

# Dr Ryan M Shannon Atnf

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It is your definitely own mature to perform reviewing habit. accompanied by guides you could enjoy now is **Dr Ryan M Shannon Atnf** below.

## **Gravitational Waves** - Michele Maggiore 2018-03-09

The two-volume book *Gravitational Waves* provides a comprehensive and detailed account of the physics of gravitational waves. While Volume 1 is devoted to the theory and experiments, Volume 2 discusses what can be learned from gravitational waves in astrophysics and in cosmology, by systematizing a large body of theoretical developments that have taken place over the last decades. The second volume also includes a detailed discussion of the first direct detections of gravitational waves. In the author's typical style, the theoretical results are generally derived afresh, clarifying or streamlining the existing derivations whenever possible, and providing a coherent and consistent picture of the field. The first volume of *Gravitational Waves*, which appeared in 2007, has established itself as the standard reference in the field. The scientific community has eagerly awaited this second volume. The recent direct detection of gravitational waves makes the topics in this book particularly timely.

## *Gravitational Waves* - Michele Maggiore 2008

The aim of this book is to become a major reference text for gravitational-wave physics, covering in detail both the experimental and the theoretical aspects. The book brings the reader to the forefront of present-day research, and assumes no previous knowledge of gravitational-wave physics.

## *When Galaxies Collide* - Lisa Harvey-Smith 2020-03-03

A book about space interspersed with fun anecdotes about an astronomer's life. In 2018 the author, Lisa Harvey-Smith, was appointed as the inaugural Australian Women in STEM Ambassador by the Australian Federal Government. In this book Harvey-Smith answers questions like: Why is the Milky Way blue? Why isn't a black hole dark? How many stars can you see with your naked eye? (9,000, but only half of that from any given point on Earth). How much hotter are blue stars than red ones? (38,000 degrees vs 3,000). Humans are the only known astronomers in the universe. When we look up at the night sky, we are linked to our ancestors. Away from city lights, we can see what generations of people before us have wondered at and weaved stories around. But all that will change. The Andromeda Galaxy is rushing towards us at 400,000 kilometres an hour. When *Galaxies Collide* will guide you to look at the night sky afresh. It peers 5.86 billion years into the future to consider the fate of Earth and its inhabitants. Will the solution be to live in space without a planet to call home? Will one of the other 100 billion planets spawn life?

## **Astronomical Data Analysis Software and Systems I** - Diana M. Worrall 1992

## **Pulsar Astronomy** - Andrew Lyne 2012-03

Now in its fourth edition, *Pulsar Astronomy* provides a thoroughly revised and updated introduction to the field of pulsar astronomy.

## *Neutron Stars and Pulsars (IAU S291)* - Joeri van Leeuwen 2013-04-25

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.

## *Liquid State Chemical Physics* - Robert Oliver Watts 1976

Good, No Highlights, No Markup, all pages are intact, Slight Shelfwear, may have the corners slightly dented, may have slight color changes/slightly damaged spine.

## **Golden Years of Australian Radio Astronomy** - Wayne Orchiston 2021

The evolution of Australian radio astronomy from 1945 to 1960 has been studied in detail by numerous historians of science in recent years. This Open Access book is the first to present an overview of this remarkable chapter in Australian science. The book begins in the post-war period, as the Radiophysics Laboratory in Sydney switched from secret wartime research on radar to peacetime applications of this new technology. Next follows the detection of radio waves from space and the ensuing transformation of this fledgling science into the dominant research program at the Radiophysics Lab. Drawing from this history, the book shows how by 1960 the Radiophysics Lab had become the largest and most successful radio astronomy group in the world. The final chapter presents an overview of Australian radio astronomy from 1960 to the present day, as Australia prepares to co-host the multi-national, multi-billion-dollar Square Kilometre Array. Nearly 300 high-quality images complement the text, drawn from a wide range of sources including the extensive collection held by the CSIRO Radio Astronomy Image Archive. The book will be an essential reference for readers interested in the scientific and cultural development of radio astronomy. This book is published open access under a CC BY 4.0 license.

## *Gravitational Waves and Cosmology* - E. Coccia 2020-08-31

The past twenty years have seen a number of breakthroughs in astrophysics and cosmology, some of which have been awarded Nobel prizes. These physics triumphs highlight the fact that while students need a solid grounding in the fundamentals of astrophysics and cosmology, sight of the basics of the fundamental interactions in physics must not be lost. This book presents papers based on lectures given at the 200th Course of the International School of Physics "Enrico Fermi", on Gravitation and Cosmology, held in Varenna, Italy, from 3 - 12 July 2017. The aim of the school was to expose students to state-of-the-art research in the field of gravitational waves and cosmology, from both a theoretical and experimental point of view. Lectures were organized in such a way as to foster interaction between the two communities, and a wide range of topics was addressed. In the gravitational waves section, topics covered include experimental issues connected with gravitational wave detection and the new field of multi-messenger astronomy, as well as more astrophysical aspects. In the section on cosmology, there are contributions on the early universe, on the cosmic microwave background (CMB) and on redshift surveys. Other areas covered include a review of inflationary scenarios; the non-Gaussian features of primordial density fluctuations; and the physical mechanisms responsible for the spectral distortions of the blackbody spectrum of the CMB. The book provides an overview of important research developments and will be of interest to all students of gravitation and cosmology.

## **Sims' History of Elgin County: A-L** - Hugh Joffre Sims 1984

## *Queanbeyan* - Nichole Overall 2013

Social pictorial history of Queanbeyan - book

## *Astronomical Data Analysis Software and Systems XXV* - Nuria P. F. Lorente 2017

## **Massive Neutrinos** - Orrin Fackler 1991

## *Fundamentals of Aperture Antennas and Arrays* - Trevor S. Bird 2016-01-19

This book is intended as an advanced text for courses in antennas, with a focus on the mature but vital background field of aperture antennas. The book is aimed at final year, MSc, PhD and Post-Doctoral students, as well as readers who are moving from academia into industry, beginning

careers as wireless engineers, system designers, in R&D, or for practising engineers. It assumes the reader has undertaken an earlier course of study on Maxwell's equations, fields and waves. Some of these topics are summarised in the early few chapters in order to provide continuity and background for the remaining chapters. The aperture antennas covered include the main types of horns, reflectors and arrays as well as microstrip patches, reflectarrays and lenses. To provide more than a superficial treatment of arrays, the topic of mutual coupling is covered in greater detail than most similar books in the area. Also included is an introduction to arrays on non-planar surfaces, which is of importance for applications that involve curved surfaces such as in aerodynamics or for making aperture antennas unobtrusive. A chapter is included on some modern aperture antennas to illustrate design techniques beyond the most common types of aperture antennas described in the early chapters. This is to show where advances have recently been made and where they could be improved in the future. Also included are selected topics of a practical nature for aperture antennas, namely fabrication and measurement.

**Einstein's Jury** - Jeffrey Crelinsten 2016-05-31

Einstein's Jury is the dramatic story of how astronomers in Germany, England, and America competed to test Einstein's developing theory of relativity. Weaving a rich narrative based on extensive archival research, Jeffrey Crelinsten shows how these early scientific debates shaped cultural attitudes we hold today. The book examines Einstein's theory of general relativity through the eyes of astronomers, many of whom were not convinced of the legitimacy of Einstein's startling breakthrough. These were individuals with international reputations to uphold and benefactors and shareholders to please, yet few of them understood the new theory coming from the pen of Germany's up-and-coming theoretical physicist, Albert Einstein. Some tried to test his theory early in its development but got no results. Others--through toil and hardship, great expense, and perseverance--concluded that it was wrong. A tale of international competition and intrigue, Einstein's Jury brims with detail gleaned from Crelinsten's far-reaching inquiry into the history and development of relativity. Crelinsten concludes that the well-known British eclipse expedition of 1919 that made Einstein famous had less to do with the scientific acceptance of his theory than with his burgeoning public fame. It was not until the 1920s, when the center of gravity of astronomy and physics shifted from Europe to America, that the work of prestigious American observatories legitimized Einstein's work. As Crelinsten so expertly shows, the glow that now surrounds the famous scientist had its beginnings in these early debates among professional scientists working in the glare of the public spotlight.

*Overview Of Gravitational Waves, An: Theory, Sources And Detection* - Auger Gerard 2017-02-15

This book describes detection techniques used to search for and analyze gravitational waves (GW). It covers the whole domain of GW science, starting from the theory and ending with the experimental techniques (both present and future) used to detect them. The theoretical sections of the book address the theory of general relativity and of GW, followed by the theory of GW detection. The various sources of GW are described as well as the methods used to analyse them and to extract their physical parameters. It includes an analysis of the consequences of GW observations in terms of astrophysics as well as a description of the different detectors that exist and that are planned for the future. With the recent announcement of GW detection and the first results from LISA Pathfinder, this book will allow non-specialists to understand the present status of the field and the future of gravitational wave science.

*Metters Capitol Wood Stoves* - Laurie Stevenson 2019-11-28

This book is a valuable reference for owners, restorers and collectors of 'Capitol' Wood Stoves. Beautifully illustrated, it provides detailed information on the history of design variations which can be used to establish the age of a particular stove. It will also be of interest to those who have fond memories of a 'Capitol' stove flickering in their parents' or grandparents' kitchens.

*Deep-Sky Companions: Southern Gems* - Stephen James O'Meara 2013-04-08

This text presents 120 deep-sky objects for southern hemisphere stargazers, each accompanied by beautiful images, finder charts and lucid commentary.

**Reflectionless Filters** - Matthew A. Morgan 2017-01-31

This invaluable resource introduces progressive techniques for the creation of sophisticated reflectionless filter topologies that have identically zero reflection coefficient at all frequencies. Practical implementations are discussed along with their advantages when

compared to classical absorptive filters and their benefits in real-world systems such as up/down converters, multiplier chains, broadband amplifiers, analog-to-digital converters, and time-domain applications. This book offers insight into the innovative process of developing reflectionless filters from first principles using both lumped elements and transmission lines. Tools for the creation of reflectionless multiplexers, matched sloped equalizers, and advanced, high-order, and nonplanar topologies are also presented.

**Neutron Stars and Pulsars** - Werner Becker 2009-02-11

Neutron stars are the most compact astronomical objects in the universe which are accessible by direct observation. Studying neutron stars means studying physics in regimes unattainable in any terrestrial laboratory. Understanding their observed complex phenomena requires a wide range of scientific disciplines, including the nuclear and condensed matter physics of very dense matter in neutron star interiors, plasma physics and quantum electrodynamics of magnetospheres, and the relativistic magneto-hydrodynamics of electron-positron pulsar winds interacting with some ambient medium. Not to mention the test bed neutron stars provide for general relativity theories, and their importance as potential sources of gravitational waves. It is this variety of disciplines which, among others, makes neutron star research so fascinating, not only for those who have been working in the field for many years but also for students and young scientists. The aim of this book is to serve as a reference work which not only reviews the progress made since the early days of pulsar astronomy, but especially focuses on questions such as: "What have we learned about the subject and how did we learn it?", "What are the most important open questions in this area?" and "What new tools, telescopes, observations, and calculations are needed to answer these questions?". All authors who have contributed to this book have devoted a significant part of their scientific careers to exploring the nature of neutron stars and understanding pulsars. Everyone has paid special attention to writing educational comprehensive review articles with the needs of beginners, students and young scientists as potential readers in mind. This book will be a valuable source of information for these groups.

**Nipple-Areolar Complex Reconstruction** - Melvin A. Shiffman 2018-02-01

This book, written by leading international experts, deals exclusively with reconstruction techniques for the Nipple-Areolar Complex (NAC). The first chapters present the history of the Nipple-Areolar Complex reconstruction and the anatomy of this part of the body. After discussing the abnormalities of the Nipple-Areolar Complex and how to prevent Nipple-Areolar Complex disorders, the book provides extensive documentation on techniques for correcting nipple hypertrophy, nipple inversion, and for increasing nipple projection. Readers will also find helpful information of malposition and tumors of the Nipple-Areolar Complex, as well as complications that can arise during the various surgical techniques. The book offers an invaluable guide for residents and fellow, practicing and highly experienced plastic surgeons, general surgeons, and those in cosmetic surgical subspecialties.

*Essential Radio Astronomy* - James J. Condon 2016-04-05

The ideal text for a one-semester course in radio astronomy Essential Radio Astronomy is the only textbook on the subject specifically designed for a one-semester introductory course for advanced undergraduates or graduate students in astronomy and astrophysics. It starts from first principles in order to fill gaps in students' backgrounds, make teaching easier for professors who are not expert radio astronomers, and provide a useful reference to the essential equations used by practitioners. This unique textbook reflects the fact that students of multiwavelength astronomy typically can afford to spend only one semester studying the observational techniques particular to each wavelength band. Essential Radio Astronomy presents only the most crucial concepts—succinctly and accessibly. It covers the general principles behind radio telescopes, receivers, and digital backends without getting bogged down in engineering details. Emphasizing the physical processes in radio sources, the book's approach is shaped by the view that radio astrophysics owes more to thermodynamics than electromagnetism. Proven in the classroom and generously illustrated throughout, Essential Radio Astronomy is an invaluable resource for students and researchers alike. The only textbook specifically designed for a one-semester course in radio astronomy Starts from first principles Makes teaching easier for astronomy professors who are not expert radio astronomers Emphasizes the physical processes in radio sources Covers the principles behind radio telescopes and receivers Provides the essential equations and fundamental constants used by practitioners Supplementary website

includes lecture notes, problem sets, exams, and links to interactive demonstrations An online illustration package is available to professors [Planetymology](#) - Isobel M Romero-Shaw 2020-12

Planetymology is an illustrated introduction to the etymology - the evolution and origins of words - in the context of astronomy. It focuses on European observations of the planets; from Mercury (known to the Ancient Greeks and Romans) all the way to Pluto (discovered as a planet in 1930 and reclassified as a dwarf planet in 2006). This book takes the reader on a tour of the Solar System, introducing the cosmic entities encountered on the way both as characters from Roman and Greek mythology, and as exotic worlds with alien characteristics. It traces the planets' names all the way back to words used by the first humans in Europe, and shows how they often have surprising links to familiar modern-day words. Planetymology is ideal for kids aged 8 - 15, and will be enjoyed by anyone with an interest in language, ancient history and/or astronomy. Blurb: The planets' names carry secrets... How is Neptune linked to hippopotamuses? Which planet's name means Sky-Father? Why did Pluto fail the planet test? Why is Uranus not called George? Read about the Gods and Goddesses that the planets are named after, discover how their names evolved from the language of ancient humans, and uncover hidden links from their names to familiar, commonly-used words. At the same time, learn about the weird and whacky weather on other planets, compare their crazy day-and-night cycles to ours on Earth, and meet Pluto's new dwarf planet friends...

**Thinking Security** - Steven M. Bellovin 2015-12-03

If you're a security or network professional, you already know the "do's and don'ts": run AV software and firewalls, lock down your systems, use encryption, watch network traffic, follow best practices, hire expensive consultants . . . but it isn't working. You're at greater risk than ever, and even the world's most security-focused organizations are being victimized by massive attacks. In *Thinking Security*, author Steven M. Bellovin provides a new way to think about security. As one of the world's most respected security experts, Bellovin helps you gain new clarity about what you're doing and why you're doing it. He helps you understand security as a systems problem, including the role of the all-important human element, and shows you how to match your countermeasures to actual threats. You'll learn how to move beyond last year's checklists at a time when technology is changing so rapidly. You'll also understand how to design security architectures that don't just prevent attacks wherever possible, but also deal with the consequences of failures. And, within the context of your coherent architecture, you'll learn how to decide when to invest in a new security product and when not to. Bellovin, co-author of the best-selling *Firewalls and Internet Security*, caught his first hackers in 1971. Drawing on his deep experience, he shares actionable, up-to-date guidance on issues ranging from SSO and federated authentication to BYOD, virtualization, and cloud security. Perfect security is impossible. Nevertheless, it's possible to build and operate security systems far more effectively. *Thinking Security* will help you do just that.

**Environmental Modelling and Prediction** - Gongbing Peng 2001-11-06

In this book the authors consider the natural environment as an integrated system. The physical, chemical and biological processes that govern the behaviour of the environmental system can thus be understood through mathematical modelling, and their evolution can be studied by means of numerical simulation. The book contains a summary of various efficient approaches in atmospheric prediction, such as numerical weather prediction and statistical forecast of climate change, as well as other successful methods in land surface modelling. The authors explore new theories and methods in environment prediction such as systems analysis and information theory. Attention is given to new achievements in remote sensing tele-metering and geographic information systems.

**Food and the Gut** - J. O. Hunter 1985

Abstract: This reference work summarizes the present state of knowledge in relation to gastrointestinal physiology and pathology. It discusses the pathophysiology of the gut from such diverse areas as intestinal permeability, gastrointestinal hormones and changes in the microflora. It focuses on the potential effects, both local and systemic, of chemicals such as opioids and nitrosamines produced in the gut, and examines the evidence for the existence of food intolerance and the therapeutic role of diet in a number of gastrointestinal disorders. Illustrations and references are included.

**Energetic Particles in the Heliosphere** - George M. Simnett 2016-12-01

This monograph traces the development of our understanding of how and where energetic particles are accelerated in the heliosphere and how they may reach the Earth. Detailed data sets are presented which address these topics. The bulk of the observations are from spacecraft in or near the ecliptic plane. It is timely to present this subject now that Voyager-1 has entered the true interstellar medium. Since it seems unlikely that there will be a follow-on to the Voyager programme any time soon, the data we already have regarding the outer heliosphere are not going to be enhanced for at least 40 years.

**Cosmic Magnetism**, - Percy Seymour 1986

The study of extraterrestrial magnetic fields is a relatively new one, confirmation of the existence of the first such field (that of our Sun) having come as late as 1908. In the past 30 years a great amount of knowledge has been accumulated on Cosmic Magnetism, which has turned out to be a truly fascinating topic for study. Percy Seymour's book is the first to deal with the topic in a non-mathematical way, and he offers a fine introduction to his subject. The first three chapters consolidate our knowledge on magnetism in general and the magnetic field of the Earth, as well as discussing the reasons for studying astronomy and cosmic magnetism in particular. The remainder of the book is devoted to the main areas of cosmic magnetism - solar, planetary and interplanetary fields, fields in stars and pulsars, fields of the milky way and fields in other galaxies. *Cosmic Magnetism* is an ideal book for sixth-formers and undergraduates studying physics or astronomy and will also appeal to amateur astronomers. As previous work on this topic has been 'hidden' in specialised academic journals.

**The Practice of Art and AI** - Andreas J. Hirsch 2022-01-04

Multidisciplinary explorations of AI and its implications for art In this multidisciplinary volume, European ARTificial Intelligence Lab, in partnership with Ars Electronica, considers the incredibly rapid development of Artificial Intelligence in the context of the cyber-arts. Bringing together 13 cultural and six scientific institutions from across Europe, this publication explores the interdisciplinary exchange between art and science and summarizes the accomplishments of the AI Lab since its opening. This guide to the events and exhibitions for this project includes more than 500 reproductions, profiles on featured exhibitors and essays. In keeping with the project's focus on the interplay between art and technology, the book includes QR codes which link the reader to video lectures and other supplementary materials. Artists and researchers include: Eva Smrekar, Eduardo Reck Miranda, Ian Gouldstone, Aarati Akkapeddi, Cecilie Waagner Falkenstrøm, Tega Brain, Sam Lavigne, Hannah Jayanti, Sarah Petkus, Mark J. Koch, Mimi Onuoha, Caroline Sinders, LaJuné McMillian, Victoria Vesna and many more.

**The Detection of Gravitational Waves** - David G. Blair 2005-10-13

This book introduces the concepts of gravitational waves within the context of general relativity. The sources of gravitational radiation for which there is direct observational evidence and those of a more speculative nature are described. He then gives a general introduction to the methods of detection. In the subsequent chapters he has drawn together the leading scientists in the field to give a comprehensive practical and theoretical account of the physics and technology of gravitational wave detection.

**The »Spectral Turn«** - Zuzanna Dziuban 2019-11-30

Over the last decades, studies on cultural memory have taken a »spectral turn« and have explored the potential of haunting metaphors for addressing past instances of violence that affect present cultural realities. This book contributes to the discussions on haunting by enquiring into its culturally and historically located modality: the emergence of the figure of the Jewish ghost in contemporary Polish popular culture, literature and critical art. Gathering contributions from an interdisciplinary group of scholars, it locates this new interest in Jewish ghosts on the map of other Polish (and Jewish) ghostologies and seeks to explore their cultural and political functions in the Polish post-Holocaust imaginaire.

**Nanohertz Gravitational Wave Astronomy** - Stephen R. Taylor 2021-11-22

Nanohertz Gravitational Wave Astronomy explores the exciting hunt for low frequency gravitational waves by using the extraordinary timing precision of pulsars. The book takes the reader on a tour across the expansive gravitational-wave landscape, from LIGO detections to the search for polarization patterns in the Cosmic Microwave Background, then hones in on the band of nanohertz frequencies that Pulsar Timing Arrays (PTAs) are sensitive to. Within this band may lie many pairs of the most massive black holes in the entire Universe, all radiating in chorus to produce a background of gravitational waves. The book shows how such

extra-Galactic gravitational waves can alter the arrival times of radio pulses emanating from monitored Galactic pulsars, and how we can use the pattern of correlated timing deviations from many pulsars to tease out the elusive signal. The book takes a pragmatic approach to data analysis, explaining how it is performed in practice within classical and Bayesian statistics, as well as the numerous strategies one can use to optimize numerical Bayesian searches in PTA analyses. It closes with a complete discussion of the data model for nanohertz gravitational wave searches, and an overview of the past achievements, present efforts, and future prospects for PTAs. The book is accessible to upper division undergraduate students and graduate students of astronomy, and also serves as a useful desk reference for experts in the field. Key features: Contains a complete derivation of the pulsar timing response to gravitational waves, and the overlap reduction function for PTAs. Presents a comprehensive overview of source astrophysics, and the dynamical influences that shape the gravitational wave signals that PTAs are sensitive to. Serves as a detailed primer on gravitational-wave data analysis and numerical Bayesian techniques for PTAs.

**The Strongest Magnetic Fields in the Universe** - Vasily S. Beskin 2016-01-29

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.

*Planets Around Pulsars* - J. A. Phillips 1993

*An Introduction to Radio Astronomy* - Bernard F. Burke 2010

This well-established, graduate-level textbook is a thorough introduction to radio telescopes and techniques for students and researchers new to the subject.

*Interferometry and Synthesis in Radio Astronomy* - Anthony Richard Thompson 1994-01-01

The theories and techniques that underlie radio interferometry as applied to astronomy and astrometry are discussed in this text. It is intended for graduate students and professionals who wish to use interferometric or synthesis-mapping techniques in astronomy, astrometry or geodesy.

*Four Pillars of Radio Astronomy: Mills, Christiansen, Wild, Bracewell* - R.H. Frater 2017-10-28

This is the story of Bernie Mills, Chris Christiansen, Paul Wild and Ron Bracewell, members of a team of radio astronomers that would lead Australia, and the world, into this new field of research. Each of the four is remembered for his remarkable work: Mills for the development the cross type instrument that now bears his name; Christiansen for the application of rotational synthesis techniques; Wild for the masterful joining of observations and theory to elicit the nature of the solar atmosphere; Bracewell for his contribution to imaging theory. As well, these Four Pillars are remembered for creating a remarkable environment for scientific discovery and for influencing the careers of future generations. Their pursuit of basic science helped pave the way for technological developments in areas ranging from Wi-Fi to sonar to medical imaging to air navigation, and for underpinning the foundations of modern cosmology and astrophysics.

**Handbook of Pulsar Astronomy** - D. R. Lorimer 2005

A concise, modern description of pulsar research.

**Wide-Range Antennas** - Boris Levin 2019-02-21

Expanding the range of antenna frequency is the main objective of this book. Solutions proposed are based on the development of new theoretical methods for analyzing and synthesizing antennas. The book shows that concentrated capacitive loads connected along linear and V-antennas provide a high level of matching with a cable over a wide frequency range and improves directional characteristics of antennas, i.e. increases the communication distance. New theoretical methods are proposed for analysis and synthesis of antennas under consideration: 1) method of calculating directional characteristics of radiators with a given current distribution, and 2) method of electrostatic analogy for calculating mutual and total fields of complex multi-element radiating structures. These methods allow us to obtain optimal directional characteristics for director-type antennas (arrays of Yagi-Uda) and log-periodic antennas with concentrated capacitances and show that use of capacitors makes it possible to extend the frequency range of the director antennas and to decrease dimensions of the log-periodic antennas. Multi-element (flat and three-dimensional) self-complementary antennas with different variants of connecting generator poles and cable wires to antenna elements are proposed, which improves the matching with a cable. Characteristics of flat structures are compared with characteristics of volume structures: conical, parabolic, and located on a pyramid edges. The book describes new versions of transparent antennas, antennas for cellular communication, multi-tier and multi-radiator antennas, and much more.

*Radio Interferometry* - T. J. Cornwell 1991