

# Scientific biographies for the beach



**As we go into the Northern Hemisphere summer beach reads season — and the Southern Hemisphere winter fireside time — we share five biographical books we've been reading recently.**

***The Man from the Future: The Visionary Life of John von Neumann*, by Ananyo Bhattacharya (Allen Lane, 2021).**

The English Wikipedia entry for John von Neumann has a 'Known for' list of 120 topics, across quantum mechanics, mathematics, economics, computer science and more. It is this wide-ranging legacy that Ananyo Bhattacharya tackles in *The Man from the Future*. Bhattacharya blends the story of von Neumann's life with details of his World War II and Cold War context, along with lucid explanations of von Neumann's key mathematical and scientific achievements. Such a wide scope could easily lose coherence, but Bhattacharya's expert handling of his material results in a lengthy but profoundly readable and fascinating volume.

***Proving Ground: The Untold Story of the Six Women Who Programmed the World's First Modern Computer*, by Kathy Kleiman (Hurst & Co., 2022).**

As a computer science undergraduate, Kathy Kleiman stumbled upon a photograph of the ENIAC, an early electronic computer. The black and white photograph showed six people twiddling the dials of the giant machine. There were four men and two women — the latter unnamed in the caption. Fascinated by the women, Kleiman went down a rabbit hole of research to name the women and find out their stories. The result is this book which follows the lives of six women who programmed the ENIAC: Kathleen McNulty, Frances Bilas, Frances Snyder, Marlyn Wescoff and Ruth Lichterman. Based on archival research and extensive interviews, the book paints a vivid picture of the lives of these women, their paths that led to the ENIAC and how they programmed one of the first electronic computers.

***A Mind Over Matter: Philip Anderson and the Physics of the Very Many*, by Andrew Zangwill (Oxford Univ. Press, 2021).**

It is rare to read a popular book on condensed-matter physics, and a book about a condensed-matter physicist is even rarer. In this biography, Andrew Zangwill tells the story of Philip Anderson's life, looking for clues that give insight into Anderson's powerful intuitions and unique

ways of thinking. For example, Zangwill attributes Anderson's preference for playing Go over Chess to a strategic mind (rather than a tactical one). Anderson's approach to physics and his personality both shine through the book, which opens with a humorous transcript of him parrying with Steven Weinberg in front of Congress while they debated the building of a new particle collider. Zangwill dips into explanations of physics at times to contextualize Anderson's work, and topics like ferromagnetism are explained in intuitive ways — making them accessible to lay readers and staying true to Anderson's way of thinking.

***Holding the Knife's Edge: Journeys of Black Female Scientists*, by Thato Motlhalamme and Evodia Setati (Quickfox Publishing, 2020).**

The title of *Holding the Knife's Edge: Journeys of Black Female Scientists* is drawn from the Sesotho/Tswana proverb, "A mother holds the knife's edge to protect her offspring," and one of the aims of this book is to show the next generation of South African scientists that a fruitful career is possible. The book also serves as a reminder to the rest of the world of the scientific achievements of Africa, especially those of black women. If these goals sound rather worthy, it is also a fun and fascinating series of profiles of scientists you probably haven't already read multiple biographies of, accompanied by light-hearted illustrations by Warwick Goldswain. Great for dipping in and out of, and for giving to any scientist you know, young or old, who needs some encouragement.

***Well, Doc, You're In: Freeman Dyson's Journey Through the Universe*, edited by David Kaiser (MIT Press, 2022).**

Freeman Dyson's career spanned an extraordinary range of work from quantum field theory, nuclear engineering and biophysics. So, it seems fitting that a book about him should span a range of authors who intersect with Dyson's life at different angles — physicists, historians and science-writers, including two of his own children. Each chapter is written by a different person, focussing on a different aspect of his life. Featured throughout is the work of artist Laurent Taudin, which explores Dyson's life and work through a series of sketches inspired by his multifaceted intellectual interests as well as his love of music. Together, the book forms a colourful collage to give insight into the life of one of the giants of twentieth-century science.

Published online: 4 July 2023