计算机组成与设计

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《计算机组成与设计:硬件/软件接口(英文版·第4版·ARM版)》采用了一个MIPS处理器来展示计算机硬件技术、流水线、存储器层次结构以及I／O等基本功能。此外。《计算机组成与设计:硬件/软件接口(英文版·第4版·ARM版)》还包括一些关于x86架构的介绍。

这本最畅销的计算机组成书籍经过全面更新，关注现今发生在计算机体系结构领域的革命性变革：从单处理器发展到多核微处理器。此外，出版这本书的ARM版是为了强调嵌入式系统对于全亚洲计算行业的重要性，并采用ARM处理器来讨论实际计算机的指令集和算术运算。因为ARM是用于嵌入式设备的最流行的指令集架构，而全世界每年约销售40亿个嵌入式设备。与前几版一样。

采用ARMv6（ARM
11系列）为主要架构来展示指令系统和计算机算术运算的基本功能。

覆盖从串行计算到并行计算的革命性变革，新增了关于并行化的一章，并且每章中还有一些强调并行硬件和软件主题的小节。

新增一个由NVIDIA的首席科学家和架构主管撰写的附录，介绍了现代GPU的出现和重要性，首次详细描述了这个针对可视计算进行了优化的高度并行化、多线程、多核的处理器。

描述一种度量多核性能的独特方法——“Roofline

model”，自带benchmark测试和分析AMD Opteron X4、Intel Xeo 5000、Sun Ultra SPARC T2和IBM Cell的性能。

涵盖了一些关于闪存和虚拟机的新内容。提供了大量富有启发性的练习题，内容达200多页。

将AMD Opteron X4和Intel Nehalem作为贯穿《计算机组成与设计:硬件/软件接口(英文版・第4版・ARM版)》的实例。

用SPEC CPU2006组件更新了所有处理器性能实例。

海报：

作者介绍:

John L．Hennessy斯坦福大学校长，IEEE和DACM会士，美国国家工程研究院院士及美国科学艺术研究院院士，因在RISC技术方面做出的突出贡献而荣获T2001年的Eckert—Mauchly奖。同时他也是2001年SeymourCray计算机工程奖得主，并且和本书另外一位作者David A．Paterson分享了2000年的IEEE John von Neumann奖。

加州大学伯克利分校计算机科学系教授，美国国家工程研究院院士，lEEE和ACM会员，曾因成功的启发式教育方法被IEEE授予James H.MIAligan，Jr.教育奖章。他因为对RISC技术的贡献而荣获1995年IEEE技术成就奖。在RAID技术方面的成就为他赢得了1999年lEEE Reyrlold Johnson信息存储奖。2000年他和John L Henrlessy分享了冯・诺伊曼奖。

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英文原版

MIPS

评论

挺好的
还是学到点东西。英文的东西照搬到中文，确实在理解和进一步提高上有了很多障碍，本来很简单的从生活中的单词来的计算机术语，到了中文又冒出那么多的莫名其妙的概念。--是个大问题

还行, 讲得清楚, 不过废话稍多了一点

对于想理解计算机底层硬件组织的同学来说，是一部不错的入门书

概念性的东西

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