

Astrophysics Abstracts aims to present a comprehensive documentation of literature in all fields of astronomy and astrophysics. Every effort will be made to ensure that the average time interval between the date of receipt of the original literature and publication of the abstracts will not exceed eight months. This time interval is near to that achieved by monthly abstracting journals, compared to which our system of accumulating abstracts for about six months offers the advantage of greater convenience for the user. Volume 18 contains literature published in 1976 and received before March 1, 1977; some older literature which was received late and which is not recorded in earlier volumes is also included.

With contributions from two of the original discoverers of protective measurement, this book investigates its broad applications and deep implications. Addressing both physical and philosophical aspects, this is a valuable resource for graduate students and researchers interested in the conceptual foundations of quantum mechanics.

Skeletal Research, An Experimental Approach discusses experimental studies on bone cell and tissue biochemistry, biomechanics, isolation, and methods of analysis. Divided into four parts encompassing 21 chapters, this book describes the advantages and limitations of approaches and options available for bone laboratories. The opening part of this book describes the isolation, characterization, and methods of analysis of bone and cartilage cells and their organ cultures. This description is followed by discussions on the intermediary metabolism of growth and articular cartilage; the isolation of plasma membranes from calcified connective tissues; and the aspects of lipidology as it applies to calcified tissue. The third part of this book focuses on the chemical, histochemical, and pathophysiological studies of bone as tissue. This text includes significant chapters on bone's biomechanics and bioelectricity; bone mineral composition; collagen biochemistry; calcium metabolism; and blood flow. Studies on bone and cartilage as circadian systems in rats and mice, emphasizing the importance of this aspect of experimental design, are covered in the concluding part of this book. This text is an ideal resource to experienced researchers and young investigators who wish to expand their technical knowledge on bone research.

An Advanced Study Institute on Fast Electrical and Optical Diagnostic Principles and Techniques was held at Il Ciocco, Castelvechio Pascoli, Italy, 10-24 July 1983. This publication is the Proceedings from that Institute. The Institute was attended by ninety-seven participants representing the United States, West Germany, the United Kingdom, Switzerland, Norway, the Netherlands, Italy, and France. The objective of the Institute was to provide a broad but comprehensive presentation of the various measurement and analysis techniques that can be employed to investigate fast physical events, nominally in the sub-microsecond regime. This requires both an understanding of the basic principles underlying the diagnostic employed and its limitations, and a knowledge of the practical techniques available to obtain reliable and repeatable data. This Institute was thus structured to begin tutorially, followed by more practical techniques, demonstrations, and discussions. The Institute was divided into the following major sections: (1) Overview of Applications and Needs; (2) Voltage and Current Measurements; (3) Data Acquisition; (4) Grounding and Shielding; (5) Fast Photography; (6) Refractive Index Measurements; (7) X-ray Diagnostics; (8) Spectroscopy; and (9) Active Optical Techniques. This Proceeding has been divided into two separate volumes. Volume 1, Current and Voltage Measurements, includes Sections (1) through (4) above; Volume 2, Optical Measurements, includes Sections (5) through (9).

ELEMENTARY TECHNICAL MATHEMATICS, 12th Edition, is written to help students with minimal math background successfully prepare for technical, trade, allied health or tech prep programs. Author Dale Ewen focuses on fundamental concepts in basic arithmetic including the metric system and measurement, algebra, geometry, trigonometry and statistics. Thousands of examples, exercises and applications cover such fields as industrial and construction trades, electronics, agriculture/horticulture, allied health, CAD/drafting, HVAC, welding, auto/diesel service, aviation, natural resources, culinary arts and business/personal finance to engage students and provide them with the math background they need to succeed in future courses and careers. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The U.S. Climate Change Science Program (CCSP), established in 2002 to coordinate climate and global change research conducted in the United States and to support decision-making on climate-related issues, is producing twenty-one synthesis and assessment reports that address its research, observation, and decision-support needs. The first report, produced by the National Oceanic and Atmospheric Administration (NOAA) in coordination with other agencies, focuses on understanding reported differences between independently produced data sets of temperature trends for the surface through the lower stratosphere and comparing these data sets to model simulations. To ensure credibility and quality, NOAA asked the National Research Council to conduct an independent review of the report. The committee concluded that the report Temperature Trends in the Lower Atmosphere: Understanding and Reconciling Differences is a good first draft that covers an appropriate range of issues, but that it could be strengthened in a number of ways.

The rapid increase in environmental measurements during the past few decades is associated with (1) increasing awareness of the complex relations linking biological responses to atmospheric variables, (2) development of improved data acquisition and handling equipment, (3) the application of modeling to environmental problems, and (4) the implementation of large, cooperative studies of international scope. The consequences of man's possible alteration of the environment have increased our interest in the complex nature of biological responses to meteorological variables. This has generated activity in both measurements and in the application of modeling techniques. The virtual explosion of modeling activity is also associated with the development of large computers. The testing of these models has demonstrated the need for more, different, and better environmental data. In addition, technological developments, such as integrated circuits, have reduced the cost, power consumption, and complexity of data acquisition systems, thus promoting more environmental measurements. The emergence of scientific cooperation on a global scale has increased measurement activities markedly. The International Geophysical Year (1958) has been followed by the International Hydrologic Decade, the International Biological Program, the Global Atmospheric Research Program, and a host of environmental studies of a regional nature that have all emphasized field data collection.

A complete review for the Registry exam, Mosby's Comprehensive Review of Radiography: The Complete Study Guide and Career Planner, 6th Edition covers the five major

subject areas of the ARRT exam in radiography. It is also an effective study guide for many radiography courses! Written in outline format, each review of a subject is followed by questions related specifically to that area. Two mock ARRT exams are included in the book, and online exams include a pool of over 1,400 review questions that may be randomly combined to generate a virtually limitless number of mock ARRT exams. From noted radiography educator William J. Callaway, this edition also provides advice on writing resumes and cover letters, interviewing, employer expectations, and continuing education requirements to help you make the transition to a successful career. Review of the five major subject areas covered on the ARRT exam, in an outline format, helps you concentrate on the most important information. Over 2,400 review questions in the book and online offer practice with a multiple-choice format similar to the ARRT exam. Thorough coverage of digital and computed radiography reflects the increased emphasis of these topics on the Registry exam. Online mock exams let you practice in tutorial mode -- with immediate feedback after each question -- or in exam mode, with feedback only after you complete the entire test. Online study tools include study tips for difficult questions and electronic flashcards with formulas, key terms, and important topics. Rationales for correct and incorrect answers are included in the appendix. Career preparation advice includes writing resumes and cover letters, tips for interviewing, a look at what employers expect, career advancement, basic financial planning, and continuing education requirements. Updates reflect the latest ARRT exam changes with expanded coverage of computed and direct radiography, a review of computed tomography along with questions, and an additional 200-question exam in the Review Activities and Challenge Tests chapter. Online access to mock exams. Job search preparation includes tips on how to submit online applications and resumes.

Learning the fundamentals of chemistry can be a difficult task to undertake for health professionals. For over 35 years, Foundations of College Chemistry, Alternate 14th Edition has helped readers master the chemistry skills they need to succeed. It provides them with clear and logical explanations of chemical concepts and problem solving. They'll learn how to apply concepts with the help of worked out examples. In addition, Chemistry in Action features and conceptual questions checks brings together the understanding of chemistry and relates chemistry to things health professionals experience on a regular basis.

This report presents a suggested procedure for measuring the tire-pavement noise at the source. The procedure uses the on-board sound intensity (OBSI) method that was found to be the preferred approach for measuring tire-pavement noise at the source. Although the research presented in this report provided a basis for the recently introduced provisional Standard Test Method for the Measurement of Tire/Pavement Noise Using the On-Board Sound Intensity (OBSI) Method (AASHTO Designation TP076-08), the procedure includes some modifications to the provisional standard. The four appendices are not published in this report. Copies are available on the TRB website.

ELEMENTARY TECHNICAL MATHEMATICS Eleventh Edition is written to help students with minimal math background successfully prepare for technical, trade, allied health, or Tech Prep programs. The authors focus on fundamental concepts in basic arithmetic including the metric system and measurement, algebra, geometry, trigonometry, and statistics, which are supported by thousands of examples, exercises, and applications surrounding such fields as industrial and construction trades, electronics, agriculture/horticulture, allied health, CAD/drafting, HVAC, welding, auto/diesel service, aviation, natural resources, culinary arts, business/personal finance, and others. For this revision, the authors have added over 150 new exercises, 30 new examples, new applications categories, and a new appendix on simple inequalities. The goal of ELEMENTARY TECHNICAL MATHEMATICS is to engage students and provide them with the math background they need to succeed in future courses and careers. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The Autodesk® BIM 360™ Glue® User Fundamentals learning guide teaches you how to better predict project outcomes, reduce conflicts and changes, and achieve lower project risk using a BIM workflow. Over the course of this learning guide, you will learn how to consolidate civil, architectural, structural, and MEP models into one BIM model in the cloud. Starting with Autodesk® Revit® models, you will append various AutoCAD® Civil 3D® drawing files and Autodesk® Inventor® models and check for conflicts. Next, you will use review and markup tools for communicating issues across disciplines. Finally, you will locate clashes to find constructability issues. This learning guide is designed for new end users of the Autodesk® BIM 360™ Glue® software in multiple disciplines and is written on the software version 4.51.34.534. In addition to Autodesk BIM 360 Glue, you must have Autodesk Revit installed on your computer to complete the practices in this course. Topics Covered - Understanding the purpose of Building Information Modeling (BIM) and how it is applied in the Autodesk BIM 360 Glue software. - Consolidate Models - Navigating the Autodesk BIM 360 Glue desktop and mobile interfaces. - Creating a composite model. - Transforming models for correct alignment. - Review and Analyze Models - Using basic viewing tools. - Saving and retrieving views. - Sectioning a model. - Investigating properties. - Hiding and unhiding items. - Communication - Measuring a model. - Marking up the model. - Collaboration - Reviewing a model for clashes. - Notifying other team members of clashes and markups. - Sending the BIM 360 Glue model to BIM 360 Field users. Prerequisites Understanding of construction terminology.

This study tool has everything you need to prepare for the ARRT CT exam! Written in outline format, Mosby's Exam Review for Computed Tomography, 2nd Edition serves as both a study guide and an in-depth review. It covers the three content areas on the CT advanced certification examination: patient care, imaging procedures, and physics/instrumentation. Developed by Daniel N. DeMaio, BS, RT(R) (CT), the book simulates the Registry exam with three 165-question mock exams. This title includes additional digital media when purchased in print format. For this digital book edition, media content is not included. Review questions with answers help you prepare for the ARRT exam and identify areas that need additional study. Rationales for correct and incorrect answers provide you with the information you need to make the most out of the Q&A sections. A thorough, outline-format review covers the three content areas on the computed tomography advanced certification exam: patient care, imaging procedures, and physics/instrumentation.

The book contains information on geology, climate and vegetation of the Sierra Nevada with a special emphasis on air pollution effects on the mixed conifer forests. A history of the extent of air pollution effects on mixed conifer forests, especially ponderosa and Jeffrey pines is provided. The physiological basis for ozone-type injury development in ponderosa pine, a discussion of ozone uptake by plants at different levels of biological organization and the effects of air pollution and other stresses on mountain forests are discussed. A considerable portion of the book is dedicated to development of statistical models and maps of ambient ozone distribution in the Sierra Nevada based on the 1999 monitoring data with passive samplers. The implications of the methodological results, formulation and application of regional air quality models for integrated assessment of urban and wildland pollution and the need for functionally integrated models of ozone deposition to the Sierra Nevada forests are also discussed. Management and monitoring needs for improved long-term understanding air pollution effects on forest ecosystems, discussion of options for proper management of the air pollution affected forests, and comparison of monitoring and modelling of ozone and forest health status in the Sierra Nevada with similar efforts in mountains of North American and European mountain ranges are the focus of the later chapters of the book.

This book describes the practice of radiation thermometry, both at a primary level and for a variety of applications, such as in the materials processing industries and remote sensing. This book is written for those who will a) apply radiation thermometry in industrial practice b) use radiation thermometers for scientific research, c) the radiation thermometry specialist in a national measurement institute d) developers of radiation thermometers who are working to innovate products for instrument manufacturers and e) developers non-contact thermometry methods to address challenging thermometry problems. The author(s) of each chapter were chosen from a group of international scientists who are experts in the field and specialist(s) on the subject matter covered in the chapter. A large number of references are included at the end of each chapter as a resource for those seeking a deeper or more detailed understanding. This book is more than a practice guide. Readers will gain in-depth knowledge in: (1) the proper selection of the type of thermometer; (2) the best practice in using the radiation thermometers; (3) awareness of the error sources and subsequent appropriate procedure to reduce the overall uncertainty; and (4) understanding of the calibration chain and its current limitations. Coverage of all fundamental aspects of the radiometric measurements Coverage of practical applications with details on the instrumentation, calibration, and error sources Authors are from the national labs internationally leading in R&D in temperature measurements Comprehensive coverage with large number of references

Electrical and Electronic Measurement and Instrumentation' is one of the core subjects taught to Electrical, Electronic and Instrumentation students at B.Tech and other equivalent levels. The content of this book has been prepared after consulting the syllabuses of a large number of Indian universities. Although books are available on this subject, it was felt necessary to prepare the one that exactly responds to the students' learning needs and to create their interest in this subject. Thus, the presentation here has been especially made simple and easy to understand. The 5th edition of BASIC AUTOMOTIVE SERVICE & SYSTEMS is a comprehensive Classroom Manual/Shop Manual set provides an accessible overview of automotive systems to prepare you for all aspects of work in the field. The Classroom Manual explores the basic theories of operation behind each automotive system, while the Shop Manual covers the hands-on diagnostic, testing, and repair procedures that relate to them. Assuming no prior knowledge of automotive technology, this clear and engaging book addresses fundamental skills and maintenance and the application of key theories. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Statistics for Criminal Justice is an introductory statistics text for undergraduate criminology and criminal justice majors. The topics and engaging presentation style are targeted to students who have a basic background in algebra but who have had little or no exposure to the study of statistics. The overarching goal for the book is to demonstrate to students both that statistics used in criminal justice can be enlightening and eye-opening and, secondly, that pre-conceived notions of their academic inadequacies coming into the course are false. The content includes coverage of the fundamental areas in statistics, beginning with descriptive statistics, moving into probability and ending with regression. Emphasis is placed on balancing thoroughness with ease of understanding in order to show students the importance and relevance of statistics.

The success of the Apgar score demonstrates the astounding power of an appropriate clinical instrument. This down-to-earth book provides practical advice, underpinned by theoretical principles, on developing and evaluating measurement instruments in all fields of medicine. It equips you to choose the most appropriate instrument for specific purposes. The book covers measurement theories, methods and criteria for evaluating and selecting instruments. It provides methods to assess measurement properties, such as reliability, validity and responsiveness, and interpret the results. Worked examples and end-of-chapter assignments use real data and well-known instruments to build your skills at implementation and interpretation through hands-on analysis of real-life cases. All data and solutions are available online. This is a perfect course book for students and a perfect companion for professionals/researchers in the medical and health sciences who care about the quality and meaning of the measurements they perform.

Modern quantum measurement for graduate students and researchers in quantum information, quantum metrology, quantum control and related fields.

Zumdahl and DeCoste's best-selling INTRODUCTORY CHEMISTRY: A FOUNDATION, Ninth Edition, combines enhanced problem-solving structure with substantial pedagogy to enable students to become successful problem solvers in the introductory course and beyond. Capturing student interest through early coverage of chemical reactions, accessible explanations and visualizations, and an emphasis on everyday applications, the authors explain chemical concepts starting with the basics and conclude by encouraging students to test their own understanding of the solution. This step-by-step approach has already helped hundreds of thousands of student's master chemical concepts and develop strong problem-solving skills. Focusing on conceptual learning, the book motivates students by connecting chemical principles to real-life experiences. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The Eighth Edition of Zumdahl and DeCoste's best-selling INTRODUCTORY CHEMISTRY: A FOUNDATION combines enhanced problem-solving structure with substantial pedagogy to enable students to become strong independent problem solvers in the introductory course and beyond. Capturing student interest through early coverage of chemical reactions, accessible explanations and visualizations, and an emphasis on everyday applications, the authors explain chemical concepts by starting with the basics,

using symbols or diagrams, and conclude by encouraging students to test their own understanding of the solution. This step-by-step approach has already helped hundreds of thousands of students master chemical concepts and develop problem-solving skills. The book is known for its focus on conceptual learning and for the way it motivates students by connecting chemical principles to real-life experiences in chapter-opening discussions and Chemistry in Focus boxes. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This book takes a learner-oriented approach as it strives to make complex material understandable and usable. By understanding the underlying principles of measurement and evaluation, readers will then be able to apply those principles and concepts in a variety of physical activity and health-related settings. Practical exercises and applications demonstrate the usefulness of measurement and evaluation, reinforce key points, and make readers active participants in their own education. The book is divided into three parts. Part One introduces the measurement process, showing readers the relevance of measurement and evaluation to their personal and professional lives, and including examples and statistics related to such concepts as validity, reliability, and objectivity. The two chapters in Part Two further help readers understand numbers and assist those who need to use more advanced statistical calculations. Part Three presents measurement and evaluation applications in various settings, such as measuring physical fitness; measuring exercise, physical activity, and health; measuring in competitive sports and coaching; measuring and evaluating knowledge and assigning grades; and measuring in research. Throughout, discussions and examples show the relevance and application of measurement and evaluation in various professions, including physical therapy, athletic training, fitness/wellness management, exercise and sport psychology, exercise science, coaching, and physical education.

The book is concerned with research on income distribution inequality of Chinese residents in the last 20 years of the 20th century and the beginning of the 21th century. Measuring and making clear the status of inequality of every consisting parts of normal income of Chinese residents is an important concept. First, on the basis of the statistical data and the estimated data, as well as several kinds of methods that are used to calculate income inequality and suited for the available data, the authors computed the population-income Gini Coefficients of normal income inequality respectively for China's national, urban and rural areas. Second, by using urban/rural income ratio, Theil index and others, they measured the status and trends of Chinese urban/rural gap and regional income disparity, as well as their influence on the whole income inequality. Third, by case study and decomposition analysis some main factors, which had impacts on income inequality of urban and rural residents in China, and their influence, were researched. Fourth, the authors studied and measured the status and changes of the poor population and poverty rates in rural and urban areas in China. Fifth, the trend of inequality of normal income of Chinese residents was predicted at large, and the status of distribution inequality of Chinese residents was judged.

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