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Lecture Notes on Chern-Simons-Witten Theory Feb 01 2020 This invaluable monograph has arisen in part from E Witten's lectures on topological quantum field theory in the spring of 1989 at Princeton University. At that time Witten unified several important mathematical works in terms of quantum field theory, most notably the Donaldson polynomial, the Gromov-Floer homology and the Jones polynomials.In his lectures, among other things, Witten explained his intrinsic three-dimensional construction of Jones polynomials via Chern-Simons gauge theory. He provided both a rigorous proof of the geometric quantization of the Chern-Simons action and a very illuminating view as to how the quantization arises from quantization of the space of connections. He constructed a projective flat connection for the Hilbert space bundle over the space of complex structures, which becomes the Knizhik-Zamolodchikov equations in a special case. His construction leads to many beautiful applications, such as the derivation of the skein relation and the surgery formula for knot invariant, a proof of Verlinde's formula, and the establishment of a connection with conformal field theory.In this book, Sen Hu has added material to provide some of the details left out of Witten's lectures and to update some new developments. In Chapter 4 he presents a construction of knot invariant via representation of mapping class groups based on the work of Moore-Seiberg and Kohno. In Chapter 6 he offers an approach to constructing knot invariant from string theory and topological sigma models proposed by Witten and Vafa. The localization principle is a powerful tool to build mathematical foundations for such cohomological quantum field theories.In addition, some highly relevant material by S S Chern and E Witten has been included as appendices for the convenience of readers: (1) Complex Manifold without Potential Theory by S S Chern, pp148-154. (2) "Geometric quantization of Chern-Simons gauge theory" by S Axelrod, S D Pietra and E Witten. (3) "On holomorphic factorization of WZW and Coset models" by E Witten.

Lecture Notes in Algebraic Topology Dec 13 2020 The amount of algebraic topology a graduate student specializing in topology must learn can be intimidating. Moreover, by their second year of graduate studies, students must make the transition from understanding simple proofs line-by-line to understanding the overall structure of proofs of difficult theorems. To help students make this transition, the material in this book is presented in an increasingly sophisticated manner. It is intended to bridge the gap between algebraic and geometric topology, both by providing the algebraic tools that a geometric topologist needs and by concentrating on those areas of algebraic topology that are geometrically motivated. Prerequisites for using this book include basic set-theoretic topology, the definition of CW-complexes, some knowledge of the fundamental group/covering space theory, and the construction of singular homology. Most of this material is briefly reviewed at the beginning of the book. The topics discussed by the authors include typical material for first- and second-year graduate courses. The core of the exposition consists of chapters on homotopy groups and on spectral sequences. There is also material that would interest students of geometric topology (homology with local coefficients and obstruction theory) and algebraic topology (spectra and generalized homology), as well as preparation for more advanced topics such as algebraic K-theory and the s-cobordism theorem. A unique feature of the book is the inclusion, at the end of each chapter, of several projects that require students to present proofs of substantial theorems and to write notes accompanying their explanations. Working on these projects allows students to grapple with the ``big picture'', teaches them how to give mathematical lectures, and prepares them for participating in research seminars. The book is designed as a textbook for graduate students studying algebraic and geometric topology and homotopy theory. It will also be useful for students from other fields such as differential geometry, algebraic geometry, and homological algebra. The exposition in the text is clear; special cases are presented over complex general statements.

Ophthalmology Dec 01 2019 Highly Commended in Internal medicine in the 2017 BMA Medical Book Awards Highly illustrated, comprehensive, and accessible, Ophthalmology Lecture Notes is the ideal reference and revision guide to common eye problems and their diagnosis and management. Beginning with overviews of anatomy, history taking, and examination, it then covers a range of core ophthalmic conditions, including a new chapter on paediatric ophthalmology. The content has been thoroughly updated and includes: Over 200 diagrams and photographs A range of core clinical cases in chapter 20 demonstrating the clinical context of key conditions Learning objectives and summary of key points in each chapter Ophthalmology Lecture Notes is perfect for developing knowledge for clinical practice or revision in the run-up to examinations, and uses a systematic approach to provide medical students and junior doctors with all the tools they need to manage clinical situations. It is also useful for optometrists in training, helping them develop a sound understanding of clinical ophthalmology.

Lecture Notes on Turbulence and Coherent Structures in Fluids, Plasmas and Nonlinear Media Feb 24 2022 This book is based on the lectures delivered at the 19th Canberra International Physics Summer School held at the Australian National University in Canberra (Australia) in January 2006.The problem of turbulence and coherent structures is of key importance in many fields of science and engineering. It is an area which is vigorously researched across a diverse range of disciplines such as theoretical physics, oceanography, atmospheric science, magnetically confined plasma, nonlinear optics, etc. Modern studies in turbulence and coherent structures are based on a variety of theoretical concepts, numerical simulation techniques and experimental methods, which cannot be reviewed effectively by a single expert.The main goal of these lecture notes is to introduce state-of-the-art turbulence research in a variety of approaches (theoretical, numerical simulations and experiments) and applications (fluids, plasmas, geophysics, nonlinear optical media) by several experts. A smooth introduction is presented to readers who are not familiar with the field, while reviewing the most recent advances in the area. This collection of lectures will provide a useful review for both postgraduate students and researchers new to the advancements in this field, as well as specialists seeking to expand their knowledge across different areas of turbulence research.

Lecture Notes on Elementary Topology and Geometry Nov 11 2020 At the present time, the average undergraduate mathematics major finds mathematics heavily compartmentalized. After the calculus, he takes a course in analysis and a course in algebra. Depending upon his interests (or those of his department), he takes courses in special topics. IIhe is exposed to topology, it is usually straightforward point set topology; if he is exposed to geom etry, it is usually classical differential geometry. The exciting revelations that there is some unity in mathematics, that fields overlap, that techniques of one field have applications in another, are denied the undergraduate. He must wait until he is well into graduate work to see interconnections, presumably because earlier he doesn't know enough. These notes are an attempt to break up this compartmentalization, at least in topology-geometry. What the student has learned in algebra and advanced calculus are used to prove some fairly deep results relating geometry, topol ogy, and group theory. (De Rham's theorem, the Gauss-Bonnet theorem for surfaces, the functorial relation of fundamental group to covering space, and surfaces of constant curvature as homogeneous spaces are the most note worthy examples.) In the first two chapters the bare essentials of elementary point set topology are set forth with some hint ofthe subject's application to functional analysis.

Lecture Notes in Computational Intelligence and Decision Making Sep 29 2019 Information and computer technologies for data analysis and processing in various fields of data mining and machine learning generates the conditions for increasing the effectiveness of information processing by making it faster and more accurate. The book includes 49 scientific papers presenting the latest research in the fields of data mining, machine learning and decision-making. Divided into three sections: "Analysis and Modeling of Complex Systems and Processes"; "Theoretical and Applied Aspects of Decision-Making Systems"; and "Computational Intelligence and Inductive Modeling", the book is of interest to scientists and developers in the field.

Lecture Notes On Mathematical Olympiad Courses: For Senior Section - Volume 1 May 18 2021 Olympiad mathematics is not a collection of techniques of solving mathematical problems but a system for advancing mathematical education. This book is based on the lecture notes of the mathematical Olympiad training courses conducted by the author in Singapore. Its scope and depth not only covers and beyond the usual syllabus, but introduces a variety of concepts and methods in modern mathematics as well.In each lecture, the concepts, theories and methods are taken as the core. The examples serve to explain and enrich their intentions and to indicate their applications. Besides, appropriate number of test questions is available for the readers' practice and testing purpose. Their detailed solutions are also conveniently provided.The examples are not very complicated so readers can easily understand. There are many real competition questions included which students can use to verify their abilities. These test questions originate from many countries all over the world. This book will serve as a useful textbook of mathematical Olympiad courses, a self-study lecture notes for students, or as a reference book for related teachers and researchers.

A Boundary Element Method for Two-dimensional Contact Problems Jul 20 2021

Lecture Notes on Obstetrics and Gynaecology Jan 02 2020 The Lecture Notes Series provides the core information required by medical students -- all in a concise easy to read format. -- Indispensable review aids -- Written by experts in their respective fields -- Extensively reviewed by students and instructors

Surgical Talk Jun 18 2021 This textbook is an introduction and guide to undergraduate surgery. It has been a bestseller since its first edition in 2001. The philosophy of this book is to focus on the level of knowledge and the approach that would be expected of the better students reaching the end of their undergraduate training. Avoiding a book that is too cumbersome, we have tried to make this book readable and enjoyable as well as using various techniques to help the reader remember key facts. In addition to general surgery, the book contains sections on trauma, orthopaedics, urology and ENT making it the only comprehensive textbook for medical students wishing to learn top tips in surgery. Subjects that are poorly covered in all the main texts are dealt with in a tutorial fashion in this book, such as fluid balance management and minor surgical procedures and there is a section on how to problem solve even in the context of areas unknown to the student. This book is useful for medical students and also for junior doctors during their day to day working lives as well as those coming up to postgraduate exams. The text has been deliberately written in a tutorial-like story format as opposed to a set of lists, since this makes it easier to understand and remember. Each chapter is written by an authoritative author alongside the book editors who have ensured it remains in the spirit of the bestselling previous editions.

Lecture Notes: Immunology Mar 28 2022 Highly Commended at the British Medical Association Book Awards 2016 Immunology Lecture Notes provides a thorough grounding in basic concepts of immunity. Covering the core components of the immunology curriculum at medical school, it presents a concise overview of the immune system, its interactions with pathogens, the major areas of immunopathology, including immunodeficiency, allergy, autoimmunity, lymphoptopliferative diseases and transplantation, and their therapy. Immunology Lecture Notes includes: Full-colour descriptive illustrations and diagrams throughout, supplemented by new molecular graphics and anatomical scans New clinical cases developed as themes throughout the book to illustrate the practical application of immunological principles Fully updated self-assessment questions with expanded explanation of answers With learning objectives and key points guiding you through the vital concepts, Immunology Lecture Notes will help you to address the key disorders of the immune system, and use immunological developments in clinical practice.

Lecture Notes on Quantum Mechanics Jun 30 2022 The chapters are not independent, but build on one another. Subjects range from the failures of classical theory to second quantization, including chapters on the Dirac theory and Feynman diagrams."--Pub. desc.

USMLE Step 1 Lecture Notes 2021: 7-Book Set Feb 12 2021 Kaplan Medical's USMLE Step 1 Lecture Notes 2021: 7-Book Set offers in-depth review with a focus on high-yield topics in every discipline—a comprehensive approach that will help you deepen your understanding while focusing your efforts where they'll count the most. Used by thousands of medical students each year to succeed on USMLE Step 1, Kaplan's official lecture notes are packed with full-color diagrams and clear review. The 7 volumes—Pathology, Pharmacology, Physiology, Biochemistry/Medical Genetics, Immunology/Microbiology, Anatomy, and Behavioral Science/Social Sciences—are updated annually by Kaplan's all-star expert faculty. The Best Review 2,000 pages covering every discipline you'll need on this section of the boards Full-color diagrams and charts for better comprehension and retention Clinical correlations and bridges between disciplines highlighted throughout Chapter summary study guides at the end of every chapter for easier review Up-To-Date Content Clinical updates included in all 7 volumes to align with recent changes Organized in outline format with high-yield summary boxes for efficient study

Lecture Notes on Mean Curvature Flow Dec 25 2021 This book is an introduction to the subject of mean curvature flow of hypersurfaces with special emphasis on the analysis of singularities. This flow occurs in the description of the evolution of numerous physical models where the energy is given by the area of the interfaces. These notes provide a detailed discussion of the classical parametric approach (mainly developed by R. Hamilton and G. Huisken). They are well suited for a course at PhD/PostDoc level and can be useful for any researcher interested in a solid introduction to the technical issues of the field. All the proofs are carefully written, often simplified, and contain several comments. Moreover, the author revisited and organized a large amount of material scattered around in literature in the last 25 years.

Lecture Notes on the Infectious Diseases Jan 26 2022

Lecture Notes: Psychiatry Mar 04 2020 Lecture Notes: Psychiatry provides a concise and accessible introduction to the fundamentals of Psychiatry, presenting the principles of Psychiatric examination followed by systematic coverage of the major psychiatric disorders, as well as covering management and treatment options. This eleventh edition has been revised to include recent developments in history-taking, psychotropic drugs and case presentations, as well as covering the practical elements of patient guidance and care. Key features include: • Clearly presented tables, figures and end-of-chapter 'Key point' summaries to aid revision • An emphasis on core management skills needed by Junior Doctors in both psychiatric and general hospital settings • Quick reference guides to help structure patient assessments on-the-go • MCQs and case studies in line with medical school and professional level psychiatry exams For those embarking on study or refreshing their knowledge of psychiatry, Lecture Notes: Psychiatry provides a step-by-step guide to both its wider and patient-centred practice.

Clinical Anaesthesia Jun 06 2020 Clinical Anaesthesia Lecture Notes provides a comprehensive introduction to the modern principles and practices of anaesthesia for medical students, trainee doctors, anaesthetic nurses and other health professionals working with anaesthetists. This fifth edition has been fully updated to reflect changes in clinical practice, guidelines, equipment and drugs. Key features include: • A new chapter on the roles of the anaesthetist • Increased coverage of the peri-operative management of the overweight and obese patient, as well as an introduction to the fundamental aspects of paediatric anaesthesia • Coverage of recent developments within the specialty, including the rapidly growing recognition of the importance of non-technical skills (NTS), and the management of some of the most common peri-operative medical emergencies • Links to further online resources • A companion website at www.lecturenotesseries.com/anaesthesia featuring interactive true/false questions, SAQs, and a list of further reading and resources Full-colour diagrams, photographs, as well as learning objectives at the start of each chapter, support easy understanding of the knowledge and skills of anaesthesia, allowing confident transfer of information into clinical practice.

Lecture Notes: Medical Microbiology and Infection Apr 16 2021 Medical Microbiology and Infection Lecture Notes is ideal for medical students, junior doctors, pharmacy students, junior pharmacists, nurses, and those training in the allied health professions. It presents a thorough introduction and overview of this core subject area, and has been fully revised and updated to include: Chapters written by leading experts reflecting current research and teaching practice New chapters covering Diagnosis of Infections and Epidemiology and Prevention & Management of Infections Integrated full-colour illustrations and clinical images A self-assessment section to test understanding Whether you need to develop your knowledge for clinical practice, or refresh that knowledge in the run up to examinations, Medical Microbiology and Infection Lecture Notes will help foster a systematic approach to the clinical situation for all medical students and hospital doctors.

Lecture Notes on General Surgery Jul 08 2020

Lecture Notes on Motivic Cohomology Oct 30 2019 The notion of a motive is an elusive one, like its namesake "the motif" of Cezanne's impressionist method of painting. Its existence was first suggested by Grothendieck in 1964 as the underlying structure behind the myriad cohomology theories in Algebraic Geometry. We now know that there is a triangulated theory of motives, discovered by Vladimir Voevodsky, which suffices for the development of a satisfactory

Motivic Cohomology theory. However, the existence of motives themselves remains conjectural. This book provides an account of the triangulated theory of motives. Its purpose is to introduce Motivic Cohomology, to develop its main properties, and finally to relate it to other known invariants of algebraic varieties and rings such as Milnor K-theory, etale cohomology, and Chow groups. The book is divided into lectures, grouped in six parts. The first part presents the definition of Motivic Cohomology, based upon the notion of presheaves with transfers. Some elementary comparison theorems are given in this part. The theory of (etale, Nisnevich, and Zariski) sheaves with transfers is developed in parts two, three, and six, respectively. The theoretical core of the book is the fourth part, presenting the triangulated category of motives. Finally, the comparison with higher Chow groups is developed in part five. The lecture notes format is designed for the book to be read by an advanced graduate student or an expert in a related field. The lectures roughly correspond to one-hour lectures given by Voevodsky during the course he gave at the Institute for Advanced Study in Princeton on this subject in 1999-2000. In addition, many of the original proofs have been simplified and improved so that this book will also be a useful tool for research mathematicians. Information for our distributors: Titles in this series are copublished with the Clay Mathematics Institute (Cambridge, MA).

 General Surgery, with Wiley E-Text Aug 01 2022 THE 'GOLDEN JUBILEE' EDITION OF A CLASSIC TEXTBOOK, FIRST PUBLISHED IN 1965 Highly Commended at the British Medical Association Book Awards 2016 General Surgery Lecture Notes continues to be an invaluable, appealing and approachable resource for thousands of medical students and surgical trainees throughout the world. This comprehensive guide focuses on the fundamentals of general surgery, and systematically covers all the clinical surgical problems that a student may encounter and about which they need to know. Fully revised and updated to reflect the rapid changes which are taking place in surgical practice, this 50th anniversary edition: Includes principles of treatment written at student level to aid understanding Features full colour illustrations throughout Includes electronic access to a range of extra material including case studies, images and photographs, and biographies Includes free access to the Wiley E-Text Is a perfect review text for medical students as well as junior surgeons taking the MRCS examination and other postgraduate surgical examinations Trusted by generations of medical students, the clinical emphasis of General Surgery Lecture Notes makes this an essential purchase for all those wishing to learn more about general surgery.

 Linear and Complex Analysis Problem Book 3 Mar 16 2021 The 2-volume-book is an updated, reorganized and considerably enlarged version of the previous edition of the Research Problem Book in Analysis (LNM 1043), a collection familiar to many analysts, that has sparked off much research. This new edition, created in a joint effort by a large team of analysts, is, like its predecessor, a collection of unsolved problems of modern analysis designed as informally written mini-articles, each containing not only a statement of a problem but also historical and metho- dological comments, motivation, conjectures and discussion of possible connections, of plausible approaches as well as a list of references. There are now 342 of these mini- articles, almost twice as many as in the previous edition, despite the fact that a good deal of them have been solved!

 Lecture Notes on Principles of Plasma Processing Sep 02 2022 Plasma processing of semiconductors is an interdisciplinary field requiring knowledge of both plasma physics and chemical engineering. The two authors are experts in each of these fields, and their collaboration results in the merging of these fields with a common terminology. Basic plasma concepts are introduced painlessly to those who have studied undergraduate electromagnetics but have had no previous exposure to plasmas. Unnecessarily detailed derivations are omitted; yet the reader is led to understand in some depth those concepts, such as the structure of sheaths, that are important in the design and operation of plasma processing reactors. Physicists not accustomed to low-temperature plasmas are introduced to chemical kinetics, surface science, and molecular spectroscopy. The material has been condensed to suit a nine-week graduate course, but it is sufficient to bring the reader up to date on current problems such as copper interconnects, low-k and high-k dielectrics, and oxide damage. Students will appreciate the web-style layout with ample color illustrations opposite the text, with ample room for notes. This short book is ideal for new workers in the semiconductor industry who want to be brought up to speed with minimum effort. It is also suitable for Chemical Engineering students studying plasma processing of materials; Engineers, physicists, and technicians entering the semiconductor industry who want a quick overview of the use of plasmas in the industry.

 USMLE Step 2 CK Lecture Notes 2021: 5-book set Nov 23 2021 The only set on the market that offers a comprehensive yet concise review of USMLE Step 2 CK exam topics. Includes: Internal Medicine Pediatrics Obstetrics/Gynecology Surgery Psychiatry/Epidemiology/Patient Safety The best review from the same team that releases USMLE Step 1 Lecture Notes Revised every year by Kaplan's all-star, expert faculty 450+ color images similar to those on the exam Structured format calling out high-yield topics in context Bridges between specialties and basic science

 Lecture Notes: Infectious Diseases Apr 04 2020 This core text provides an excellent concise introduction to infectious diseases. The book integrates basic science with clinical practice with disease-orientated descriptions and clinical presentations on a system-by-system basis. It is therefore ideal for both the student and the practitioner. For this new sixth edition the text has been brought fully up to date throughout. The highly structured and improved text is designed to facilitate easy access to information, making the book an ideal resource for clinical attachments and revision. There is a new chapter that covers infections in special groups, as well as coverage of sepsis and septic shock. The Introductory chapter also takes into account new control measures, emerging infections, and infections linked with bioterrorism. Information on global occurrence is added to the epidemiology sections where relevant and web site information has been included to provide up-to-date resources on fast moving topics such as AIDS, and travel-related infections such as SARS. The result is a text that is a compact yet comprehensive guide to infectious diseases. It will appeal to medical students, junior doctors, general practitioners, and allied health professionals who want a concise introduction to the subject or an ideal revision companion.

 Lecture Notes on Ergodic Theory, 1962/63 Sep 21 2021

 Lecture Notes in Fixed Income Fundamentals Aug 09 2020 Written for undergraduates, this book is dedicated to fixed income fundamentals that do not require modeling the dynamics of interest rates. The book concentrates on understanding and explaining the pillars of fixed income markets, using the modern finance approach implied by the "no free lunch" condition. It focuses on conceptual understanding so that novice readers will be familiar with tools needed to analyze bond markets. Institutional information is covered only to the extent that is necessary to obtain full appreciation of concepts. This volume will equip readers with a solid and intuitive understanding of the No Arbitrage Condition -- its link to the existence and estimation of the term structure of interest rates, and to valuation of financial contracts. Using the modern approach of arbitrage arguments, the book addresses positions and contracts that do not require modeling evolution of interest rates. As such, it welcomes readers lacking the technical background for this modeling, and provides them with good intuition for interest rates, no arbitrage condition, bond markets and certain financial contracts.

 Lecture Notes May 30 2022 If you're an incoming freshman facing the culture shock of campus life, reeling under the weight of scholastic expectations, and feeling the pressure of overwhelming financial commitments—don't panic! Lectures Notes counters the confusion with an insider's perspective on navigating these challenges and many more. Professor Philip Freeman reveals the three sure-fire rules for a great college experience, offers solid strategies for fostering crucial relationships with faculty advisors, and sets you up for four years of success—and beyond. Packed with practical advice, Lectures Notes is a must read for every college-bound high school senior, whether you're attending a small-town junior college, a sprawling mega-campus, or an ivy-league university. Don't leave home without it!

 Lecture notes Oct 11 2020

 Emergency Medicine Jun 26 2019 Emergency Medicine Lecture Notes provides all the necessary information, within one short volume, for a sound introduction to this core specialty area. Presented in a user-friendly format, combining readability with flowcharts and high-quality illustrations, this fourth edition has been thoroughly revised to reflect recent advances in the field of emergency medicine. For this new edition, Emergency Medicine Lecture Notes features: ● Illustrations and flow charts in a two colour presentation throughout ● More detail on imaging, diagnosis and management of a wide range of acute conditions ● A brand new companion website at www.lecturenoteseries.com/emergencymed featuring a selection of MCQs to test readers on common pitfalls in emergency medicine Not only is this book a great starting point to support initial teaching on the topic, but it is easy to dip in and out of for reference or revision at the end of a module, rotation or final exams. Whether you need to develop or refresh your knowledge of emergency medicine, Emergency Medicine Lecture Notes presents 'need to know' information for all those involved in treating those in an emergency setting.

 Lecture Notes on Turbulence and Coherent Structures in Fluids, Plasmas and Nonlinear Media Jul 28 2019 This book is based on the lectures delivered at the 19th Canberra International Physics Summer School held at the Australian National University in Canberra (Australia) in January 2006.The problem of turbulence and coherent structures is of key importance in many fields of science and engineering. It is an area which is vigorously researched across a diverse range of disciplines such as theoretical physics, oceanography, atmospheric science, magnetically confined plasma, nonlinear optics, etc. Modern studies in turbulence and coherent structures are based on a variety of theoretical concepts, numerical simulation techniques and experimental methods, which cannot be reviewed effectively by a single expert.The main goal of these lecture notes is to introduce state-of-the-art turbulence research in a variety of approaches (theoretical, numerical simulation and experiments) and applications (fluids, plasmas, geophysics, nonlinear optical media) by several experts. A smooth introduction is presented to readers who are not familiar with the field, while reviewing the most recent advances in the area. This collection of lectures will provide a useful review for both postgraduate students and researchers new to the advancements in this field, as well as specialists seeking to expand their knowledge across different areas of turbulence research.

 Lecture Notes in Quantum Chemistry Jan 14 2021 "Quantum Chemistry" is the course material of a European Summer School in Quantum Chemistry, organized by Bj|rn O. Roos. It consists of lectures by outstanding scientists who participate in the education of students and young scientists. The book has a wider appeal as additional reading for University courses. Contents: P.-A. Malmquist: Mathematical Tools in Quantum Chemistry J. Olsen: The Method of Second Quantization P.R. Taylor: Molecular Symmetry and Quantum Chemistry B.O. Roos: The Multiconfigurational (MC) Self-Consistent Field (SCF) Theory P.E.M. Siegbahn: The Configuration Interaction Method T. Helgaker: Optimization of Minima and Saddle Points P.R. Taylor: Accurate Calculations and Calibration U. Wahlgren: Effective Core Potential Method

 Lecture notes in pure and applied mathematics Oct 23 2021

 Lecture Notes on Diophantine Analysis Oct 03 2022 These lecture notes originate from a course delivered at the Scuola Normale in Pisa in 2006. Generally speaking, the prerequisites do not go beyond basic mathematical material and are accessible to many undergraduates. The contents mainly concern diophantine problems on affine curves, in practice describing the integer solutions of equations in two variables. This case historically suggested some major ideas for more general problems. Starting with linear and quadratic equations, the important connections with Diophantine Approximation are explained and Thue's celebrated results are proved in full detail. In later chapters more modern issues on heights of algebraic points are dealt with, and applied to a sharp quantitative treatment of the unit equation. The book also contains several supplements, hinted exercises and an appendix on recent work on heights.

 Lecture Notes: Haematology May 06 2020 As the science and practice of haematology continues to advance at a considerable rate, Haematology Lecture Notes remains a comprehensive guide to this diverse subject, and provides support in understanding the pathogenesis and management of haematological disorders. Successfully integrating the physiological, pathological, and clinical aspects of haematology, this new edition includes new material on molecular and cellular diagnostics, expanded coverage on haemostasis, malignant haematology and transplant, and features self-assessment questions at the end of each chapter. Thoroughly revised and updated, Haematology Lecture Notes provides the core subject knowledge required by students and junior doctors to excel in this specialty.

 Lecture Notes on Dermatology Aug 21 2021

 Lecture Notes in Cosmology Aug 28 2019 Cosmology has become a very active research field in the last decades thanks to the impressing improvement of our observational techniques which have led to landmark discoveries such as the accelerated expansion of the universe, and have put physicists in front of new mysteries to unveil, such as the quest after the nature of dark matter and dark energy. These notes offer an approach to cosmology, covering fundamental topics in the field: the expansion of the universe, the thermal history, the evolution of small cosmological perturbations and the anisotropies in the cosmic microwave background radiation. Some extra topics are presented in the penultimate chapter and some standard results of physics and mathematics are available in the last chapter in order to provide a self-contained treatment. These notes offer an in-depth account of the above-mentioned topics and are aimed to graduate students who want to build an expertise in cosmology.

 Lecture Notes Haematology Nov 04 2022 The Lecture Notes series is ideal for medical students, junior doctors and other allied health professionals. Lecture Notes: Haematology concentrates on providing the required core subject knowledge and has been extensively revised and updated to reflect the considerable advances in the understanding of the molecular biology and pathogenesis of haematological disorders, while continuing the tradition of successfully integrating the physiological, pathological and clinical aspects of haematology. Each chapter begins with a list of learning objectives that identifies the key elements that students need to know, whilst also taking learning to the next level. This new edition includes brief sections on the approaches to investigation and treatment of haematological problems, the underlying mechanisms and relationships concerning lymphomas and other neoplastic diseases of the bone marrow, and the rapidly changing area of bone marrow transplantation. Illustrated in full colour throughout, with new illustrations and photographs of important normal and abnormal blood cells, this eighth edition is a comprehensive guide to haematology and an essential aid for anyone who wants a concise introduction to the subject.

 Lecture Notes on Pathology Sep 09 2020

 Paediatrics Lecture Notes Apr 28 2022 Paediatrics Lecture Notes covers the core aspects of caring for children in clinical practice, offering concise yet detailed information on examination, emergency care, nutrition, immunisation, infant and adolescent health, and more. Designed for medical students and junior doctors alike, this compact and easy-to-use textbook guides readers through each essential aspect of paediatric care, from normal and abnormal childhood development, to cardiology, gastroenterology and metabolic disorders. Throughout the text, key points, practice questions, treatment guides, learning logs and self-assessment tests help prepare readers for paediatric rotations and clinical examinations. Now in its tenth edition, this classic textbook features new and updated information that reflects changes in practice and recent advances in child and adolescent health. Providing a clear and accessible overview of paediatrics, this invaluable single-volume resource: Presents an overview of paediatrics, including expanded materials on genetics, differential diagnosis, investigation for common presentations, and treatment and management of various conditions Offers real-life advice and practical ways of gaining experience in paediatrics and career development Includes OSCE stations, examination review tips, extended matching questions and additional online learning resources Features an enhanced Symptom Sorter to quickly determine which conditions should feature in differential diagnoses Paediatrics Lecture Notes, Tenth Edition is a must-have guide for medical students and junior doctors in paediatric placements and preparing for clinical examinations.