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Polytropes - Georg P. Horedt 2006-05-02
This book provides the most complete academic treatment on the application of polytropes ever published. It is primarily intended for students and scientists working in Astrophysics and related fields. It provides a full overview of past and present research results and is an indispensible guide for everybody wanting to apply polytropes.
Journal of the Chemical Society - Chemical Society (Great Britain) 1909
"Titles of chemical papers in British and foreign journals" included in Quarterly journal, v. 1-12.
The Early Universe - Edward Kolb 2018-03-08
The Early Universe has become the standard reference on forefront topics in cosmology, particularly to the early history of the Universe. Subjects covered include primordial nubleosynthesis, baryogenesis, phases transitions, inflation, dark matter, and galaxy formation, relics such as axions, neutrinos and monopoles, and speculations about the Universe at the Planck time. The book includes more than ninety figures as well as a five-page update discussing recent developments such as the COBE results.
Gravity - James B. Hartle 2003
Providing relevant solutions of the Einstein equation, this text introduces field equations of general relativity & their supporting mathematics. Emphasis is on the connection between observation & theory and the phenomena of gravitational physics.
The Ashgate Companion to Contemporary Philosophy of Physics - Dean Rickles 2008
Introducing the reader to the very latest developments in the philosophical foundations of physics, this book covers advanced material at a level suitable for beginner and intermediate students. A detailed overview is provided of the central debates in the philosophy of quantum mechanics, statistical mechanics, quantum computation, and quantum gravity. This book enables both philosophers and physicists to engage with the most pressing problems in contemporary philosophy of physics in a fruitful way.
Fourteenth Marcel Grossmann Meeting, The: On Recent Developments In Theoretical And Experimental General Relativity, Astrophysics, And Relativistic Field Theories - Proceedings Of The Mg14 Meeting On General Relativity (In 4 Parts) - Massimo Bianchi 2017-10-13
The four volumes of the proceedings of MG14 give a broad view of all aspects of gravitational physics and astrophysics, from mathematical issues to recent observations and experiments. The scientific program of the meeting included 35 morning plenary talks over 6 days, 6 evening popular talks and 100 parallel sessions on 84 topics over 4 afternoons.Volume A contains plenary and review talks ranging from the mathematical foundations of classical and quantum gravitational theories including recent developments in string theory, to precision tests of general relativity including progress towards the detection of gravitational waves, and from supernova cosmology to relativistic astrophysics, including topics such as gamma ray bursts, black hole physics both in our galaxy and in active galactic nuclei in other galaxies, and neutron star, pulsar and white dwarf astrophysics.The remaining volumes include parallel sessions which touch on dark matter, neutrinos, X-ray sources, astrophysical black holes, neutron stars, white dwarfs, binary systems, radiative transfer, accretion disks, quasars, gamma ray bursts, supernovas, alternative gravitational theories, perturbations of collapsed objects, analog models, black hole thermodynamics, numerical relativity, gravitational lensing, large scale structure, observational cosmology, early universe models and cosmic microwave background anisotropies, inhomogeneous cosmology, inflation, global structure, singularities, chaos, Einstein-Maxwell systems, wormholes, exact solutions of Einstein's equations, gravitational waves, gravitational wave detectors and data analysis, precision gravitational measurements, quantum gravity and loop quantum gravity, quantum cosmology, strings and branes, self-gravitating systems, gamma ray astronomy, cosmic rays and the history of general relativity.
Policy Studies in Canada - Laurent Dobuzinskis 1996
Twenty-one Canadian political scientists examine policy studies in the country from the beginnings of the field to speculations on future directions in research. The discussions describe influences and theoretical departures based on work investigating government, public administration, and political economy, describing the penetration of policy analysis into government and non-government organizations. Besides this historical overview, the volume also outlines the principal elements of four major methodological approaches used in contemporary Canadian policy studies, illustrating strengths and weaknesses in regards to Canadian policy. Lacks an index. Canadian card order number C96-930355-6. Paper edition (unseen), $24.95. Annotation copyrighted by Book News, Inc., Portland, OR
The Thirteenth Marcel Grossmann Meeting - Kjell Rosquist 2015-01-26
The Marcel Grossmann Meetings seek to further the development of the foundations and applications of Einstein's general relativity by promoting theoretical understanding in the relevant fields of physics, mathematics, astronomy and astrophysics and to direct future technological, observational, and experimental efforts. The meetings discuss recent developments in classical and quantum aspects of gravity, and in cosmology and relativistic astrophysics, with major emphasis on mathematical foundations and physical predictions, having the main objective of gathering scientists from diverse backgrounds for deepening our understanding of spacetime structure and reviewing the current state of the art in the theory, observations and experiments pertinent to relativistic gravitation. The range of topics is broad, going from the more abstract classical theory, quantum gravity, branes and strings, to more concrete relativistic astrophysics observations and modeling. The three volumes of the proceedings of MG13 give a broad view of all aspects of gravitational physics and astrophysics, from mathematical issues to recent observations and experiments. The scientific program of the meeting included 33 morning plenary talks during 6 days, and 75 parallel sessions over 4 afternoons. Volume A contains plenary and review talks ranging from the mathematical foundations of classical and quantum gravitational theories including recent developments in string/brane theories, to precision tests of general relativity including progress towards the detection of gravitational waves, and from supernova cosmology to relativistic astrophysics including such topics as gamma ray bursts, black hole physics both in our galaxy and in active galactic nuclei in other galaxies, and neutron star and pulsar astrophysics. Volumes B and C include parallel sessions which touch on dark matter, neutrinos, X-ray sources, astrophysical black holes, neutron stars, binary systems, radiative transfer, accretion disks, quasors, gamma ray bursts, supernovas, alternative gravitational theories, perturbations of collapsed objects, analog models, black hole thermodynamics, numerical relativity, gravitational lensing, large scale structure, observational cosmology, early universe models and cosmic microwave background anisotropies, inhomogeneous cosmology, inflation, global structure, singularities, chaos, Einstein–Maxwell systems, wormholes, exact solutions of Einstein's equations, gravitational waves, gravitational wave detectors and data analysis, precision gravitational measurements, quantum gravity and loop quantum gravity, quantum cosmology, strings and branes, self-gravitating systems, gamma ray astronomy, and cosmic rays and the history of general relativity. Contents:On the Cosmological Singularity (Vladimir A Belinski)GRB Afterglow Discovery with Bepposax: Its Story 15 Years Later (Filippo Frontera)Rotation, Convection, and Core Collapse (W David Arnett)Spacetime Singularities: Recent Developments (Claes Uggla)Hidden Symmetries: From BKL to Kac–Moody (Philipp Fleig & Hermann Nicolai)Recent Results in Mathematical GR (Sergiu

Klainerman)Higher Dimensional Black Holes (Harvey S Reall)Causal Dynamical Triangulations and the Search for a Theory of Quantum Gravity (Jan Ambjorn, Andrzej Görlich, Jerzy Jurkiewicz & Renate Loll)On Quantum Gravity, Asymptotic Safety, and Paramagnetic Dominance (Andreas Nink & Martin Reuter)Perturbative Quantum Gravity as a Double Copy of Gauge Theory and Implications for UV Properties (Zvi Bern)Type Ia Supernova Cosmology: Past and Future (Ariel Goobar)The Energetic Universe: A Nobel Surprise (Robert P Kirshner)Strong, Weak, Electromagnetic and Gravitational Interactions in Neutron Stars (Jorge Rueda & Remo Ruffini)Gravitational-Wave Physics and Astronomy Using Ground-Based Interferometers (David H Reitze & David H Shoemaker)Gamma-Ray Burst Prompt Emission (Bing Zhang)Black Holes, Supernovae and Gamma Ray Bursts (Remo Ruffini)Precisions Tests of Theories of Gravity Using Pulsars (Michael Kramer)The Planck Mission: Recent Results, Cosmological and Fundamental Physics Perspectives (Nazzareno Mandolesi, Carlo Burigana, Alessandro Gruppuso & Paolo Natoli)Observation of a New Boson at a Mass of 125 GeV with the CMS Experiment at the LHC (Chiara Mariotti)Unavoidable CMB Spectral Features and Blackbody Photosphere of Our Universe (Rashid Sunyaev & Rishi Khatri)Search for the Standard Model Higgs Boson with the ATLAS Detector (Domizia Orestano) Readership: Graduate students in astronomy, astrophysics and cosmology, and scientists interested in general relativity, gravitation, astrophysics, quantum gravity, particle physics, cosmology and theoretical physics. Keywords:General Relativity;Gravitation;Astrophysics;Quantum Gravity;Particle Physics;Cosmology;Theoretical Physics

Rotation and Accretion Powered Pulsars - Pranab Ghosh 2007-04-17

This book is an introduction to pulsars, a key area in high energy astrophysics with continuing potential for fundamental discoveries. Throughout the book runs the unifying thread of the evolutionary link between rotation-powered pulsars and accretion-powered pulsars — a milestone of modern astrophysics. Early textbooks on pulsars dealt almost entirely with rotation-powered ones, while accounts of pulsars in volumes on X-ray binaries focused almost exclusively on accretion-powered ones. This is the first textbook to treat these two kinds of pulsars simultaneously with equal importance, stressing the fact that both are rotating, magnetic neutron stars, operating under different conditions during different parts of their lives. It describes the observational properties of both kinds of pulsars, summarizes our physical understanding of these properties, and pays detailed attention to the physics of superdense matter which neutron stars are composed of, as well as to the superfluidity which is expected to occur in neutron stars. Evolution from rotation-power to accretion-power, and vice versa, are carefully described. The effects of the strong magnetic fields of neutron stars on themselves, their emission properties, and their environments are discussed, as are the origin and evolution of such magnetic fields. Also treated is the superbly accurate verification of Einstein's theory of general relativity through timing studies of binary pulsars, which led to the award of the Nobel Prize to Hulse and Taylor in 1993. On each topic, the book starts with simple, basic physical concepts, and builds up the exposition to the point where the latest and most exciting developments become accessible to the reader. Contents:The Discovery of PulsarsPhysics of Neutron StarsOrigin and Evolution of Neutron StarsProperties of Rotation Powered PulsarsSuperfluidity in Neutron Stars and Glitch DiagnosticsProperties of Accretion Powered PulsarsPulsar MagnetospheresPulsar Emission MechanismsSpin Evolution of Neutron StarsNeutron Star Magnetic FieldsStrange Stars Readership: Graduate students and upper level undergraduates, researchers and teachers in astrophysics, astronomy, theoretical physics, astro-plasma physics, general relativity and related subjects. Keywords:Reviews:“Neutron stars are implicated in some of the most fascinating phenomena in the universe. This comprehensive text is unique in its authoritative and clear coverage of what we have learnt about neutron stars in different cosmic environments from observations in all wavebands.”Professor Sir M J Rees Astronomer Royal Cambridge University “Rotation and Accretion Powered Pulsars by Professor Pranab Ghosh is a masterpiece of erudition and pedagogy and can be recommended without hesitation to both beginners and specialists in this fascinating field of modern astrophysics.”Professor Jean-Pierre Lasota Institut d'Astrophysique de Paris “This book is an excellent and up to date basic reference source for all theoretical and observational aspects of neutron stars and will be very much welcomed by everyone working in high-energy astrophysics, stellar evolution and the studies of pulsars. For those teaching courses in these fields of astrophysics it also is highly recommended.”Space Science Reviews “The book is written in a very readable style, with clear explanations of the subtleties of the various topics and occasional anecdotal notes on points of historical interest. It would be a valuable addition to the library of anyone interested in the physics of compact stellar objects.”Australian Physics

The Routledge Handbook of Idealism and Immaterialism - Joshua Farris 2021-09-13

The influence of materialist ontology largely dominates philosophical and scientific discussions. However, there is a resurgent interest in alternative ontologies from panpsychism (the view that at the base of reality exists potential minds, minds, or mind-lets) to idealism and dualism (the view that all of reality is material and mental). The Routledge Handbook of Idealism and Immaterialism is an outstanding reference source and the first major collection of its kind. Historically grounded and constructively motivated, it covers the key topics in philosophy, science, and theology, providing students and scholars with a comprehensive introduction to idealism and immaterialism. Also addressed are post-materialism developments, with explicit attention to variations of idealism and immaterialism (the view that reality depends on a mind or a set of minds). Comprising 44 chapters written by an international and interdisciplinary team of contributors, the Handbook is organised into five clear parts: Idealism and the history of philosophy Important figures in idealism Systematic assessment of idealism Idealism and science Idealism, physicalism, panpsychism, and substance dualism Essential reading for students and researchers in metaphysics, philosophy of science, philosophy of religion, and philosophy of mind, The Routledge Handbook of Idealism and Immaterialism will also be of interest to those in related discplines where idealist and immaterialist ontology impinge on history, science, and theology.

Proceedings of the Royal Society of London - Royal Society (Great Britain) 1989

Quantum Gravity: Proceedings Of The Sixth Moscow Quantum Gravity Seminar - Berezin V A 1998-03-09

This comprehensive volume opens with an introductory editorial giving a general review of London's environment and its prospects for a sustainable future. The subsequent chapters are written by experts on architecture, planning, air pollution, biodiversity, transport, rivers, parks, aesthetic aspects of London's landscape, politics, health, and economics. The highly topical material authoritatively describes the major recent developments that have greatly affected London's environment and in some ways have set the city on a path towards a more sustainable future. This progress includes changes in the law (GLA act), politics (adopting sustainability as a political goal), policies on waste disposal (no more landfills), housing areas, building development (e.g. Canary Wharf), traffic management (congestion charges), policies for enhancing biodiversity, transport infrastructure (cars, railways), and managing the risk of floods and other disasters (in response to climate change). The book shows how these policies and practical developments interact, and therefore need to be understood by considering them as a whole. A postscript by the Deputy Mayor of London, Nicky Gavron, is included summarising London's environmental policies that have been developed since the conference on “London Environment and Future” was held on September 18-19, 2002.

The Philosophy of Cosmology - Khalil Chamcham 2017-04-13

Following a long-term international collaboration between leaders in cosmology and the philosophy of science, this volume addresses foundational questions at the limit of science across these disciplines, questions raised by observational and theoretical progress in modern cosmology. Space missions have mapped the Universe up to its early instants, opening up questions on what came before the Big Bang, the nature of space and time, and the quantum origin of the Universe. As the foundational volume of an emerging academic discipline, experts from relevant fields lay out the fundamental problems of contemporary cosmology and explore the routes toward finding possible solutions. Written for graduates and researchers in physics and philosophy, particular efforts are made to inform academics from other fields, as well as the educated public, who wish to understand our modern vision of the Universe, related philosophical questions, and the significant impacts on scientific methodology.

A General Relativity Workbook - Thomas A. Moore 2015-03-06

Applied General Relativity - Michael H. Soffel 2019-09-23

In the late 20th and beginning 21st century high-precision astronomy, positioning and metrology strongly rely on general relativity. Supported by exercises and solutions this book offers graduate students and

researchers entering those fields a self-contained and exhaustive but accessible treatment of applied general relativity. The book is written in a homogenous (graduate level textbook) style allowing the reader to understand the arguments step by step. It first introduces the mathematical and theoretical foundations of gravity theory and then concentrates on its general relativistic applications: clock rates, clock sychronization, establishment of time scales, astronomical references frames, relativistic astrometry, celestial mechanics and metrology. The authors present up-to-date relativistic models for applied techniques such as Satellite LASER Ranging (SLR), Lunar LASER Ranging (LLR), Globale Navigation Satellite Systems (GNSS), Very Large Baseline Interferometry (VLBI), radar measurements, gyroscopes and pulsar timing. A list of acronyms helps the reader keep an overview and a mathematical appendix provides required functions and terms.

Proceedings of the 16th International Conference on General Relativity & Gravitation - Nigel Bishop 2002

The 16th conference of the International Society on General Relativity and Gravitation (GR16), held at the International Convention Centre in Durban, South Africa, from 15 to 21 July, was attended by 450 delegates from around the world. The scientific programme comprised 18 plenary lectures, one public lecture and 19 workshops which, excepting three plenary lectures, are presented in this proceedings. It was the first major international conference on general relativity and gravitation held on the African continent.

General Relativity And Relativistic Astrophysics - Proceedings Of The 4th Canadian Conference - Kunstatter Gabor 1992-02-28

Quantum computing and quantum information are two of the fastest growing and most exciting research fields in physics. Entanglement, teleportation and the possibility of using the non-local behavior of quantum mechanics to factor integers in random polynomial time have also added to this new interest. This book supplies a huge collection of problems in quantum computing and quantum information together with their detailed solutions, which will prove to be invaluable to students as well as researchers in these fields. All the important concepts and topics such as quantum gates and quantum circuits, product Hilbert spaces, entanglement and entanglement measures, deportation, Bell states, Bell inequality, Schmidt decomposition, quantum Fourier transform, magic gate, von Neumann entropy, quantum cryptography, quantum error corrections, number states and Bose operators, coherent states, squeezed states, Gaussian states, POVM measurement, quantum optics networks, beam splitter, phase shifter and Kerr Hamilton operator are included. The topics range in difficulty from elementary to advanced. Almost all problems are solved in detail and most of the problems are self-contained.

Challenging Routes In Quantum Cosmology - Paulo Vargas Moniz 2022-07-28

Quantum cosmology has gradually emerged as the focus of devoted research, mostly within the second half of last century. As we entered the 21st century, the subject is still very much alive. The outcome of results and templates for investigation have been enlarged, some very recent and fascinating. Hence this book, where the authors bequeath some of their views, as they believe this current century is the one where quantum cosmology will be fully accomplished.Though some aspects are not discussed (namely, supersymmetry or loop structures), there are perhaps a set of challenges that in the authors' opinion remain, some since the dawn of quantum mechanics and applications to cosmology. Others could have been selected, at the readers' discretion and opinion. The authors put herewith a chart and directions to explore, some of which they have worked on or aimed to work more, in the twilight of their current efforts. Their confidence is that someone will follow in their trails, venturing in discovering the proper answer, by being able to formulate the right questions beforehand. The authors' shared foresight is that such discoveries, from those formulations, will be attained upon endorsing the routes within the challenges herewith indicated.

Beyond Einstein Gravity - Salvatore Capozziello 2010-10-27

Beyond Einstein’s Gravity is a graduate level introduction to extended theories of gravity and cosmology, including variational principles, the weak-field limit, gravitational waves, mathematical tools, exact solutions, as well as cosmological and astrophysical applications. The book provides a critical overview of the research in this area and unifies the existing literature using a consistent notation. Although the results apply in principle to all alternative gravities, a special emphasis is on scalar-tensor and f(R) theories. They were studied by theoretical physicists from early on, and in the 1980s they appeared in attempts to renormalize General Relativity and in models of the early universe. Recently, these theories have seen a new lease of life, in both their metric and metric-affine versions, as models of the present acceleration of the universe without introducing the mysterious and exotic dark energy. The dark matter problem can also be addressed in extended gravity. These applications are contributing to a deeper understanding of the gravitational interaction from both the theoretical and the experimental point of view. An extensive bibliography guides the reader into more detailed literature on particular topics.

Compact Stars - Norman K. Glendenning 2012-12-06

A whole decades research collated, organised and synthesised into one single book! Following a 60-page review of the seminal treatises of Misner, Thorne, Wheeler and Weinberg on general relativity, Glendenning goes on to explore the internal structure of compact stars, white dwarfs, neutron stars, hybrids, strange quark stars, both the counterparts of neutron stars as well as of dwarfs. This is a self-contained treatment and will be of interest to graduate students in physics and astrophysics as well as others entering the field.

Social Solutions to Poverty - Scott Myers-Lipton 2015-11-17

The voices of famous and lesser known figures in America's quest to reduce poverty are collected for the first time in this comprehensive historical anthology. The book traces the most important ideas and contributions of citizens, activists, labour leaders, scholars, politicians, and governmental agencies to ensure American citizens the basics of food, housing, employment, education, and health care. The book follows the idea of poverty reduction from Thomas Paine's agrarian justice to Josiah Quincy's proposal for the construction of poorhouses; from the Freedmen's Bureau to Sitting Bull's demand for money and supplies; from Coxey's army of the unemployed to Jane Addams's Hull House; from the Civil Works Administration to Dr. Martin Luther King, Jr.'s call for an Economic Bill of Rights; and from William Julius Wilson's universal programme of reform to George W. Bush's armies of compassion.

Quantum Cosmology - The Supersymmetric Perspective - Vol. 2 - Paulo Vargas Moniz 2010-04-27

We read in order to know we are not alone, I once heard, and perhaps it could also be suggested that we write in order not to be alone, to endorse, to promote continuity. The idea for this book took about 10 years to materialize, and it is the author’s hope that its content will constitute the beginning of further explorations beyond current horizons. More speci cally, this book appeals to the reader to engage upon and persevere with a journey, moving through the less well explored territories in the evolution of the very early universe, and pushing towards new landscapes. P- haps, during or after consulting this book, this attitude and this willingness will be embraced by someone, somewhere, and this person will go on to enrich our quantum cosmological description of the early universe, by means of a clearer supersymm- ric perspective. It is to these creative and inquisitive ‘young minds’ that the book is addressed. The reader will not therefore nd in this book all the answers to all the problems regarding a supersymmetric and quantum description of the early universe, and this remark is substantiated in the book by a list of unresolved and challenging problems, itself incomplete.

A Scientific Autobiography: S Chandrasekhar -

Astrophysics And Neutrino Physics - He Guo-zhe 1993-04-28

Group Theory and General Relativity - Moshe Carmeli 2000

This is the only book on the subject of group theory and Einstein's theory of gravitation. It contains an extensive discussion on general relativity from the viewpoint of group theory and gauge fields. It also puts together in one volume many scattered, original works, on the use of group theory in general relativity theory. There are twelve chapters in the book. The first six are devoted to rotation and Lorentz groups, and their representations. They include the spinor representation as well as the infinite-dimensional representations. The other six chapters deal with the application of groups -- particularly the Lorentz and the SL(2, C) groups -- to the theory of general relativity. Each chapter is concluded with a set of problems. The topics covered range from the fundamentals of general relativity theory, its formulation as an SL(2, C) gauge theory, to exact solutions of the Einstein gravitational field equations. The important Bondi-Metzner-Sachs group, and its representations, conclude the book The entire book is self-contained in both group theory and general relativity theory, and no prior knowledge of either is assumed. The subject of this book constitutes a relevant link between field theoreticians and general relativity theoreticians, who usually work rather independently of each other. The treatise is highly topical and of

real interest to theoretical physicists, general relativists and applied mathematicians. It is invaluable to graduate students and research workers in quantum field theory, general relativity and elementary particle theory.

Quantum Cosmology - The Supersymmetric Perspective - Vol. 1 - Paulo Vargas Moniz 2010-07-02

We read in order to know we are not alone, I once heard, and perhaps it could also be suggested that we write in order not to be alone, to endorse, to promote continuity. The idea for this book took about ten years to materialize, and it is the author’s hope that its content will constitute the beginning of further explorations beyond current horizons. More speci cally, this book appeals to the reader to engage upon and persevere with a journey, moving through the less well explored territories in the evolution of the very early universe, and pushing towards new landscapes. P- haps, during or after consulting this book, this attitude and this willingness will be embraced by someone, somewhere, and this person will go on to enrich our quantum cosmological description of the early universe, by means of a clearer supersymm- ric perspective. It is to these creative and inquisitive ‘young minds’ that the book is addressed. The reader will not therefore nd in this book all the answers to all the problems regarding a supersymmetric and quantum description of the early universe, and this remark is substantiated in the book by a list of unresolved and challenging problems, itself incomplete.

High Energy Physics And Cosmology - Proceedings Of The 1990 Summer School - Pati Jogesh C 1991-05-16

This School presented topics of current interest in high energy physics including Superstrings, Unified Theories and Cosmology.

Gravity - James B. Hartle 2021-06-24

Einstein's theory of general relativity is a cornerstone of modern physics. It also touches upon a wealth of topics that students find fascinating – black holes, warped spacetime, gravitational waves, and cosmology. Now reissued by Cambridge University Press, this ground-breaking text helped to bring general relativity into the undergraduate curriculum, making it accessible to virtually all physics majors. One of the pioneers of the 'physics-first' approach to the subject, renowned relativist James B. Hartle, recognized that there is typically not enough time in a short introductory course for the traditional, mathematics-first, approach. In this text, he provides a fluent and accessible physics-first introduction to general relativity that begins with the essential physical applications and uses a minimum of new mathematics. This market-leading text is ideal for a one-semester course for undergraduates, with only introductory mechanics as a prerequisite.

The Magnetospheres of the Earth and Jupiter - V. Formisano 2012-12-06

The Symposium 'The Magnetospheres of the Earth and Jupiter' (May 28th-June 1st, 1974 in Frascati) was organized by the 'Laboratorio Plasma Spazio' of the CNR, on the occasion of its moving to the Frascati area. The main theoretical topic was to be covered by N. Brice, but he died on January 31st, in a plane crash at Pago Pago (Samoa). It seemed appropriate to all of us to honor Neil Brice by renaming the meeting: 'Neil Brice Memorial Symposium'. The Symposium covered problems of magnetospheric dynamics, of both the Earth and Jupiter, with emphasis on the comparison between the two objects. The collaboration of American scientists participating in the recent NASA plan etary missions has made it possible to have new important scientific results presented to and discussed by the scientific community. Of the many people who helped to make the meeting such a success, very special thanks goes to Prof. C. Kennel ofU.C.L.A. whose contribution to the organization of this symposium has been extremely important.

An Introduction to General Relativity - L. P. Hughston 1990

More emphasis is placed on an intuitive grasp of the subject and calculational facility than on rigorous exposition in this introduction to general relativity for mathematics undergraduates or graduate physicists.

The Janus Point - Julian Barbour 2020-12-01

In a universe filled by chaos and disorder, one physicist makes the radical argument that the growth of order drives the passage of time -- and shapes the destiny of the universe. Time is among the universe's greatest mysteries. Why, when most laws of physics allow for it to flow forward and backward, does it only go forward? Physicists have long appealed to the second law of thermodynamics, held to predict the increase of disorder in the universe, to explain this. In The Janus Point, physicist Julian Barbour argues that the second law has been misapplied and that the growth of order determines how we experience time. In his view, the big bang becomes the "Janus point," a moment of minimal order from which time could flow, and order increase, in two directions. The Janus Point has remarkable implications: while most physicists predict that the universe will become mired in disorder, Barbour sees the possibility that order -- the stuff of life -- can grow without bound. A major new work of physics, The Janus Point will transform our understanding of the nature of existence.

Progress in Physics, vol. 4/2006 - Dmitri Rabounski

Progress in Physics has been created for publications on advanced studies in theoretical and experimental physics, including related themes from mathematics.

Identity Theft in Today's World - Megan McNally 2012

This book accurately identifies the various forms of identity theft in simple, easy-to-understand terms, exposes exaggerated and erroneous information, and explains how everyone can take action to protect themselves.

Complexity, Entropy And The Physics Of Information - Wojciech H. Zurek 2018-03-08

This book has emerged from a meeting held during the week of May 29 to June 2, 1989, at St. John’s College in Santa Fe under the auspices of the Santa Fe Institute. The (approximately 40) official participants as well as equally numerous “groupies” were enticed to Santa Fe by the above “manifesto.” The book—like the “Complexity, Entropy and the Physics of Information” meeting explores not only the connections between quantum and classical physics, information and its transfer, computation, and their significance for the formulation of physical theories, but it also considers the origins and evolution of the information-processing entities, their complexity, and the manner in which they analyze their perceptions to form models of the Universe. As a result, the contributions can be divided into distinct sections only with some difficulty. Indeed, I regard this degree of overlapping as a measure of the success of the meeting. It signifies consensus about the important questions and on the anticipated answers: they presumably lie somewhere in the “border territory,” where information, physics, complexity, quantum, and computation all meet.

Eighth Marcel Grossmann Meeting, The: On Recent Developments In Theoretical And Experimental General Relativity, Gravitation, And Relativistic Field Theories - Proceedings Of The Meeting (In 2 Parts) - Piran Tsvi 1999-05-14

Since 1975, the Marcel Grossmann Meetings have been organized to provide opportunities for discussing recent advances in gravitation, general relativity and relativistic field theories, emphasizing mathematical foundations, physical predictions and experimental tests. The objective of these meetings is to facilitate exchange among scientists that may deepen our understanding of space-time structures and to review the status of ongoing experiments aimed at testing Einstein's theory of gravitation from either the ground or space.The Eighth Marcel Grossmann Meeting took place on 22-27 June, 1997, at the Hebrew University of Jerusalem, Israel. The scientific program included 25 plenary talks and 40 parallel sessions during which 400 papers were presented. The papers that appear in this book cover all aspects of gravitation, from mathematical issues to recent observations and experiments.

Black Hole Physics - V. Frolov 1998-11-30

Introduces the physics of black holes and the methods employed in it, and reviews the main results of this branch of physics. Frolov (physics, U. of Alberta) and Novikov (theoretical astrophysics, U. of Copenhagen) focus on questions that have been answered relatively recently. Among the topics treated are: space-time of stationary black holes, general theory of black holes, black hole perturbations, numerics, electrodynamics, black holes in unified theories of gravity, quantum black holes, final states of evaporating black holes, and the information loss puzzle. Special attention is paid to the role of black holes in astrophysics and observational evidence of black hole existence. Many exotic subjects linked with black holes, such as white holes, wormholes, and time machines, are discussed. Appendices cover mathematical aspects of general relativity and black holes and quantum field theory in curved spacetime. Annotation copyrighted by Book News, Inc., Portland, OR

Ruby on Rails Tutorial - Michael Hartl 2016-11-17

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Used by sites as varied as Twitter, GitHub, Disney, and Airbnb, Ruby on Rails is one of the most popular frameworks for developing web applications, but it can be challenging to learn and use. Whether you’re new to web development or new only to Rails, Ruby on

Rails™ Tutorial, Fourth Edition, is the solution. Best-selling author and leading Rails developer Michael Hartl teaches Rails by guiding you through the development of three example applications of increasing sophistication. The tutorial’s examples focus on the general principles of web development needed for virtually any kind of website. The updates to this edition include full compatibility with Rails 5, a division of the largest chapters into more manageable units, and a huge number of new exercises interspersed in each chapter for maximum reinforcement of the material. This indispensable guide provides integrated tutorials not only for Rails, but also for the essential Ruby, HTML, CSS, and SQL skills you need when developing web applications. Hartl explains how each new technique solves a real-world problem, and then he demonstrates it with bite-sized code that’s simple enough to understand, yet novel enough to be useful. Whatever your previous web development experience, this book will guide you to true Rails mastery. This book will help you Install and set up your Rails development environment, including pre-installed integrated development environment (IDE) in the cloud Go beyond generated code to truly understand how to build Rails applications from scratch Learn testing and test-driven development (TDD) Effectively use the Model-View-Controller (MVC) pattern Structure applications using the REST architecture Build static pages and transform them into dynamic ones Master the Ruby programming skills all Rails developers need Create high-quality site layouts and data models Implement registration and authentication systems, including validation and secure passwords Update, display, and delete users Upload images in production using a cloud storage service Implement account activation and password reset, including sending email with Rails Add social features and microblogging, including an introduction to Ajax Record version changes with Git and create a secure remote repository at Bitbucket Deploy your applications early and often with Heroku

Gravitation - Charles W. Misner 2017-10-24

Spacetime physics -- Physics in flat spacetime -- The mathematics of curved spacetime -- Einstein's geometric theory of gravity -- Relativistic stars -- The universe -- Gravitational collapse and black holes -- Gravitational waves -- Experimental tests of general relativity -- Frontiers

Michel de Montaigne - Ann Hartle 2003-03-27

Michel de Montaigne, the inventor of the essay, has always been acknowledged as a great literary figure but has never been thought of as a philosophical original. This book treats Montaigne as a serious thinker in his own right, taking as its point of departure Montaigne's description of himself as 'an unpremeditated and accidental philosopher'. Whereas previous commentators have treated Montaigne's Essays as embodying a scepticism harking back to classical sources, Ann Hartle offers an account that reveals Montaigne's thought to be dialectical, transforming sceptical doubt into wonder at the most familiar aspects of life. This major reassessment of a much admired but also much underestimated thinker will interest a wide range of historians of philosophy as well as scholars in comparative literature, French studies and the history of ideas.

Quantum Leap - Vladimir G. Ivancevic 2008

This is a unique 21st-century monograph that reveals a basic, yet deep understanding of the universe, as well as the human mind and body OCo all from the perspective of quantum mechanics and quantum field theory.This book starts with both non-mathematical and mathematical preliminaries. It presents the basics of both non-relativistic and relativistic quantum mechanics, and introduces Feynman path integrals and their application to quantum fields and string theory, as well as some non-quantum applications. It then describes the quantum universe in the form of loop quantum gravity and quantum cosmology. Lastly, the book turns to the human body and mind, applying quantum theory to electro-muscular stimulation and consciousness.It can be used as a graduate (or advanced undergraduate) textbook for a two-semester course in quantum physics and its modern applications. Some parts of the book can also be used by engineers, biologists, psychologists and computer scientists, as well as applied mathematicians, both in industry and academia."