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Titolo	Modern parallel programming with C++ and Assembly language : X86 SIMD development using AVX, AVX2, and AVX-512 // Daniel Kusswurm
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ISBN	1-4842-7918-2
Descrizione fisica	1 online resource (642 pages)
Disciplina	005.133
Soggetti	Assembly languages (Electronic computers) C++ (Computer program language) Computer architecture
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Chapter 1 SIMD Fundamentals -- Chapter 2 AVX C++ Programming - Part 1 -- Chapter 3 AVX C++ Programming - Part 2 -- Chapter 4 AVX2 C++ Programming - Part 1 -- Chapter 5 AVX2 C++ Programming - Part 2 -- Chapter 6 AVX2 C++ Programming - Part 3 -- Chapter 7 AVX-512 C++ Programming - Part 1 -- Chapter 8 AVX-512 C++ Programming - Part 2 -- Chapter 9 Supplemental C++ SIMD Programming -- Chapter 10 X86 Processor Architecture -- Chapter 11 Core Assembly Language Programming Part 1 -- Chapter 12 Core Assembly Language Programming Part 2 -- Chapter 13 AVX Assembly Language Programming Part 1 -- Chapter 14 AVX Assembly Language Programming Part 2 -- Chapter 15 AVX2 Assembly Language Programming Part 1 -- Chapter 16 AVX2 Assembly Language Programming Part 2 -- Chapter 17 AVX-512 Assembly Language Programming Part 1 -- Chapter 18 AVX-512 Assembly Language Programming Part 2 -- Chapter 19 SIMD Usage and Optimization Guidelines -- Appendix A Source Code and Development Tools -- Appendix B References and Resources.
Sommario/riassunto	Learn the fundamentals of x86 Single instruction multiple data (SIMD) programming using C++ intrinsic functions and x86-64 assembly

language. This book emphasizes x86 SIMD programming topics and technologies that are relevant to modern software development in applications which can exploit data level parallelism, important for the processing of big data, large batches of data and related important in data science and much more.

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