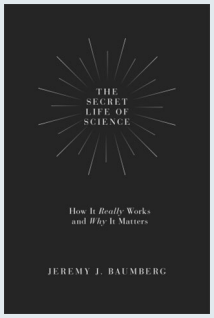
ON OUR BOOKSHELF

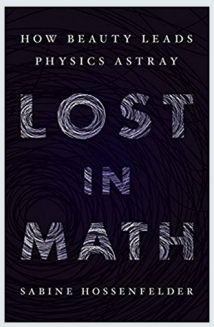


The Secret Life of Science: How It Really Works and Why It Matters

By Jeremy J. Baumberg

PRINCETON UNIVERSITY PRESS: 2018. 248 PP. £24.00

Science is the basic human endeavour of understanding the world we live in. It relies on structures that ensure its continued success, but often at the expense of its practitioners or even its beneficiaries. Jeremy Baumberg dives into the 'secret life' of science, discussing things like the main motivators for science, the 'publish or perish' culture and how scientific knowledge propagates within and outside the scientific community. Baumberg paints a complicated picture of the science ecosystem and concludes by asking if and how it can be improved.

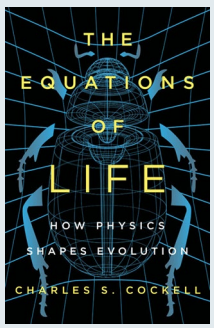


Lost in Math: How Beauty Leads Physics Astray

By Sabine Hossenfelder

BASIC BOOKS: 2018. 304 PP. £22.99

Sabine Hossenfelder starts off by asking a very simple question: "we believe the laws of nature are beautiful, but is not believing something a scientist must not do?" The author wonders whether our quest for beauty and simplicity in science has led us astray. Do elegant but ultimately untestable theories help science move forward? The author touches on things like the grand unification and dark matter, both stubbornly elusive to prove, to make a case that hard data rather than (ever-changing) aesthetic considerations should drive our quest for knowledge.

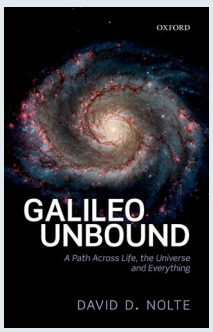


The Equations of Life: How Physics Shapes Evolution

By Charles S. Cockell

BASIC BOOKS: 2018. 352 PP. US$32.00

The laws of physics are often considered to be fundamental, in the sense that they govern the very basic structure of matter. Yet while living beings, from a ladybug to humans, are made out of matter, the link between the laws of physics and biology is not an intuitive one. Charles Cockell makes the case that the diversity of life is only an illusion behind which much simpler and persistent 'forms' exist. These forms are a direct consequence of physical laws and as such they could potentially be relevant to life on Earth and throughout the cosmos.



Galileo Unbound: A Path Across Life, the Universe and Everything

By David D. Nolte

OXFORD UNIVERSITY PRESS: 2018. 352 PP. £25.00

Galileo was one of the most important founding figures of modern science. David Nolte, in *Galileo Unbound* draws a continuous line starting from Galileo, to Newton, Lagrange and Poincaré, all the way to Darwin and beyond. The concept of a trajectory in space is taken as the common link, starting from three dimensions, progressing into four dimensions and graduating into multi-dimensional spaces. The book tells the story of how 'space' expanded in dimensions and increased in abstraction, and what the role of Galileo and the scientists that came after him was in this evolution.

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