

Physical Sciences Paper2 Memorandum N

In this original and integrated approach to theoretical reasoning in physics, Malcolm Longair illuminates the subject from the perspective of real physics as practised by research scientists. Concentrating on the basic insights, attitudes and techniques that are the tools of the modern physicist, this approach conveys the intellectual excitement and beauty of the subject. Through a series of seven case studies, an undergraduate course in classical physics and the discovery of quanta are reviewed from the point of the view of how the great discoveries and changes of perspective came about. This approach illuminates the intellectual struggles needed to attain understanding of some of the most difficult concepts in physics. Longair's highly acclaimed text has been fully revised and includes new studies on the physics of fluids, Maxwell's great paper on equations for the electromagnetic field and problems of contemporary cosmology and the very early universe.

Originally published in 1988, the essays in this book focus primarily on colonial medicine in the British Empire but comparative material on the experience of France and Germany is also included. The authors show how medicine served as an instrument of empire, as well as constituting an imperializing cultural force in itself, reflecting in different contexts, the objectives of European expansion – whether to conquer, to occupy or to settle. With chapters from a distinguished array of social and medical historians, colonial medicine is examined in its topical, regional and professional diversity. Ranging from tropical to temperate regions, from 18th Century colonial America to 20th Century South Africa, this book is an important contribution to our understanding of the influence of European medicine on imperial history.

Computer Physics Communications

Reactor Physics Constants

An Alternative Approach to the Understanding of Quantum Mechanics

International Conference on Plasma Physics

New Serial Titles

Along with windstorms, floods are the most common and widespread of all natural disasters. Although they can often be predicted, they cause loss of life, damage and destruction, as many urban communities are located near coasts and rivers. In terms of victims, floods are responsible for more than half the deaths caused by natural catastrophes. As flood events appear to be rapidly increasing world-wide, an advanced and universal approach to urban flooding and how to manage will help reduce flood impact. This textbook integrates expertise from disciplines such as hydrology, sociology, architecture, urban design, construction and water resources engineering. The subject is approached from an international perspective and case studies, exercises, expert advice and literature recommendations are included to support the theory and illustrations. Developed by a team of specialists, this volume is intended for urban flood management education of hydrology, geography, civil and environmental engineering, and management students at university level. Moreover, professionals will find this book useful as a reference. More information on flood resilience and urban flood management can be found at www.floodresiliencgroup.org For a preview, please go to http://issuu.com/crcpress/docs/urban_flood_management

Chemistry is often seen as a difficult subject to understand. This book focusses on the triangle model that Alex H. Johnstone developed in the early 1980s. Originally conceived in the context of making chemistry more accessible to a wider range of learners, the model has been applied in almost every area of education in chemistry at all stages of learning. In looking at why chemistry is difficult, there are two central questions. Firstly, does the problem relate to the nature of chemistry and, secondly, does it relate to the way humans gain understanding? Both were found to be important and the answers to the two question were found to be connected. The triangle model arose from sustained research into human learning. The central finding from research is the critical role of working memory and the model rationalises so much evidence from chemistry education research as well as the repeated experiences of teachers of chemistry at all levels. In order to understand chemistry, it is essential to develop sound mental models of molecular reality. It generates major implications for the way a chemistry curriculum should be constructed and the processes of teaching and learning in chemistry when the goal is focussed on understanding the key ideas. Some of these implications are developed and pointers offered to more successful ways forward. The power of the Johnstone Triangle lies in the way it offers clear directions for all involved in chemistry education. It is hoped that this book will prove helpful to all involved in sharing the exciting story of the way humans have come to understand the molecular world, one of the great examples of great human endeavour.

Disease, Medicine and Empire

Australian National Bibliography

Monthly Catalog of United States Government Publications

Research Summary

Engineering Design Handbook

ERDA Energy Research Abstracts

Innovative account of the origins of quantum mechanics told from a historical perspective, for advanced undergraduates, graduate students and researchers.

A union list of serials commencing publication after Dec. 31, 1949.

Aspects of Kolmogorov Complexity the Physics of Information

Cumulative listing

Book Catalog of the Library and Information Services Division: Shelf List catalog

American Naval Officers, Scientists and the Ocean Environment

American Journal of Physics

Research Memorandum

Early in the twentieth century, American naval officers questioned the significance of applied ocean science. At the same time, scientists were content to keep naval warfare at arm's length. German U-boat success in World War I changed these views. In "An Ocean in Common" Weir focuses on the course that led scientists and naval officers to better understand one another and the world ocean, detailing how this alliance led to the emergence of modern submarine warfare and oceanography and ocean engineering as vital fields of study.

Just 23 years ago Benoit Mandelbrot published his famous picture of the Mandelbrot set, but that picture has changed our view of the mathematical and physical universe. In this text, Mandelbrot offers 25 papers from the past 25 years, many related to the famous inkblot figure. Of historical interest are some early images of this fractal object produced with a crude dot-matrix printer. The text includes some items not previously published.

Physics Briefs

Monthly Catalogue, United States Public Documents

Second Supplement

Proceedings : Joint Conference of Fourth Kiev International Conference on Plasma Theory and Fourth International Congress on Waves and Instabilities in Plasmas, April 7-11, 1980, Nagoya, Japan

Chapters from The History of Solid State Physics

Memorandum -

This landmark work chronicles the origin and evolution of solid state physics, which grew to maturity between 1920 and 1960. The book examines the early roots of the field in industrial, scientific and artistic efforts and traces them through the 1950s, when many physicists around the world recognized themselves as members of a distinct subfield of physics research centered on solids. The book opens with an account of scientific and social developments that preceded the discovery of quantum mechanics, including the invention of new experimental means for studying solids and the establishment of the first industrial laboratories. The authors set the stage for the modern era by detailing the formulation of the quantum field theory of solids. The core of the book examines six major themes: the band theory of solids; the phenomenology of imperfect crystals; the puzzle of the plastic properties of solids, solved by the discovery of dislocations; magnetism; semiconductor physics; and collective phenomena, the context in which old puzzles such as superconductivity and superfluidity were finally solved. All readers interested in the history of science will find this absorbing volume an essential resource for understanding the emergence of contemporary physics.

The research presented in Aspects of Kolmogorov Complexity addresses the fundamental standard of defining randomness as measured by a Martin-Lof level of randomness as found in random sequential binary strings. A classical study of statistics that addresses both a fundamental standard of statistics as well as an applied measure for statistical communication theory. The research points to compression levels in a random state that are greater than is found in current literature. A historical overview of the field of Kolmogorov Complexity and Algorithmic Information Theory, a subfield of Information Theory, is given as well as examples using a radix 3, radix 4, and radix 5 base numbers for both random and non-random sequential strings. The text also examines monochromatic and chromatic symbols and both theoretical and applied aspects of data compression as they relate to the transmission and storage of information. The appendix contains papers on the subject given at conferences and the references are current.ContentsTechnical topics addressed in Aspects of Kolmogorov Complexity include: • Statistical Communication Theory • Algorithmic Information Theory • Kolmogorov Complexity • Martin-Lof Randomness • Compression, Transmission and Storage of Information

Guide to U.S. Government Publications

Uspekhi

Nuclear Science Abstracts

Physikalische Berichte

Theoretical Concepts in Physics

Catalogs of the Scripps Institution of Oceanography Library

Out of the Crystal MazeChapters from The History of Solid State PhysicsOxford University Press

National Library of Medicine Current Catalog

A Collection of Technical Papers: AIAA 86-1235

Urban Flood Management

The Johnstone Triangle

Applied Mechanics Reviews

The Mandelbrot Set and Beyond