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Dynamics of Linear Operators

This book offers insights into the history of mathematics education, covering both the current state of the art of research and the methodology of the field. History of mathematics education is treated in the book as a part of social history. This book grew out of the presentations delivered at the International Congress on Mathematics Education in Hamburg. Modern development and growing internationalization of mathematics education made it clear that many urgent questions benefit from a historical approach. The chapters present viewpoints from the following countries: Belgium, Brazil, Cambodia, China, Cyprus, Germany, Iceland, Italy, the Netherlands, Russia,Spain and Sweden. Each chapter represents significant directions of historical studies. The book is a valuable source for every historian of mathematics education and those interested in mathematics education and its development.

Strength of Materials and Theory of Elasticity in 19th Century Italy

This book is a collection of 65 selected papers presented at the 7th International Conference on Scientific Computing in Electrical Engineering (SCEE), held in Espoo, Finland, in 2008. The aim of the SCEE 2008 conference was to bring together

scientists from academia and industry, e.g. mathematicians, electrical engineers, computer scientists, and physicists, with the goal of intensive discussions on industrially relevant mathematical problems, with an emphasis on modeling and numerical simulation of electronic circuits and devices, electromagnetic fields, and coupled problems.This extensive reference work is divided into five parts: 1. Computational electromagnetics, 2. Circuit simulation, 3. Coupled problems, 4. Mathematical and computational methods, and 5. Model-order reduction. Each part starts with an general introduction followed by the actual papers.

The World as a Mathematical Game

Technology-enhanced learning is a timely topic, the importance of which is recognized by educational researchers, practitioners, software designers, and policy makers. This volume presents and discusses current trends and issues in technology-enhanced learning from a European research and development perspective. This multifaceted and multidisciplinary topic is considered from four different viewpoints, each of which constitutes a separate section in the book. The sections include general as well as domain-specific principles of learning that have been found to play a significant role in technology-enhanced environments, ways to shape the environment to optimize learners' interactions and learning, and specific technologies used by the environment to empower learners. An additional section discusses the work presented in the preceding sections from a computer science perspective and an implementation perspective. This book comes out of the work in Kaleidoscope: a European Network of Excellence in which over 1,000 people from more than 90 institutes across Europe participate. Kaleidoscope brings together researchers from diverse disciplines and cultures, through their collaboration and sharing of scientific outcomes, they are helping move the field of technology-enhanced learning forward.

Djairo G. de Figueiredo - Selected Papers

History of Functional Analysis presents functional analysis as a rather complex blend of algebra and topology, with its evolution influenced by the development of these two branches of mathematics. The book adopts a narrower definition—one that is assumed to satisfy various algebraic and topological conditions. A moment of reflections shows that this already covers a large part of modern analysis, in particular, the theory of partial differential equations. This volume comprises nine chapters, the first of which focuses on linear differential equations and the Sturm-Liouville problem. The succeeding chapters go on to discuss the ""crypto-integral"" equations, including the Dirichlet principle and the Beer-Neumann method; the equation of vibrating membranes, including the contributions of Poincare and H.A. Schwarz's 1885 paper; and the idea of infinite dimension. Other chapters cover the crucial years and the definition of Hilbert space, including Fredholm's discovery and the contributions of Hilbert; duality and the definition of normed spaces, including the Hahn-Banach theorem and the method of the gliding hump and Baire category; spectral theory after 1900, including the

theories and works of F. Riesz, Hilbert, von Neumann, Weyl, and Carleman; locally convex spaces and the theory of distributions; and applications of functional analysis to differential and partial differential equations. This book will be of interest to practitioners in the fields of mathematics and statistics.

The Craft of Probabilistic Modelling

The Fourth International Conference on the History of Mathematics Education was hosted by Academy of Sciences and University of Turin (Italy). About 50 senior and junior researchers from 16 countries met for four days to talk about one topic: the history of mathematics education. In total 44 contributions were presented. The themes were Ideas, people and movements, Transmission of ideas, Teacher education, Geometry and textbooks, Textbooks – changes and origins, Curriculum and reform, Teaching in special institutions, and Teaching of geometry. In this volume you find 28 of the papers, all of them peer-reviewed. Since the first international conference on the history of mathematics education, the aim has been to develop this area of research, to attract more researchers and provide new insights that stimulate further "digging". It is therefore very pleasing that so many new young researchers joined the conference, presenting results from ongoing or recently finished PhD projects. This makes us confident about a prosperous future of this research area as we look forward to the Fifth International Conference on the History of Mathematics Education, to be held in Utrecht, the Netherlands, in September 2017. Previous international conferences on the history of mathematics education: 2009 in Garðabær (Iceland) 2011 in Lisbon (Portugal) 2013 in Uppsala (Sweden)

Who's who in America 1996

An exploration of the influence of the charismatic Milanese art theorist on his contemporaries in the field of drawing, painting, printmaking, decorative arts, and sculpture.

Lomazzo's Aesthetic Principles Reflected in the Art of his Time

The problem of finding minimal surfaces, i. e. of finding the surface of least area among those bounded by a given curve, was one of the first considered after the foundation of the calculus of variations, and is one which received a satis factory solution only in recent years. Called the problem of Plateau, after the blind physicist who did beautiful experiments with soap films and bubbles, it has resisted the efforts of many mathematicians for more than a century. It was only in the thirties that a solution was given to the problem of Plateau in 3-dimensional Euclidean space, with the papers of Douglas [DJ] and Rado [R T1, 2]. The methods of Douglas and Rado were developed and extended in 3-dimensions by several authors, but none of the results was shown to hold even for minimal hypersurfaces in higher dimension, let alone surfaces

of higher dimension and codimension. It was not until thirty years later that the problem of Plateau was successfully attacked in its full generality, by several authors using measure-theoretic methods; in particular see De Giorgi [DG1, 2, 4, 5], Reifenberg [RE], Federer and Fleming [FF] and Almgren [AF1, 2]. Federer and Fleming defined a k-dimensional surface in IR" as a k-current, i. e. a continuous linear functional on k-forms. Their method is treated in full detail in the splendid book of Federer [FH 1].

Handbook on the History of Mathematics Education

The first book to assemble the wide body of theory which has rapidly developed on the dynamics of linear operators. Written for researchers in operator theory, but also accessible to anyone with a reasonable background in functional analysis at the graduate level.

The Oxford Illustrated History of Italy

The contributions in this proceedings volume offer a new perspective on the mathematical ties between France and Italy, and reveal how mathematical developments in these two countries affected one another. The focus is above all on the Peninsula's influence on French mathematicians, counterbalancing the historically predominant perception that French mathematics was a model for Italian mathematicians. In the process, the book details a subtle network of relations between the two countries, where mathematical exchanges fit into the changing and evolving framework of Italian political and academic structures. It reconsiders the issue of nationalities in all of its complexity, an aspect often neglected in research on the history of mathematics. The works in this volume are selected contributions from a conference held in Lille and Lens (France) in November 2013 on Images of Italian Mathematics in France from Risorgimento to Fascism. The authors include respected historians of mathematics, philosophers of science, historians, and specialists for Italy and intellectual relations, ensuring the book will be of great interest to their peers.

Math Tools

In this book, topics such as algebra, trigonometry, calculus and statistics are brought to life through over 500 applications ranging from biology, physics and chemistry to astronomy, geography and music. With over 600 illustrations emphasizing the beauty of mathematics, Math Tools complements more theoretical textbooks on the market, bringing the subject closer to the reader and providing a useful reference to students. By highlighting the ubiquity of mathematics in practical fields, the book will appeal not only to students and teachers, but to anyone with a keen interest in mathematics and its applications.

Linear Theories of Elasticity and Thermoelasticity

The Lévy Laplacian is an infinite-dimensional generalization of the well-known classical Laplacian. The theory has become well developed in recent years and this book was the first systematic treatment of the Lévy–Laplace operator. The book describes the infinite-dimensional analogues of finite-dimensional results, and more especially those features which appear only in the generalized context. It develops a theory of operators generated by the Lévy Laplacian and the symmetrized Lévy Laplacian, as well as a theory of linear and nonlinear equations involving it. There are many problems leading to equations with Lévy Laplacians and to Lévy–Laplace operators, for example superconductivity theory, the theory of control systems, the Gauss random field theory, and the Yang–Mills equation. The book is complemented by an exhaustive bibliography. The result is a work that will be valued by those working in functional analysis, partial differential equations and probability theory.

Approximation by Max-Product Type Operators

This is the first comprehensive International Handbook on the History of Mathematics Education, covering a wide spectrum of epochs and civilizations, countries and cultures. Until now, much of the research into the rich and varied history of mathematics education has remained inaccessible to the vast majority of scholars, not least because it has been written in the language, and for readers, of an individual country. And yet a historical overview, however brief, has become an indispensable element of nearly every dissertation and scholarly article. This handbook provides, for the first time, a comprehensive and systematic aid for researchers around the world in finding the information they need about historical developments in mathematics education, not only in their own countries, but globally as well. Although written primarily for mathematics educators, this handbook will also be of interest to researchers of the history of education in general, as well as specialists in cultural and even social history.

Giovanni Battista Guccia

In the first decade of the twentieth century as Albert Einstein began formulating a revolutionary theory of gravity, the Italian mathematician Gregorio Ricci was entering the later stages of what appeared to be a productive if not particularly memorable career, devoted largely to what his colleagues regarded as the dogged development of a mathematical language he called the absolute differential calculus. In 1912, the work of these two dedicated scientists would intersect—and physics and mathematics would never be the same. Einstein's Italian Mathematicians chronicles the lives and intellectual contributions of Ricci and his brilliant student Tullio Levi-Civita, including letters, interviews, memoranda, and other personal and professional papers, to tell the remarkable, little-known story of how two Italian academicians, of

widely divergent backgrounds and temperaments, came to provide the indispensable mathematical foundation—today known as the tensor calculus—for general relativity.

Scientific Computing in Electrical Engineering SCEE 2008

It is commonly believed that chaos is linked to non-linearity, however many (even quite natural) linear dynamical systems exhibit chaotic behavior. The study of these systems is a young and remarkably active field of research, which has seen many landmark results over the past two decades. Linear dynamics lies at the crossroads of several areas of mathematics including operator theory, complex analysis, ergodic theory and partial differential equations. At the same time its basic ideas can be easily understood by a wide audience. Written by two renowned specialists, Linear Chaos provides a welcome introduction to this theory. Split into two parts, part I presents a self-contained introduction to the dynamics of linear operators, while part II covers selected, largely independent topics from linear dynamics. More than 350 exercises and many illustrations are included, and each chapter contains a further 'Sources and Comments' section. The only prerequisites are a familiarity with metric spaces, the basic theory of Hilbert and Banach spaces and fundamentals of complex analysis. More advanced tools, only needed occasionally, are provided in two appendices. A self-contained exposition, this book will be suitable for self-study and will appeal to advanced undergraduate or beginning graduate students. It will also be of use to researchers in other areas of mathematics such as partial differential equations, dynamical systems and ergodic theory.

Peano

This book is a collection of essays written by the very scientists and engineers who have led, and continue to lead, the scientific quest known as SETI, the search for extraterrestrial intelligence. Divided into three parts, the first section, 'The Spirit of SETI Past', written by the surviving pioneers of this then emerging discipline, reviews the major projects undertaken during the first 50 years of SETI science and the results of that research. In the second section, 'The Spirit of SETI Present', the present-day science and technology is discussed in detail, providing the technical background to contemporary SETI instruments, experiments, and analytical techniques, including the processing of the received signals to extract potential alien communications. In the third and final section, 'The Spirit of SETI Future', the book looks ahead to the possible directions that SETI will take in the next 50 years, addressing such important topics as interstellar message construction, the risks and assumptions of interstellar communications, when we might make contact, what aliens might look like and what is likely to happen in the aftermath of such a contact.

History of Functional Analysis

Traces the history of Italy from the Roman Empire to the present, and examines the connections between Italian society, politics, and culture.

National Subcommissions of ICMI and their Role in the Reform of Mathematics Education

Geographic index, Professional index, Retiree index, Necrology.

Mathematicians of the World, Unite!

Foreword The modern developments in mathematical biology took place roughly between 1920 and 1940, a period now referred to as the "Golden Age of Theoretical Biology". The eminent Italian mathematician Vito Volterra played a decisive and widely acknowledged role in these developments. Volterra's interest in the application of mathematics to the non physical sciences, and to biology and economics in particular, dates back to the turn of the century and was expressed in his inaugural address at the University of Rome for the academic year 1900/01 (VOLTERRA 1901). Nevertheless, it was only in the mid-twenties that Volterra entered the field in person, at the instigation of his son in law, Umberto D'Ancona, who had confronted him with the problem of competition among animal species, asking him whether a mathematical treatment was possible. From that time on, until his death in 1940, Volterra produced a huge output of publications on the subject. Volterra's specific project was to transfer the model and the concepts of classical mechanics to biology, constructing a sort of "rational mechanics" and an "analytic mechanics" of biological associations. The new subject was thus to be equipped with a solid experimental or at least empirical basis, also in this case following the tried and tested example of mathematical physics. Although very few specific features of this reductionist programme have actually survived, Volterra's contribution was decisive, as is now universally acknowledged, in en couraging fresh studies in the field of mathematical biology.

Quantum Probability and Related Topics

Catalogo dei libri in commercio

The book presents research that contributes to the development of intelligent dialog systems to simplify diverse aspects of everyday life, such as medical diagnosis and entertainment. Covering major thematic areas: machine learning and artificial neural networks; algorithms and models; and social and biometric data for applications in human–computer interfaces, it discusses processing of audio-visual signals for the detection of user-perceived states, the latest scientific discoveries in

processing verbal (lexicon, syntax, and pragmatics), auditory (voice, intonation, vocal expressions) and visual signals (gestures, body language, facial expressions), as well as algorithms for detecting communication disorders, remote health-status monitoring, sentiment and affect analysis, social behaviors and engagement. Further, it examines neural and machine learning algorithms for the implementation of advanced telecommunication systems, communication with people with special needs, emotion modulation by computer contents, advanced sensors for tracking changes in real-life and automatic systems, as well as the development of advanced human–computer interfaces. The book does not focus on solving a particular problem, but instead describes the results of research that has positive effects in different fields and applications.

Who's who in the World

This is an excerpt from the 4-volume dictionary of economics, a reference book which aims to define the subject of economics today. 1300 subject entries in the complete work cover the broad themes of economic theory. This extract concentrates on utility and probability.

Stochastic Processes with Applications

The Unreal Life of Oscar Zariski records the life of Oscar Zariski that is based upon Carol Parikh's interviews with his family, colleagues, students, and his own memories from tape-recorded interviews conducted before his death in 1986. This book describes Oscar Zariski's work in mathematics that perpetually altered the foundations of algebraic geometry. The powerful tools he forged from the ideas of algebra allowed him to penetrate classical problems with a clarity and depth that brought a rigor to the way algebraic geometers carry out proofs. The strength of his work was matched by his forcefulness as a teacher, and the students he trained at Johns Hopkins and later at Harvard have made essential contributions to many areas of mathematics. This publication is beneficial to students and researchers interested in Oscar Zariski's life and work in mathematics.

Images of Italian Mathematics in France

This monograph presents a broad treatment of developments in an area of constructive approximation involving the so-called "max-product" type operators. The exposition highlights the max-product operators as those which allow one to obtain, in many cases, more valuable estimates than those obtained by classical approaches. The text considers a wide variety of operators which are studied for a number of interesting problems such as quantitative estimates, convergence, saturation results, localization, to name several. Additionally, the book discusses the perfect analogies between the

probabilistic approaches of the classical Bernstein type operators and of the classical convolution operators (non-periodic and periodic cases), and the possibilistic approaches of the max-product variants of these operators. These approaches allow for two natural interpretations of the max-product Bernstein type operators and convolution type operators: firstly, as possibilistic expectations of some fuzzy variables, and secondly, as bases for the Feller type scheme in terms of the possibilistic integral. These approaches also offer new proofs for the uniform convergence based on a Chebyshev type inequality in the theory of possibility. Researchers in the fields of approximation of functions, signal theory, approximation of fuzzy numbers, image processing, and numerical analysis will find this book most beneficial. This book is also a good reference for graduates and postgraduates taking courses in approximation theory.

The Biology of Numbers

A classic work by the mathematician who developed the general theory of functions that depend on a continuous set of values of another function, this volume deals primarily with integral equations.

Einstein's Italian Mathematicians: Ricci, Levi-Civita, and the Birth of General Relativity

This book addresses fixed point theory, a fascinating and far-reaching field with applications in several areas of mathematics. The content is divided into two main parts. The first, which is more theoretical, develops the main abstract theorems on the existence and uniqueness of fixed points of maps. In turn, the second part focuses on applications, covering a large variety of significant results ranging from ordinary differential equations in Banach spaces, to partial differential equations, operator theory, functional analysis, measure theory, and game theory. A final section containing 50 problems, many of which include helpful hints, rounds out the coverage. Intended for Master's and PhD students in Mathematics or, more generally, mathematically oriented subjects, the book is designed to be largely self-contained, although some mathematical background is needed: readers should be familiar with measure theory, Banach and Hilbert spaces, locally convex topological vector spaces and, in general, with linear functional analysis.

Linear Chaos

This volume presents a collection of selected papers by the prominent Brazilian mathematician Djairo G. de Figueiredo, who has made significant contributions in the area of Differential Equations and Analysis. His work has been highly influential as a challenge and inspiration to young mathematicians as well as in development of the general area of analysis in his home country of Brazil. In addition to a large body of research covering a variety of areas including geometry of Banach spaces, monotone operators, nonlinear elliptic problems and variational methods applied to differential equations, de Figueiredo is

known for his many monographs and books. Among others, this book offers a sample of the work of Djairo, as he is commonly addressed, advancing the study of superlinear elliptic problems (both scalar and system cases), including questions on critical Sobolev exponents and maximum principles for non-cooperative elliptic systems in Hamiltonian form.

Minimal Surfaces and Functions of Bounded Variation

This book examines the life and work of mathematician Giovanni Battista Guccia, founder of the Circolo Matematico di Palermo and its renowned journal, the Rendiconti del Circolo matematico di Palermo. The authors describe how Guccia, an Italian geometer, was able to establish a mathematical society in Sicily in the late nineteenth century, which by 1914 would grow to become the largest and most international in the world, with one of the most influential journals of the time. The book highlights the challenges faced by Guccia in creating an international society in isolated Palermo, and places Guccia's activities in the wider European context through comparisons with the formation of the London Mathematical Society and the creation of Mittag-Leffler's Acta Mathematica in Stockholm. Based on extensive searches in European archives, this scholarly work follows both historical and scientific treads, and will appeal to those interested in the history of mathematics and science in general.

Fixed Point Theorems and Applications

ICMI (or IMUK) was founded in 1908 and initiated the establishment of national subcommissions to launch national activities in response to the IMUK agenda and to promote the reform proposals within each member country.While ICMI's activities were thoroughly studied, the activities of the national subcommissions are studied only very marginally. In the meantime, their work has been of major importance – both because of their role in exploring and documenting the development of mathematics education at the beginning of the 20th century, and because of the changes and new ideas which they brought to their countries. Importantly, even if some results of their activities were analyzed within their countries in the corresponding languages, almost nothing is known internationally. This book is planned to deepen our knowledge on at least some of the national subcommissions. The book will interest both researchers and others interested in mathematics education and its development.

Researching the History of Mathematics Education

This vividly illustrated history of the International Congress of Mathematicians — a meeting of mathematicians from around the world held roughly every four years — acts as a visual history of the 25 congresses held between 1897 and 2006, as well as a story of changes in the culture of mathematics over the past century. Because the congress is an international

meeting, looking at its history allows us a glimpse into the effect of wars and strained relations between nations on the scientific community.

Utility and Probability

Galileo and Newton's work towards the mathematisation of the physical world; Leibniz's universal logical calculus; the Enlightenment's mathématique sociale. John von Neumann inherited all these aims and philosophical intuitions, together with an idea that grew up around the Vienna Circle of an ethics in the form of an exact science capable of guiding individuals to make correct decisions. With the help of his boundless mathematical capacity, von Neumann developed a conception of the world as a mathematical game, a world globally governed by a universal logic in which individual consciousness moved following different strategies: his vision guided him from set theory to quantum mechanics, to economics and to his theory of automata (anticipating artificial intelligence and cognitive science). This book provides the first comprehensive scientific and intellectual biography of John von Neumann, a man who perhaps more than any other is representative of twentieth century science.

Theory of Functionals and of Integral and Integro-differential Equations

Quantum Probability and Related Topics is a series of volumes based on material discussed at the various QP conferences. It aims to provide an update on the rapidly growing field of classical probability, quantum physics and functional analysis.

The Volterra Chronicles

This book brings together the personal accounts and reflections of nineteen mathematical model-builders, whose specialty is probabilistic modelling. The reader may well wonder why, apart from personal interest, one should commission and edit such a collection of articles. There are, of course, many reasons, but perhaps the three most relevant are: (i) a philosophicaJ interest in conceptual models; this is an interest shared by everyone who has ever puzzled over the relationship between thought and reality; (ii) a conviction, not unsupported by empirical evidence, that probabilistic modelling has an important contribution to make to scientific research; and finally (iii) a curiosity, historical in its nature, about the complex interplay between personal events and the development of a field of mathematical research, namely applied probability. Let me discuss each of these in turn. Philosophical Abstraction, the formation of concepts, and the construction of conceptual models present us with complex philosophical problems which date back to Democritus, Plato and Aristotle. We have all, at one time or another, wondered just how we think; are our thoughts, concepts and models of reality approxim&tions to the truth, or are they simply functional constructs helping us to master our environment? Nowhere are these problems more

apparent than in mathematical model ling, where idealized concepts and constructions replace the imperfect realities for which they stand.

Neural Approaches to Dynamics of Signal Exchanges

Essentially there are two variational theories of liquid crystals explained in this book. The theory put forward by Zocher, Oseen and Frank is classical, while that proposed by Ericksen is newer in its mathematical formulation although it has been postulated in the physical literature for the past two decades. The newer theory provides a better explanation of defects in liquid crystals, especially of those concentrated on lines and surfaces, which escape the scope of the classical theory. The book opens the way to the wealth of applications that will follow.

"Dig where you stand" 4

All students of mathematics know of Peano's postulates for the natural numbers and his famous space-filling curve, yet their knowledge often stops there. Part of the reason is that there has not until now been a full-scale study of his life and works. This must surely be surprising, when one realizes the length of his academic career (over 50 years) and the extent of his publica tions (over 200) in a wide variety of fields, many of which had immediate and long-term effects on the development of modern mathematics. A study of his life seems long overdue. It appeared to me that the most likely person to write a biography of Peano would be his devoted disciple Ugo Cassina, with whom I studied at the University of Milan in 1957-58. I wrote to Professor Cassina on 29 October, 1963, inquiring if he planned to write the biography, and I offered him my assistance, since I hoped to return to Italy for a year. He replied on 28 November, 1963, suggesting that we collaborate, meaning by this that I would write the biography, in English, using his material and advice. I gladly agreed to this suggestion, but work on the project had hardly begun when Professor Cassina died unexpectedly on 5 October, 1964. I then decided to continue the project on my own. I spent the academic year 1966-67 in Turin; completion of the book took ten years.

Giuseppe Peano between Mathematics and Logic

The life of Vito Volterra, one of the finest scientists and mathematicians Italy ever produced, spans the period from the unification of the Italian peninsula in 1860 to the onset of the Second World War--an era of unparalleled progress and unprecedented turmoil in the history of Europe. Born into an Italian Jewish family in the year of the liberation of Italy's Jewish ghettos, Volterra was barely in his twenties when he made his name as a mathematician and took his place as a leading light in Italy's modern scientific renaissance. By his early forties, he was a world-renowned mathematician, a sought-

after figure in European intellectual and social circles, the undisputed head of Italy's mathematics and physics school--and still living with his mother, who decided the time was ripe to arrange his marriage. When Italy entered World War I in 1915, the fifty-five-year-old Volterra served with distinction and verve as a lieutenant and did not put on civilian clothes again until the Armistice of 1918. This book, based in part on unpublished personal letters and interviews, traces the extraordinary life and times of one of Europe's foremost scientists and mathematicians, from his teenage struggles to avoid the stifling life of a ""respectable"" bank clerk in Florence, to his seminal mathematical work--which today influences fields as diverse as economics, physics, and ecology--and from his spirited support of Italy's scientific and democratic institutions during his years as an Italian Senator, to his steadfast defiance of the Fascists and Mussolini. In recounting the life of this outstanding scientist, European Jewish intellectual, committed Italian patriot, and devoted if frequently distracted family man, The Volterra Chronicles depicts a remarkable individual in a prodigious age and takes the reader on a vivid and splendidly detailed historical journey.

Searching for Extraterrestrial Intelligence

The Unreal Life of Oscar Zariski

This book examines the theoretical foundations underpinning the field of strength of materials/theory of elasticity, beginning from the origins of the modern theory of elasticity. While the focus is on the advances made within Italy during the nineteenth century, these achievements are framed within the overall European context. The vital contributions of Italian mathematicians, mathematical physicists and engineers in respect of the theory of elasticity, continuum mechanics, structural mechanics, the principle of least work and graphical methods in engineering are carefully explained and discussed. The book represents a work of historical research that primarily comprises original contributions and summaries of work published in journals. It is directed at those graduates in engineering, but also in architecture, who wish to achieve a more global and critical view of the discipline and will also be invaluable for all scholars of the history of mechanics.

Technology-Enhanced Learning

The Lévy Laplacian

This book contains the papers developing out the presentations given at the International Conference organized by the Torino Academy of Sciences and the Department of Mathematics Giuseppe Peano of the Torino University to celebrate the

150th anniversary of G. Peano's birth - one of the greatest figures in modern mathematics and logic and the most important mathematical logician in Italy - a century after the publication of Formulario Mathematico, a great attempt to systematise Mathematics in symbolic form.

Variational Theories for Liquid Crystals

Stochastic processes have wide relevance in mathematics both for theoretical aspects and for their numerous real-world applications in various domains. They represent a very active research field which is attracting the growing interest of scientists from a range of disciplines. This Special Issue aims to present a collection of current contributions concerning various topics related to stochastic processes and their applications. In particular, the focus here is on applications of stochastic processes as models of dynamic phenomena in research areas certain to be of interest, such as economics, statistical physics, queuing theory, biology, theoretical neurobiology, and reliability theory. Various contributions dealing with theoretical issues on stochastic processes are also included.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION