of latest technology from industry including the Sun Niagara Multiprocessor AMD Opteron and Pentium 4 Three review appendices included in the printed volume review the basic and intermediate principles the main text relies upon Eight reference appendices collected on the CD cover a range of topics including specific architectures embedded systems application specific processors some guest authored by subject experts

□□□□□□□□□□/□□□□ John L. Hennessy, □□□, David A. Patterson, 1999 *High Performance Computing - HiPC'99* Prith Banerjee, Viktor K. Prasanna, Bhabani P. Sinha, 2004-06-01 These are the proceedings of the Sixth International Conference on High Performance Computing HiPC 99 held December 17 20 in Calcutta India The meeting serves as a forum for presenting current work by researchers from around the world as well as highlighting activities in Asia

in the high performance computing area The meeting emphasizes both the design and the analysis of high performance computing systems and their scientific engineering and commercial applications Topics covered in the meeting series include Parallel Algorithms Scientific Computation Parallel Architectures Visualization Parallel Languages Compilers Network and Cluster Based Computing Distributed Systems Signal Image Processing Systems Programming Environments Supercomputing Applications Memory Systems Internet and WWW based Computing Multimedia and High Speed Networks Scalable Servers We would like to thank Alfred Hofmann and Ruth Abraham of Springer Verlag for their excellent support in bringing out the proceedings The detailed messages from the steering committee chair general co chair and program chair pay tribute to numerous volunteers who helped us in organizing the meeting October 1999 Viktor K Prasanna Bhabani Sinha Prithviraj Banerjee Message from the Steering Chair It is my pleasure to welcome you to the Sixth International Conference on High Performance Computing I hope you enjoy the meeting the rich cultural heritage of Calcutta as well as the mother Ganges the river of life

Web Engineering and Peer-to-Peer Computing Enrico Gregori, Ludmila Cherkasova, Gianpaolo Cugola, Fabio Panzieri, Gian P. Picco, 2003-06-30 This book constitutes the refereed proceedings of the two thematic workshops held jointly with Networking 2002 WEB Engineering and Peer to Peer Computing Networking 2002 was organized by the Italian National Research Council CNR and was sponsored by the IFIP working groups WG 6 2 Network and Intern work Architectures WG 6 3 Performance of Communication Systems and WG 6 8 Wireless Communications The program of the conference covered ve days and included the main conference three days two tutorial days and one day of thematic workshops TheInternationalWorkshoponWebEngineeringwasdedicatedtothedisc

sionoftheprincipalissuesthatemergeinthedesignandimplementationoflar scale complex Web based systems Scalability issues pose a number of ch lenging problems to solve for both applications and the underlying web network infrastructure On one hand web services and internet applications must take into account network performance and transport protocol design to achieve ceptable performance and robustness On the other hand emerging network and Web technologies are determined by the requirements of these applications Fifteen papers were presented that illustrated the current state of the art in this area In addition to the authors of these papers the Workshop on Web Engine ing was attended by about thirty participants who contributed to the workshop by stimulating fruitful discussions at the end of each presentation Thus this workshop provided a excellent opportunity for researchers from both industry and academia to gather exchange ideas and discuss recent results in the dev opment of Web based systems and emerging Internet applications

Acceleration of Biomedical Image Processing with Dataflow on FPGAs Frederik Gröll, Udo Keschull, 2022-09-01 Short compute times are crucial for timely diagnostics in biomedical applications but lead to a high demand in computing for new and improved imaging techniques In this book reconfigurable computing with FPGAs is discussed as an alternative to multi core processing and graphics card accelerators Instead of adjusting the application to the hardware FPGAs allow the hardware to also be adjusted to the

problem Acceleration of Biomedical Image Processing with Dataflow on FPGAs covers the transformation of image processing algorithms towards a system of deep pipelines that can be executed with very high parallelism The transformation process is discussed from initial design decisions to working implementations Two example applications from stochastic localization microscopy and electron tomography illustrate the approach further Topics discussed in the book include Reconfigurable hardware Dataflow computing Image processing Application acceleration

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