



new in the library

August 2019 - Physics

Undergraduate Lecture Notes in Physics

Written by an ICTP associate, it introduces key concepts in quantum physics and provides a gentle introduction to the field of nanotechnology.

Hassan Raza

Freshman Lectures on Nanotechnology

ICTP Associate!

From My Vast Repertoire ... Guido Altarelli's Legacy

A collection of original contributions, inspired by Altarelli's ideas, whether directly or indirectly, by some of the leading theoretical and experimental high-energy physicists currently in the field.

Stefano Forte
Aharon Levy
Giovanni Ridolfi
editors

World Scientific

Astronomy and Astrophysics Library

Rudolf Kippenhahn
Alfred Weigert
Achim Weiss

Stellar Structure and Evolution

Second Edition

"There is an enormous amount of physics and astronomy in this second edition. Some of the material cannot easily be found in other books, certainly, anyone planning to teach the subject should have it."

Virginia Trimble, *The Observatory*

BEYOND WEIRD

"A clear and deeply researched account of what's known about the quantum laws of nature, and how to think about what they might really mean"

Nature

WHY EVERYTHING YOU THOUGHT
YOU KNEW ABOUT QUANTUM
PHYSICS IS... DIFFERENT

PHILIP BALL

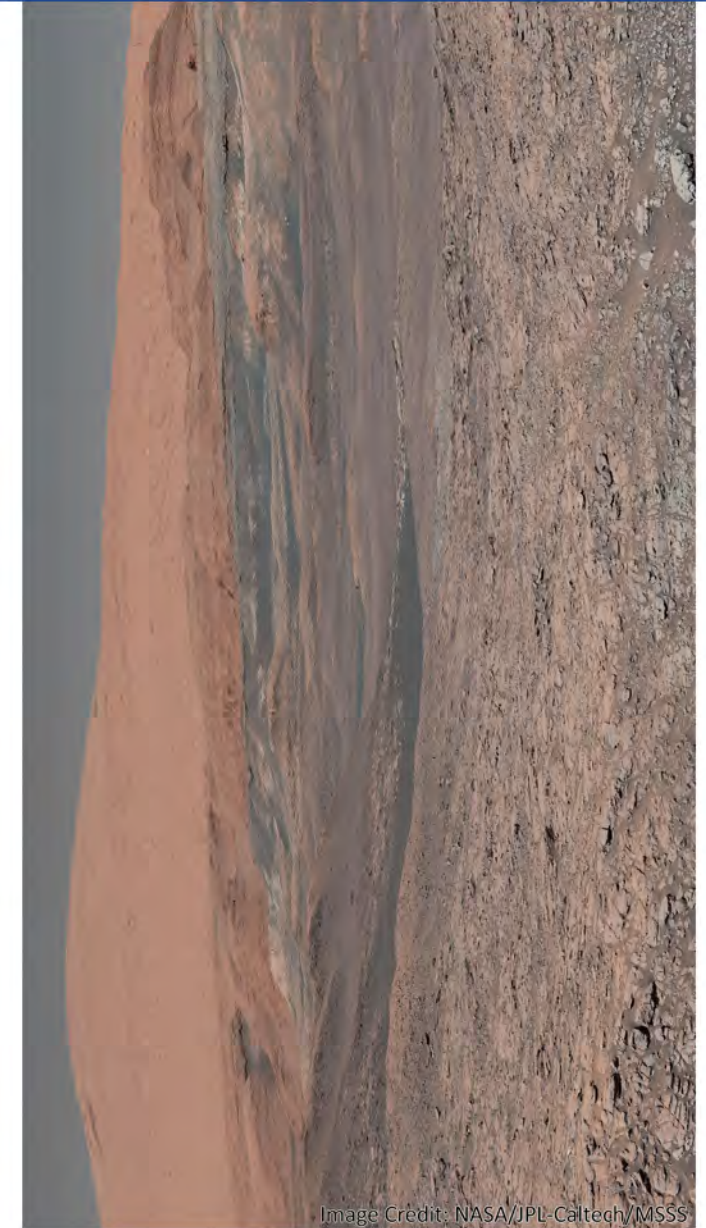


Image Credit: NASA/JPL-Caltech/MSSS

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August 2019 - Mathematics

Theory of Groups and Symmetries

Finite Groups, Lie Groups, and Lie Algebras

Presents the main approaches in study of algebraic structures of symmetries in models of theoretical and mathematical physics, and covers the commonly encountered quantum groups, including Yangians.



Alexey P Isaev
Valery A Rubakov

Utkir A. Rozikov

A systematic review of the theory of dynamical systems, with a concise presentation of billiards in elementary mathematics and simple billiards related to geometry and physics, by ICTP associate U. A. Rozikov

An Introduction to Mathematical Billiards

ICTP Associate!

World Scientific

A Gentle Course in Local Class Field Theory

Pierre Guillot

"The title intrigues! How could anyone possibly introduce class field theory (local or global) gently? Guillot comes as close as one might hope."

D. V. Feldman, *Choice*



CAMBRIDGE

Steven Roman

An Introduction to the Language of Category Theory

"A fast, but very complete, introduction to the basic concepts in category theory, well complemented by a list of proposed exercises at the end of every chapter"

Juan Antonio López-Ramos, *Mathematical Reviews*

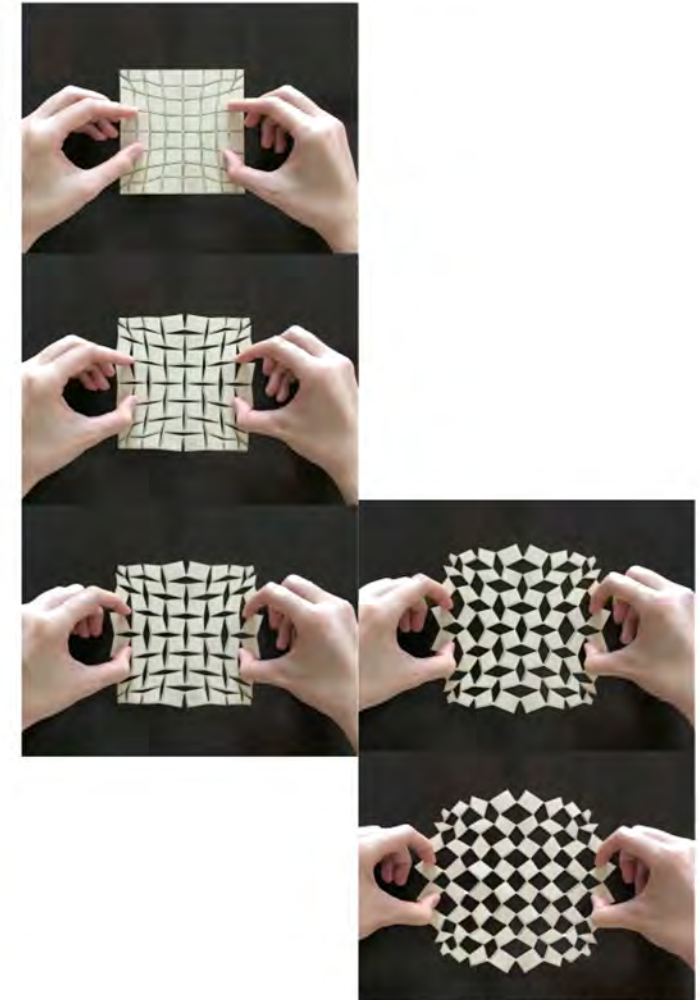
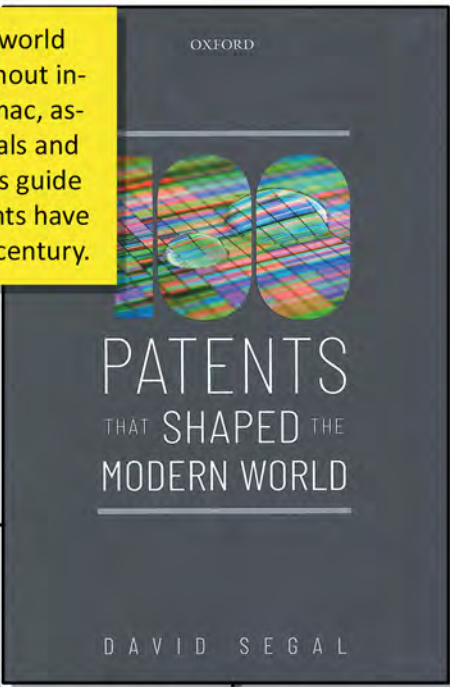


image credit: 10.1038/s41563-019-0452-y

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What would our world today be like without inventions like tarmac, aspirin, liquid crystals and barbed wire? This guide shows how patents have shaped the 21st century.



PETER S. UNGAR

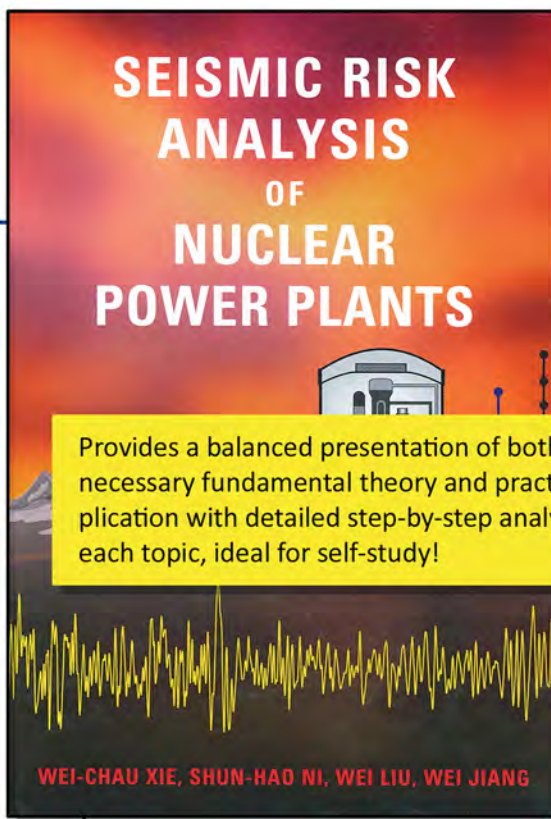
Evolution's Bite

"The revelation of not only how the science is done, but also what a huge difference a tangential idea such as Ungar's topographic analysis can make, is one of the great delights and strengths of the book. Our mouths are full of history."

Adrian Barnett, New Scientist

SEISMIC RISK ANALYSIS OF NUCLEAR POWER PLANTS

Provides a balanced presentation of both the necessary fundamental theory and practical application with detailed step-by-step analysis for each topic, ideal for self-study!



WEI-CHAU XIE, SHUN-HAO NI, WEI LIU, WEI JIANG

Reinforcement Learning

An Introduction
second edition

Richard S. Sutton and Andrew G. Barto

"The bible of reinforcement learning, the new edition is particularly timely given the burgeoning activity in the field"

Pedro Domingos, University of Washington

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August 2019 - Other Fields

Inmaculada de Melo-Martin & Kristen Intemann

how to bridge the gap between scientists and the public

THE FIGHT AGAINST DOUBT

"Scientific dissent often facilitates scientific and social progress but can also be problematic. Focusing on the qualities of the "soil," rather than the mere existence of "seeds of doubt" —makes this a valuable book."

Erin J. Nash, Science

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