

NEW BOOKS & MEDIA

Quantum Ethics

A Call to Action

The Quantum Daily
Teralon, 2021

As Peter Parker was famously warned by his Uncle Ben, “With great power comes great responsibility.” That modern-day proverb is the theme of *Quantum Ethics*, a new minidocumentary about the moral issues surrounding quantum computers. It might seem like an idle concern, but the film compellingly argues that the machines’ sheer strength will enable unprecedented technological developments that could prove dangerous, such as destructive weaponry, powerful artificial intelligence, and the breaking of seemingly secure encryption technologies. Even if those dire scenarios don’t come to pass, quantum computers, if not allocated equitably, would likely concentrate more of the world’s wealth in the hands of what one interviewee pithily terms a “bunch of really, really rich hedge fund people.” *Quantum Ethics* cautions us to take heed before the genie is out of the bottle.

—RD



Not Necessarily Rocket Science

A Beginner's Guide to Life in
the Space AgeKellie Gerardi
Mango, 2020. \$19.95

Part history of space exploration, part memoir, *Not Necessarily Rocket Science* focuses on the development of the aerospace industry and the author’s own part as a space-travel advocate and science communicator. Kellie Gerardi has trained for spaceflight, conducted research in microgravity, and made a career as a commercial spaceflight industry professional,

working for such entities as the Commercial Spaceflight Federation, the Space Frontier Foundation, and Masten Space Systems. Her enthusiasm and passion for what she calls the new era in space exploration and for the brighter future for humanity it represents are evident throughout her narrative.

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Meteorite

How Stones from Outer Space
Made Our WorldTim Gregory
Basic Books, 2020. \$30.00

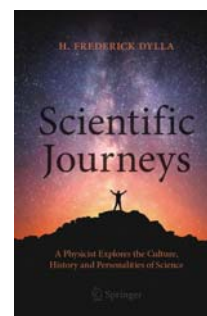
The simplicity of the title *Meteorite* belies the vastness of the actual subject matter covered by cosmochemist Tim Gregory. In discussing “how stones from outer space made our world,” Gregory explains how the unique chemistry of meteorites that have fallen to Earth has provided insights into the creation of not only our own planet but the entire solar system. Along the way, he covers various other topics, such as some of the earliest discoveries of meteorites—including one that hit the Chaco region of Argentina more than 4000 years ago—and the development of the field of cosmochemistry. Aimed at the general reader, Gregory’s debut science book brings geology to life with his easy conversational style and nontechnical narrative.

—CC

Scientific
JourneysA Physicist
Explores
the Culture,
History and
Personalities
of ScienceH. Frederick Dylla
Springer, 2020. \$27.99 (paper)

A collection of vignettes about science, its history, and its intersection with the public sphere, *Scientific Journeys* was authored by H. Frederick Dylla, a plasma physicist and former CEO of the American Institute of Physics (publisher of PHYSICS TODAY). The anecdotes cover figures as varied as medieval botanist Hildegard of Bingen; electrical engineer Amar G. Bose, founder of the eponymous audio company; and particle physicist Jean Trân Thanh Vân, who helped rebuild ties between scientists in his native Vietnam and the international scientific community after the country’s reopening in the 1990s. A self-described “Sputnik kid,” Dylla was motivated to pursue a career in science by Cold War angst that the US was falling behind after the 1957 launch of the Soviet satellite. Some of the vignettes may seem naïve in our age of political polarization, but the author’s infectious enthusiasm for science—and his evocative depiction of post-World War II optimism about the future—is inspiring.

—RD

Loop Quantum
Gravity for EveryoneRodolfo Gambini and Jorge Pullin
World Scientific,
2020. \$28.00

In this new book, physicists Rodolfo Gambini and Jorge Pullin take on the challenging task of explaining loop quantum gravity to a general audience in less than 100 pages. The result is an enjoyable read that will be accessible to students and scientifically curious laypeople. The authors begin with explanations of gravitation and quantum theory before moving on to loop quantum gravity and its applications, including black holes and spin foams.

—MB PT

