



# Computer Architecture: A Quantitative Approach, 3rd Edition

*John L. Hennessy, David A. Patterson*

Download now

[Click here](#) if your download doesn't start automatically

# Computer Architecture: A Quantitative Approach, 3rd Edition

*John L. Hennessy, David A. Patterson*

**Computer Architecture: A Quantitative Approach, 3rd Edition** John L. Hennessy, David A. Patterson

This best-selling title, considered for over a decade to be essential reading for every serious student and practitioner of computer design, has been updated throughout to address the most important trends facing computer designers today. In this edition, the authors bring their trademark method of quantitative analysis not only to high performance desktop machine design, but also to the design of embedded and server systems. They have illustrated their principles with designs from all three of these domains, including examples from consumer electronics, multimedia and web technologies, and high performance computing.

The book retains its highly rated features: Fallacies and Pitfalls, which share the hard-won lessons of real designers; Historical Perspectives, which provide a deeper look at computer design history; Putting it all Together, which present a design example that illustrates the principles of the chapter; Worked Examples, which challenge the reader to apply the concepts, theories and methods in smaller scale problems; and Cross-Cutting Issues, which show how the ideas covered in one chapter interact with those presented in others. In addition, a new feature, Another View, presents brief design examples in one of the three domains other than the one chosen for Putting It All Together.

The authors present a new organization of the material as well, reducing the overlap with their other text, *Computer Organization and Design: A Hardware/Software Approach 2/e*, and offering more in-depth treatment of advanced topics in multithreading, instruction level parallelism, VLIW architectures, memory hierarchies, storage devices and network technologies.

Also new to this edition, is the adoption of the MIPS 64 as the instruction set architecture. In addition to several online appendixes, two new appendixes will be printed in the book: one contains a complete review of the basic concepts of pipelining, the other provides solutions a selection of the exercises. Both will be invaluable to the student or professional learning on her own or in the classroom.

Hennessy and Patterson continue to focus on fundamental techniques for designing real machines and for maximizing their cost/performance.

- \* Presents state-of-the-art design examples including:
  - \* IA-64 architecture and its first implementation, the Itanium
  - \* Pipeline designs for Pentium III and Pentium IV
  - \* The cluster that runs the Google search engine
  - \* EMC storage systems and their performance
  - \* Sony Playstation 2
  - \* Infiniband, a new storage area and system area network
  - \* SunFire 6800 multiprocessor server and its processor the UltraSPARC III
  - \* Trimedia TM32 media processor and the Transmeta Crusoe processor
  
- \* Examines quantitative performance analysis in the commercial server market and the embedded market, as

well as the traditional desktop market.

Updates all the examples and figures with the most recent benchmarks, such as SPEC 2000.

- \* Expands coverage of instruction sets to include descriptions of digital signal processors, media processors, and multimedia extensions to desktop processors.

- \* Analyzes capacity, cost, and performance of disks over two decades.

Surveys the role of clusters in scientific computing and commercial computing.

- \* Presents a survey, taxonomy, and the benchmarks of errors and failures in computer systems.

- \* Presents detailed descriptions of the design of storage systems and of clusters.

- \* Surveys memory hierarchies in modern microprocessors and the key parameters of modern disks.

- \* Presents a glossary of networking terms.

 [Download Computer Architecture: A Quantitative Approach, 3r ...pdf](#)

 [Read Online Computer Architecture: A Quantitative Approach, ...pdf](#)

## **Download and Read Free Online Computer Architecture: A Quantitative Approach, 3rd Edition John L. Hennessy, David A. Patterson**

---

### **From reader reviews:**

#### **John Honeycutt:**

What do you think of book? It is just for students as they are still students or that for all people in the world, exactly what the best subject for that? Simply you can be answered for that question above. Every person has various personality and hobby for every single other. Don't to be pressured someone or something that they don't desire do that. You must know how great along with important the book Computer Architecture: A Quantitative Approach, 3rd Edition. All type of book is it possible to see on many resources. You can look for the internet sources or other social media.

#### **Joan Burton:**

Information is provisions for individuals to get better life, information nowadays can get by anyone on everywhere. The information can be a understanding or any news even a problem. What people must be consider any time those information which is within the former life are hard to be find than now's taking seriously which one is appropriate to believe or which one the particular resource are convinced. If you have the unstable resource then you have it as your main information it will have huge disadvantage for you. All of those possibilities will not happen with you if you take Computer Architecture: A Quantitative Approach, 3rd Edition as the daily resource information.

#### **Chris Boos:**

Often the book Computer Architecture: A Quantitative Approach, 3rd Edition has a lot associated with on it. So when you read this book you can get a lot of help. The book was written by the very famous author. This articles author makes some research previous to write this book. This kind of book very easy to read you can obtain the point easily after scanning this book.

#### **James Rutledge:**

Reading a guide make you to get more knowledge from this. You can take knowledge and information from the book. Book is prepared or printed or highlighted from each source that will filled update of news. In this particular modern era like at this point, many ways to get information are available for you. From media social similar to newspaper, magazines, science book, encyclopedia, reference book, novel and comic. You can add your understanding by that book. Ready to spend your spare time to open your book? Or just looking for the Computer Architecture: A Quantitative Approach, 3rd Edition when you essential it?

**Download and Read Online Computer Architecture: A Quantitative Approach, 3rd Edition John L. Hennessy, David A. Patterson  
#ALQZSDBWEV7**

## **Read Computer Architecture: A Quantitative Approach, 3rd Edition by John L. Hennessy, David A. Patterson for online ebook**

Computer Architecture: A Quantitative Approach, 3rd Edition by John L. Hennessy, David A. Patterson Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Computer Architecture: A Quantitative Approach, 3rd Edition by John L. Hennessy, David A. Patterson books to read online.

### **Online Computer Architecture: A Quantitative Approach, 3rd Edition by John L. Hennessy, David A. Patterson ebook PDF download**

### **Computer Architecture: A Quantitative Approach, 3rd Edition by John L. Hennessy, David A. Patterson Doc**

Computer Architecture: A Quantitative Approach, 3rd Edition by John L. Hennessy, David A. Patterson Mobipocket

Computer Architecture: A Quantitative Approach, 3rd Edition by John L. Hennessy, David A. Patterson EPub