

Indice Mereghetti 2017

The harvesting, processing and consumption of edible insects is one of the main keys to the sustainability of food chains on the African continent. Insects are the largest and most successful group of animals on the planet and it is estimated that they comprise 80% of all animals. This makes edible insects extremely important to the future survival of large populations across Africa and the world. Insects offer a complete animal protein that includes all 9 essential amino acids and are very competitive with other protein sources. They are also a good source of beneficial unsaturated fats, and many insects have a perfect Omega 3:6 balance. *African Edible Insects As Alternative Source of Food, Oil, Protein and Bioactive Components* comprehensively outlines the importance of edible insects as food and animal feed and the processing of insects in Africa. The text also highlights indigenous knowledge of edible insects and shows the composition and nutritional value of these insects, plus presents reviews of current research and developments in this rapidly expanding field. All of the main types of edible insects are covered, including their nutritional value, chemical makeup, and harvesting and processing details. The various preparation technologies are covered for each insect, as are their individual sensory qualities and safety aspects. A key aspect of this work is its focus on the role of insects in edible oils and gelatins. Individual chapters focus on entomophagy in Africa and the various key aspects of the continent's growing edible insect consumption market. As it becomes increasingly clear that the consumption of insects will play a major role in the sustainability of food chains in Africa, this work can be used as a comprehensive and up-to-date singular source for researchers looking for a complete overview on this crucial topic.

Astrophysics of Gaseous Nebulae and Active Galactic Nuclei, second edition, is a graduate-level text and reference book on gaseous nebulae, nova and supernova remnants. It will be valuable to anyone seriously interested in astrophysics. There is a significant and increasing interest in using fungi as biocontrol agents for insect pests in agricultural systems, and also a growing interest in the basic biology of insect-fungal associations from the perspective of parasitism, symbiosis, and infection. Vega and Blackwell are well-regarded workers in this field, and they have assembled an impressive short book of ten chapters to cover the most important topics in this field, incorporating new molecular techniques wherever possible. The book should appeal to workers in ecology, entomology, mycology, plant pathology, and biological control and pest management.

This book is a collation of the contributions presented at a major conference on isolated neutron stars held in London in April 2006. Forty years after the discovery of radio pulsars it presents an up-to-date description of the new vision of isolated neutron stars that has emerged in recent years. The great variety of isolated neutron stars, from pulsars to

magnetars, is well covered by descriptions of recent observational results and presentations of the latest theoretical interpretation of these data.

This volume presents the current knowledge of magnetic fields in diffuse astrophysical media. Starting with an overview of 21st century instrumentation to observe astrophysical magnetic fields, the chapters cover observational techniques, origin of magnetic fields, magnetic turbulence, basic processes in magnetized fluids, the role of magnetic fields for cosmic rays, in the interstellar medium and for star formation. Written by a group of leading experts the book represents an excellent overview of the field. Nonspecialists will find sufficient background to enter the field and be able to appreciate the state of the art.

Beyond the range of optical perception--and of ordinary imaginings--a new and violent universe lay undetected until the advent of space exploration. Supernovae, black holes, quasars and pulsars--these were the secrets of the highenergy world revealed when, for the first time, astronomers attached their instruments to rockets and lofted them beyond the earth's x-ray-absorbing atmosphere. The X-Ray Universe is the story of these explorations and the fantastic new science they brought into being. It is a first-hand account: Riccardo Giacconi is one of the principal pioneers of the field, and Wallace Tucker is a theorist who worked closely with him at many critical periods. The book carries the reader from the early days of the Naval Research Laboratory through the era of V-2 rocketry, Sputnik, and the birth of NASA, to the launching of the Einstein X-Ray Observatory. But this is by no means just a history. Behind the suspenseful, sometimes humorous details of human personality grappling with high technology lies a sophisticated exposition of current cosmology and astrophysics, from the rise and fall of the steady-state theory to the search for the missing mass of the universe.

X-ray astronomy is the prime available window on astrophysical compact objects: black holes, neutron stars and white dwarfs. New observational opportunities have led to an explosion of knowledge in this field. This book provides a comprehensive overview of the astrophysics of compact objects that emit X-rays. Sixteen chapters written by the foremost experts in the field cover the observations and the astrophysical interpretation of these objects. Topics covered include binary systems, gamma ray burst sources, anomalous X-ray pulsars, super-soft sources, and enigmatic fast X-ray transients. Further chapters are dedicated to isolated neutron stars and the X-ray source populations of globular clusters. The properties of X-ray binaries are discussed in depth in chapters on quasi-periodic oscillations and related aperiodic X-ray variability, X-ray bursts, black holes, and relativistic jets. This is a valuable reference for both graduate students and active researchers.

This book is devoted to the astrophysics of cosmic rays, especially the origin of the cosmic rays observed on Earth. The

problem of the propagation and acceleration of cosmic rays in the interstellar medium and, in general, in the galaxy is discussed. Topics of gamma- and X-ray astronomy and of high-energy neutrino astronomy related to cosmic rays are also discussed. Summaries of the observational and experimental results are given."

This is an in-depth look at baryon number violation in the Standard Model including the necessary background in finite temperature field theory, plasma dynamics and how to calculate the out of equilibrium evolution of particle number densities throughout a phase transition. It is a self-contained pedagogical review of the theoretical background to electroweak baryogenesis as well as a summary of the other prevailing mechanisms for producing the asymmetry between matter and antimatter using the Minimal Supersymmetric Standard Model as a pedagogical tool whenever appropriate.

A complete text on the physics of gamma-ray bursts, the most brilliant explosions since the Big Bang.

The book discusses invasive-species problems in agriculture, forests and aquatic ecosystems, highlighting the invasive mechanisms and management of the selected invasive species. Biological invasion has become a serious global ecological and economic problem that deserves particular attention from both government officials and scientists. This volume focuses on three key scientific areas: 1) population establishment and spreading mechanisms of the selected invasive species; 2) ecology adaptation, population growth, expansion and evolution of invasive species; and 3) impact of bio-invasion on the ecosystem structure and function at community and ecosystem levels. The presented research will result in techniques for better management of invasive species.

An updated version of the popular graduate text on accretion in astrophysics.

This book reviews the most significant developments in quantum methodology applied to a broad variety of problems in chemistry, physics, and biology. In particular, it discusses atomic and molecular structure, dynamics and spectroscopy as well as applications of quantum theory to biological and condensed matter systems. The volume contains twenty-four selected, peer-reviewed contributions based on the presentations given at the Twentieth International Workshop on Quantum Systems in Chemistry, Physics, and Biology (QSCP-XX), held in Varna, Bulgaria, in September 2015. It is divided into five sections containing the most relevant papers written by leading experts in the fields. This book will appeal to advanced graduate students, researchers, and academics involved in theoretical, quantum or statistical and computational chemical physics and physical chemistry.

Covering a variety of essential topics relating to commercial poultry nutrition and production—including feeding systems and poultry diets—this complete reference is ideal for professionals in the poultry-feed industries, veterinarians, nutritionists, and farm managers. Detailed and accessible, the guide analyzes commercial poultry production at a worldwide level and outlines the importance it holds for maintaining essential food supplies. With ingredient evaluations and diet formulations, the study's compressive models for feeding programs target a wide range of commercially prominent poultry, including laying hens, broiler chickens, turkeys, ducks, geese, and game birds, among others.

Gold nanoparticles provide a platform for the development of new and efficient diagnostic and therapeutic tools. This book offers a

general guide to the synthesis and coating of gold nanoparticles. It describes the links between optical features and geometries of gold nanoparticles and provides a readily comprehensible connection in all the chapters between the geometry of gold nanoparticles and their final applications.

Written by a leading expert, this monograph presents recent developments on supernova remnants, with the inclusion of results from various satellites and ground-based instruments. The book details the physics and evolution of supernova remnants, as well as provides an up-to-date account of recent multiwavelength results. Supernova remnants provide vital clues about the actual supernova explosions from X-ray spectroscopy of the supernova material, or from the imprints the progenitors had on the ambient medium supernova remnants are interacting with - all of which the author discusses in great detail. The way in which supernova remnants are classified, is reviewed and explained early on. A chapter is devoted to the related topic of pulsar wind nebulae, and neutron stars associated with supernova remnants. The book also includes an extended part on radiative processes, collisionless shock physics and cosmic-ray acceleration, making this book applicable to a wide variety of astronomical sub-disciplines. With its coverage of fundamental physics and careful review of the state of the field, the book serves as both textbook for advanced students and as reference for researchers in the field.

This volume contains 74 papers presented at SCI 2016: First International Conference on Smart Computing and Informatics. The conference was held during 3-4 March 2017, Visakhapatnam, India and organized communally by ANITS, Visakhapatnam and supported technically by CSI Division V – Education and Research and PRF, Vizag. This volume contains papers mainly focused on applications of advanced intelligent techniques to video processing, medical imaging, machine learning, sensor technologies, and network security.

"An excellent book for those who are interested in learning the current status of research and development . . . [and] who want to get a comprehensive overview of the current state-of-the-art." —E-Streams This book provides up-to-date information on research and development in the rapidly growing area of networks based on the multihop ad hoc networking paradigm. It reviews all classes of networks that have successfully adopted this paradigm, pointing out how they penetrated the mass market and sparked breakthrough research. Covering both physical issues and applications, Mobile Ad Hoc Networking: Cutting Edge Directions offers useful tools for professionals and researchers in diverse areas wishing to learn about the latest trends in sensor, actuator, and robot networking, mesh networks, delay tolerant and opportunistic networking, and vehicular networks. Chapter coverage includes: Multihop ad hoc networking Enabling technologies and standards for mobile multihop wireless networking Resource optimization in multiradio multichannel wireless mesh networks QoS in mesh networks Routing and data dissemination in opportunistic networks Task farming in crowd computing Mobility models, topology, and simulations in VANET MAC protocols for VANET Wireless sensor networks with energy harvesting nodes Robot-assisted wireless sensor networks: recent applications and future

challenges Advances in underwater acoustic networking Security in wireless ad hoc networks Mobile Ad Hoc Networking will appeal to researchers, developers, and students interested in computer science, electrical engineering, and telecommunications.

Insect science is fast changing as insects are evolving to a plethora of newer chemical molecules, climate change, management tactics and transformation of the landscapes. Through the International Conference, the editors have attempted to gather together newer aspects of Insect Sciences like Insect Taxonomy, DNA Barcoding, Physiology, Toxicology, Vectors and their Management, Molecular Biology, RNA interference in Pest Management, Semiochemicals and Pest Management using Host Plant Resistance and Biological Control appropriated especially for the developing world. Both basic and applied aspects of insect science have been included to stimulate comprehensive studies on insect science. The book not only deals with insect science but also environmental and ecological aspects in the hope that the book will be of immense use to students, researchers, extension workers, planners, administrators, farmers and other end users. The Chapters on diversified aspects of Insect Science are contributed by leading scientists for the coming 21st century in which entomology is witnessing a dramatic advancement in management of pests through in-depth investigations. The dimensions of Insect Science covered in the book are pest management approaches that can be adopted worldwide with ascent on sustainability.

Community ecology has undergone a transformation in recent years, from a discipline largely focused on processes occurring within a local area to a discipline encompassing a much richer domain of study, including the linkages between communities separated in space (metacommunity dynamics), niche and neutral theory, the interplay between ecology and evolution (eco-evolutionary dynamics), and the influence of historical and regional processes in shaping patterns of biodiversity. To fully understand these new developments, however, students continue to need a strong foundation in the study of species interactions and how these interactions are assembled into food webs and other ecological networks. This new edition fulfils the book's original aims, both as a much-needed up-to-date and accessible introduction to modern community ecology, and in identifying the important questions that are yet to be answered. This research-driven textbook introduces state-of-the-art community ecology to a new generation of students, adopting reasoned and balanced perspectives on as-yet-unresolved issues. Community Ecology is suitable for advanced undergraduates, graduate students, and researchers seeking a broad, up-to-date coverage of ecological concepts at the community level.

The Physics and Astrophysics of Neutron Stars Springer

This book constitutes the proceedings of the 22nd International Conference on Descriptive Complexity of Format Systems, DCFS 2020, which was supposed to take place in Vienna, Austria, in August 2020, but the conference was

anceled due to the COVID-19 crisis. The 19 full papers presented in this volume were carefully reviewed and selected from 31 submissions. They deal with all aspects of descriptive complexity and costs of description of objects in various computational models, such as Turing machines, pushdown automata, finite automata, grammars, and others.

This volume contains 68 papers presented at SCI 2016: First International Conference on Smart Computing and Informatics. The conference was held during 3-4 March 2017, Visakhapatnam, India and organized communally by ANITS, Visakhapatnam and supported technically by CSI Division V – Education and Research and PRF, Vizag. This volume contains papers mainly focused on smart computing for cloud storage, data mining and software analysis, and image processing.

This book summarizes the science to be carried out by the upcoming Cherenkov Telescope Array, a major ground-based gamma-ray observatory that will be constructed over the next six to eight years. The major scientific themes, as well as core program of key science projects, have been developed by the CTA Consortium, a collaboration of scientists from many institutions worldwide. CTA will be the major facility in high-energy and very high-energy photon astronomy over the next decade and beyond. CTA will have capabilities well beyond past and present observatories. Thus, CTA's science program is expected to be rich and broad and will complement other major multiwavelength and multimessenger facilities. This book is intended to be the primary resource for the science case for CTA and it thus will be of great interest to the broader physics and astronomy communities. The electronic version (e-book) is available in open access.

The bioeconomy initially focused on resource substitution, including the production of biomass from various resources; its conversion, fractionation, and processing by means of biotechnology; and chemistry and process engineering towards the production and marketing of food, feed, fuel, and fibre. Nevertheless, although resource substitution is still considered important, the emphasis has been recently shifted to the biotechnological innovation perspective of the bioeconomy, in terms that ensure environmental sustainability. It is estimated that around one-third of the food produced for human consumption is wasted throughout the world, posing not only a sustainability problem related to food security but also a significant environmental problem. Food waste streams, mainly derived from fruits and vegetables, cereals, oilseeds, meat, dairy, and fish processing, have unavoidably attracted the interest of the scientific community as an abundant reservoir of complex carbohydrates, proteins, lipids, and functional compounds, which can be utilized as raw materials for added-value product formulations. This Special Issue focuses on innovative and emerging food and by-products processing methods for the sustainable transition to a bioeconomy era.

With more than one and a half million copies sold worldwide in thirty languages, '1001 Movies You Must See Before You Die' celebrates the great and groundbreaking, classic and cult, must-see movies of all time, offering a treasure trove of

incisive, witty, and revealing insights. Spanning more than a century of extraordinary cinema, this comprehensive volume brings together the most significant movies from every country and all genres, from action to Western, through animation, comedy, documentary, musical, thriller, noir, short, romance, and sci-fi. Completely revised and updated for 2013, this definitive edition features a fresh new design, 500 original movie posters, and 200 new movie stills. Fifty previously overlooked or recently discovered masterpieces are reviewed for the first time, taking their place alongside the box-office smashes and critically acclaimed films of movie history. Quotes from movie directors and critics, together with little-known facts complement the incisive reviews and vital statistics of each movie to make this the most fact-filled edition ever. So, whether your passion is rom-com or art house, 'The Blue Angel' or 'Blue Velvet', '1001 Movies You Must See Before You Die' is bound to become the only film book you will ever turn to.

This volume extends the ISSI series on magnetic fields in the Universe into the domain of what are by far the strongest fields in the Universe, and stronger than any field that could be produced on Earth. The chapters describe the magnetic fields in non-degenerate strongly magnetized stars, in degenerate stars (such as white dwarfs and neutron stars), exotic members called magnetars, and in their environments, as well as magnetic fields in the environments of black holes. These strong fields have a profound effect on the behavior of matter, visible in particular in highly variable processes like radiation in all known wavelengths, including Gamma-Ray bursts. The generation and structure of such strong magnetic fields and effects on the environment are also described.

Present Knowledge in Nutrition, 10th Edition provides comprehensive coverage of all aspects of human nutrition, including micronutrients, systems biology, immunity, public health, international nutrition, and diet and disease prevention. This definitive reference captures the current state of this vital and dynamic science from an international perspective, featuring nearly 140 expert authors from 14 countries around the world. Now condensed to a single volume, this 10th edition contains new chapters on topics such as epigenetics, metabolomics, and sports nutrition. The remaining chapters have been thoroughly updated to reflect recent developments. Suggested reading lists are now provided for readers wishing to delve further into specific subject areas. An accompanying website provides book owners with access to an image bank of tables and figures as well as any updates the authors may post to their chapters between editions. Now available in both print and electronic formats, the 10th edition will serve as a valuable reference for researchers, health professionals, and policy experts as well as educators and advanced nutrition students.

IAU Symposium 291 features a rich harvest of recent scientific discoveries and looks forward to the many exciting avenues for future neutron-star research. The volume starts with general, lively, comprehensive introductions to three main themes that successfully communicate the excitement of current pulsar research. The subsequent reviews and

contributions on hot topics cover: ongoing searches for pulsars, both radio and gamma-ray; neutron star formation and properties; binary pulsars; pulsar timing and tests of gravitational theories; magnetars; radio transients; radio, X-ray and gamma-ray pulse properties and emission mechanisms; and future facilities. This range of topics clearly illustrates the diverse nature and wide application of neutron-star research. Through a combination of introductory reviews and practically complete coverage of current results from across the electromagnetic spectrum, IAU S291 is the perfect reference for neutron-star researchers and also provides an excellent read for advanced undergraduate and starting graduate students.

IAU S238 report on the physics of black holes, by leading researchers in the field.

This book presents the revised version of seven tutorials given at the NETWORKING 2002 Conference in Pisa, Italy in May 2002. The lecturers present a coherent view of the core issues in the following areas: - peer-to-peer computing and communications - mobile computing middleware - network security in the multicast framework - categorizing computing assets according to communication patterns - remarks on ad-hoc networking - communication through virtual technologies - optical networks.

Similarity and Dimensional Methods in Mechanics, 10th Edition is an English language translation of this classic volume examining the general theory of dimensions of physical quantities, the theory of mechanical and physical similarity, and the theory of modeling. Several examples illustrate the use of the theories of similarity and dimensions for establishing fundamental mechanical regularities in aviation, explosions, and astrophysics, as well as in the hydrodynamics of ships. Other interesting areas covered include the general theory of automodel motions of continuum media, the theory of propagation of explosion waves in gases, the theory of one-dimensional nonestablished motion in gases, the fundamentals of the gas-dynamics theory of atom-bomb explosion in the atmosphere and the theory of averaging of gaseous flows in channels. Aspects of modeling include the dimensionless characteristics of compressor operation, the theories of engine thrust, and efficiency of an ideal propeller for subsonic and supersonic speeds. Similarity and Dimensional Methods in Mechanics, 10th Edition is an ideal volume for researchers and students involved in physics and mechanics.

Edible insects have always been a part of human diets, but in some societies there remains a degree of disdain and disgust for their consumption. Insects offer a significant opportunity to merge traditional knowledge and modern science to improve human food security worldwide. This publication describes the contribution of insects to food security and examines future prospects for raising insects at a commercial scale to improve food and feed production, diversify diets, and support livelihoods in both developing and developed countries. Edible insects are a promising alternative to the conventional production of meat, either for direct human consumption or for indirect use as feedstock. This publication will boost awareness of the many valuable roles that insects play in sustaining nature and human life, and it will

stimulate debate on the expansion of the use of insects as food and feed.

Cold adaptation includes a complex range of structural and functional adaptations at the level of all cellular constituents, and these adaptations render cold-adapted organisms particularly useful for biotechnological applications. This book presents the most recent knowledge of (i) boundary conditions for microbial life in the cold, (ii) microbial diversity in various cold ecosystems, (iii) molecular cold adaptation mechanisms and (iv) the resulting biotechnological perspectives.

This book summarizes the recent progress in the physics and astrophysics of neutron stars and, most importantly, it identifies and develops effective strategies to explore, both theoretically and observationally, the many remaining open questions in the field. Because of its significance in the solution of many fundamental questions in nuclear physics, astrophysics and gravitational physics, the study of neutron stars has seen enormous progress over the last years and has been very successful in improving our understanding in these fascinating compact objects. The book addresses a wide spectrum of readers, from students to senior researchers. Thirteen chapters written by internationally renowned experts offer a thorough overview of the various facets of this interdisciplinary science, from neutron star formation in supernovae, pulsars, equations of state super dense matter, gravitational wave emission, to alternative theories of gravity. The book was initiated by the European Cooperation in Science and Technology (COST) Action MP1304 “Exploring fundamental physics with compact stars” (NewCompStar).

The aim of the inaugural meeting of the Sant Cugat Forum on Astrophysics was to address, in a global context, the current understanding of and challenges in high-energy emissions from isolated and non-isolated neutron stars, and to confront the theoretical picture with observations of both the Fermi satellite and the currently operating ground-based Cherenkov telescopes. Participants have also discussed the prospects for possible observations with planned instruments across the multi-wavelength spectrum (e.g. SKA, LOFAR, E-VLT, IXO, CTA) and how they will impact our theoretical understanding of these systems. In keeping with the goals of the Forum, this book not only represents the proceedings of the meeting, but also a reflection on the state-of-the-art in the topic.

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