

Opinions Libres

le blog d'Olivier Ezratty

Understanding Quantum Technologies 2025 on Amazon

The online PDF version of the 8th edition of the book "Understanding Quantum Technologies" is available since September 29th.

As I do every year, I continue to update the book, first to publish it on arXiv which I did late October. On top of many small updates, I added a small section on the "Making of" of this version of the book which is the first I did in LaTeX.

I then continued to refine it – and refinement is an endless task – to publish it on Amazon KDP using self-publishing. The most tedious part was to create the cover with the right spine size. I automatized it entirely with LaTeX, to fit Amazon's constraints.

So here it is. This new paperback edition is available throughout the world, and in five parts.

Part 1 "**Prologue**" (360 pages, \$35 and 35€) which starts with the history of quantum physics highlighting the key contributors of this field and quantum physics 101 (quantization, superposition, entanglement and the likes). It then digs into quantum computing with starting with describing how gate-based quantum computing operates (linear algebra, qubits, gates, measurement), and then quantum computing engineering which includes quantum computer systems architecture, quantum error handling, quantum memory, quantum energetics, a new scientific part on a rarely discussed topic, the Lieb-Robinson limit, how to deal with uncertainty and economics.

Part 2 "Computing hardware" (452 pages, \$44 and 40€) contains a description of all qubit types with their science, engineering and vendors offerings and roadmap, then quantum enabling technologies, and at last unconventional computing, which may compete with both classical computing and quantum computing. It is probably the most detailed place describing what industry vendors are doing.

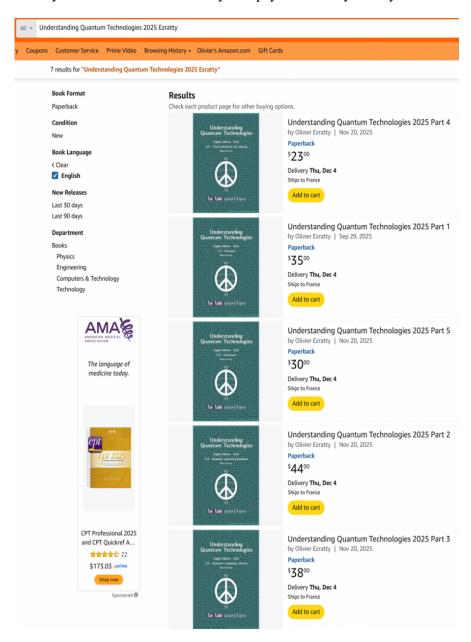
Part 3 "Computing software" (354 pages, \$38 and 34€) covers quantum algorithms, software tools, use cases and case studies across about 20 different markets (chemical engineering, life sciences, transportation, financial services, etc.).

Part 4 "Communications and sensing" (182 pages, \$23 and 21€) contains the parts related to quantum communications, quantum cryptography, quantum post-quantum cryptography and quantum sensing including a new subsection on dark matter quantum sensing.

Part 5 "**Ecosystem**" (216 pages, \$30 and 27€) describes quantum ecosystems throughout the world from the entrepreneurial to the country scene, corporate adoption, quantum technologies and society, and quantum fake sciences, plus a glossary. I even added a timeline of key technology and ecosystem advances year by year since 2018, the year I started to publish this book. It adds a making of for the book.

You can order these parts on Amazon with looking for "Understanding Quantum Technologies 2025" in your

preferred marketplace. In total, if you order the five parts, you're in for \$170 and about 157€ depending on your country's VAT. Think about what you'd pay for an analyst study with less information!



As a reminder, the online version of the book is always free and available in PDF format, on both Letter and A4 page sizes, with either the whole 1522 pages book, or with separate lighter PDF files for each of the 5 parts.

If you want me to sign it, get one and find me wherever I go, like in various conferences (QUEST-IS in Paris and Q2B Santa Clara for example, this December 2025).

Whatever the format, isn't that a good Christmas gift for your friends?

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