



CUDA by Example: An Introduction to General-Purpose GPU Programming

By Jason Sanders, Edward Kandrot



Download



Read Online

CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot

“This book is required reading for anyone working with accelerator-based computing systems.”

–From the Foreword by Jack Dongarra, University of Tennessee and Oak Ridge National Laboratory

CUDA is a computing architecture designed to facilitate the development of parallel programs. In conjunction with a comprehensive software platform, the CUDA Architecture enables programmers to draw on the immense power of graphics processing units (GPUs) when building high-performance applications. GPUs, of course, have long been available for demanding graphics and game applications. CUDA now brings this valuable resource to programmers working on applications in other domains, including science, engineering, and finance. No knowledge of graphics programming is required—just the ability to program in a modestly extended version of C.

***CUDA by Example*, written by two senior members of the CUDA software platform team, shows programmers how to employ this new technology. The authors introduce each area of CUDA development through working examples. After a concise introduction to the CUDA platform and architecture, as well as a quick-start guide to CUDA C, the book details the techniques and trade-offs associated with each key CUDA feature. You’ll discover when to use each CUDA C extension and how to write CUDA software that delivers truly outstanding performance.**

Major topics covered include

- Parallel programming
- Thread cooperation
- Constant memory and events
- Texture memory
- Graphics interoperability
- Atomics
- Streams
- CUDA C on multiple GPUs
- Advanced atomics

- Additional CUDA resources

All the CUDA software tools you'll need are freely available for download from NVIDIA.

<http://developer.nvidia.com/object/cuda-by-example.html>

 [Download CUDA by Example: An Introduction to General-Purpos
...pdf](#)

 [Read Online CUDA by Example: An Introduction to General-Purp
...pdf](#)

CUDA by Example: An Introduction to General-Purpose GPU Programming

By Jason Sanders, Edward Kandrot

CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot

“This book is required reading for anyone working with accelerator-based computing systems.”

—From the Foreword by Jack Dongarra, University of Tennessee and Oak Ridge National Laboratory

CUDA is a computing architecture designed to facilitate the development of parallel programs. In conjunction with a comprehensive software platform, the CUDA Architecture enables programmers to draw on the immense power of graphics processing units (GPUs) when building high-performance applications. GPUs, of course, have long been available for demanding graphics and game applications. CUDA now brings this valuable resource to programmers working on applications in other domains, including science, engineering, and finance. No knowledge of graphics programming is required—just the ability to program in a modestly extended version of C.

***CUDA by Example*, written by two senior members of the CUDA software platform team, shows programmers how to employ this new technology. The authors introduce each area of CUDA development through working examples. After a concise introduction to the CUDA platform and architecture, as well as a quick-start guide to CUDA C, the book details the techniques and trade-offs associated with each key CUDA feature. You’ll discover when to use each CUDA C extension and how to write CUDA software that delivers truly outstanding performance.**

Major topics covered include

- Parallel programming
- Thread cooperation
- Constant memory and events
- Texture memory
- Graphics interoperability
- Atomics
- Streams
- CUDA C on multiple GPUs
- Advanced atomics
- Additional CUDA resources

All the CUDA software tools you’ll need are freely available for download from NVIDIA.

<http://developer.nvidia.com/object/cuda-by-example.html>

CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders,

Edward Kandrot Bibliography

- Sales Rank: #46712 in Books
- Published on: 2010-07-29
- Original language: English
- Number of items: 1
- Dimensions: 9.00" h x .90" w x 7.30" l, 1.15 pounds
- Binding: Paperback
- 312 pages

 [Download CUDA by Example: An Introduction to General-Purpos ...pdf](#)

 [Read Online CUDA by Example: An Introduction to General-Purp ...pdf](#)

Download and Read Free Online CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot

Editorial Review

From the Back Cover

""This book is required reading for anyone working with accelerator-based computing systems."" -From the Foreword by Jack Dongarra, University of Tennessee and Oak Ridge National Laboratory
CUDA is a computing architecture designed to facilitate the development of parallel programs. In conjunction with a comprehensive software platform, the CUDA Architecture enables programmers to draw on the immense power of graphics processing units (GPUs) when building high-performance applications. GPUs, of course, have long been available for demanding graphics and game applications. CUDA now brings this valuable resource to programmers working on applications in other domains, including science, engineering, and finance. No knowledge of graphics programming is required-just the ability to program in a modestly extended version of C. "CUDA by Example, " written by two senior members of the CUDA software platform team, shows programmers how to employ this new technology. The authors introduce each area of CUDA development through working examples. After a concise introduction to the CUDA platform and architecture, as well as a quick-start guide to CUDA C, the book details the techniques and trade-offs associated with each key CUDA feature. You'll discover when to use each CUDA C extension and how to write CUDA software that delivers truly outstanding performance. Major topics covered include

- Parallel programming
- Thread cooperation
- Constant memory and events
- Texture memory
- Graphics interoperability
- Atomics
- Streams
- CUDA C on multiple GPUs
- Advanced atomics
- Additional CUDA resources

All the CUDA software tools you'll need are freely available for download from NVIDIA.<http://developer.nvidia.com/object/cuda-by-example.html>

About the Author

Jason Sanders is a senior software engineer in the CUDA Platform group at NVIDIA. While at NVIDIA, he helped develop early releases of CUDA system software and contributed to the OpenCL 1.0 Specification, an industry standard for heterogeneous computing. Jason received his master's degree in computer science from the University of California Berkeley where he published research in GPU computing, and he holds a bachelor's degree in electrical engineering from Princeton University. Prior to joining NVIDIA, he previously held positions at ATI Technologies, Apple, and Novell. When he's not writing books, Jason is typically working out, playing soccer, or shooting photos.

Edward Kandrot is a senior software engineer on the CUDA Algorithms team at NVIDIA. He has more than twenty years of industry experience focused on optimizing code and improving performance, including for Photoshop and Mozilla. Kandrot has worked for Adobe, Microsoft, and Google, and he has been a consultant at many companies, including Apple and Autodesk. When not coding, he can be found playing

World of Warcraft or visiting Las Vegas for the amazing food.

Users Review

From reader reviews:

Joann Hamilton:

The book with title CUDA by Example: An Introduction to General-Purpose GPU Programming contains a lot of information that you can learn it. You can get a lot of help after read this book. This particular book exist new know-how the information that exist in this book represented the condition of the world currently. That is important to you to know how the improvement of the world. That book will bring you within new era of the the positive effect. You can read the e-book in your smart phone, so you can read this anywhere you want.

Denise Zimmerman:

Your reading 6th sense will not betray you actually, why because this CUDA by Example: An Introduction to General-Purpose GPU Programming guide written by well-known writer who knows well how to make book which might be understand by anyone who read the book. Written throughout good manner for you, still dripping wet every ideas and composing skill only for eliminate your personal hunger then you still skepticism CUDA by Example: An Introduction to General-Purpose GPU Programming as good book not simply by the cover but also by content. This is one e-book that can break don't determine book by its handle, so do you still needing another sixth sense to pick this kind of!? Oh come on your studying sixth sense already said so why you have to listening to one more sixth sense.

Patrice Reese:

Beside this particular CUDA by Example: An Introduction to General-Purpose GPU Programming in your phone, it may give you a way to get closer to the new knowledge or details. The information and the knowledge you can got here is fresh through the oven so don't become worry if you feel like an outdated people live in narrow town. It is good thing to have CUDA by Example: An Introduction to General-Purpose GPU Programming because this book offers for your requirements readable information. Do you sometimes have book but you don't get what it's facts concerning. Oh come on, that will not happen if you have this within your hand. The Enjoyable arrangement here cannot be questionable, similar to treasuring beautiful island. Techniques you still want to miss this? Find this book as well as read it from now!

Donald Spada:

Do you like reading a reserve? Confuse to looking for your chosen book? Or your book has been rare? Why so many concern for the book? But just about any people feel that they enjoy for reading. Some people likes studying, not only science book but also novel and CUDA by Example: An Introduction to General-Purpose GPU Programming or perhaps others sources were given information for you. After you know how the fantastic a book, you feel wish to read more and more. Science book was created for teacher or perhaps students especially. Those textbooks are helping them to add their knowledge. In other case, beside science

reserve, any other book likes CUDA by Example: An Introduction to General-Purpose GPU Programming to make your spare time far more colorful. Many types of book like this.

Download and Read Online CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot #FWNCZ9XT67Q

Read CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot for online ebook

CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot 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 CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot books to read online.

Online CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot ebook PDF download

CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot Doc

CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot Mobipocket

CUDA by Example: An Introduction to General-Purpose GPU Programming By Jason Sanders, Edward Kandrot EPub