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KEY=M2 - COLTON BRENDEN

DSE Maths CP P2 by topic 2012-2018 MATHS CORE Finnish Lessons What Can the World Learn from Educational Change in Finland Teachers College Press ⬜*It is now time to break down the ideology of exceptionalism in the United States and other Anglo-American nations if we are to develop reforms that will truly inspire our teachers to improve learning for all our students⬜especially those who struggle the most. In that essential quest, Pasi Sahlberg is undoubtedly one of the very best teachers of all.⬜ ⬜From the Foreword by Andy Hargreaves, Lynch School of Education, Boston College Finnish Lessons is a first-hand, comprehensive account of how Finland built a world-class education system during the past three decades. The author traces the evolution of education policies in Finland and highlights how they differ from the United States and other industrialized countries. He shows how rather than relying on competition, choice, and external testing of students, education reforms in Finland focus on professionalizing teachers⬜ work, developing instructional leadership in schools, and enhancing trust in teachers and schools. This book details the complexity of educational change and encourages educators and policymakers to develop effective solutions for their own districts and schools.* **Biostatistics A Foundation for Analysis in the Health Sciences Wiley** *The ability to analyze and interpret enormous amounts of data has become a prerequisite for success in allied healthcare and the health sciences. Now in its 11th edition, Biostatistics: A Foundation for Analysis in the Health Sciences continues to offer in-depth guidance toward biostatistical concepts, techniques, and practical applications in the modern healthcare setting. Comprehensive in scope yet detailed in coverage, this text helps students understand—and appropriately use—probability distributions, sampling distributions, estimation, hypothesis testing, variance analysis, regression, correlation analysis, and other statistical tools fundamental to the science and practice of medicine. Clearly-defined pedagogical tools help students stay up-to-date on new material, and an emphasis on statistical software allows faster, more accurate calculation while putting the focus on the underlying concepts rather than the math. Students develop highly relevant skills in inferential and differential statistical techniques, equipping them with the ability to organize, summarize, and interpret large bodies of data. Suitable for both graduate and advanced undergraduate coursework, this text retains the rigor required for use as a professional reference.* **Bioelectricity A Quantitative Approach Springer Science & Business Media** *This text is an introduction to electrophysiology, following a quantitative approach. The first chapter summarizes much of the mathematics required in the following chapters. The second chapter presents a very concise overview of the general principles of electrical fields and current flow, mostly es tablished in physical science and engineering, but also applicable to biolog ical environments. The following five chapters are the core material of this text. They include descriptions of how voltages come to exist across membranes and how these are described using the Nernst and Goldman equations (Chapter 3), an examination of the time course of changes in membrane voltages that produce action potentials (Chapter 4), propagation of action potentials down fibers (Chapter 5), the response of fibers to artificial stimuli such as those used in pacemakers (Chapter 6), and the voltages and currents produced by these active processes in the surrounding extracellular space (Chapter 7). The subsequent chapters present more detailed material about the application of these principles to the study of cardiac and neural electrophysiology, and include a chapter on recent developments in mem brane biophysics. The study of electrophysiology has progressed rapidly because of the precise, delicate, and ingenious experimental studies of many investigators. The field has also made great strides by unifying the numerous experimental observations through the development of increasingly accurate theoretical concepts and mathematical descriptions. The application of these funda mental principles has in turn formed a basis for the solution of many different electrophysiological problems.* **Recognition and Management of Pesticide Poisonings (5th Ed.) DIANE Publishing** *This 5th ed. is an update and expansion of the 1989 4th ed. This EPA manual provides health professionals with information on the health hazards of pesticides currently in use, and current consensus recommendations for management of poisonings and injuries caused by them. As with previous updates, this new ed. incorporates new pesticide products that are not necessarily widely known among health professionals. Contents: (1) General Information: Introduction; General Principles in the Management of Acute Pesticide Poisonings; Environmental and Occupational History; (2) Insecticides; (3) Herbicides; (4) Other Pesticides; (5) Index of Signs and Symptoms; Index of Pesticide Products. Charts and tables.* **Numerical Methods in Contact Mechanics John Wiley & Sons** *Computational contact mechanics is a broad topic which bringstogether algorithmic, geometrical, optimization and numericalaspects for a robust, fast and accurate treatment of contactproblems. This book covers all the basic ingredients of contact andcomputational contact mechanics: from efficient contact detectionalgorithms and classical optimization methods to new developmentsin contact kinematics and resolution schemes for both sequentialand parallel computer architectures. The book is self-contained andintended for people working on the implementation and improvementof contact algorithms in a finite element software. Using a new tensor algebra, the authors introduce some originalnotions in contact kinematics and extend the classical formulationof contact elements. Some classical and new resolution methods forcontact problems and associated ready-to-implement expressions areprovided. Contents: 1. Introduction to Computational Contact. 2. Geometry in Contact Mechanics. 3. Contact Detection. 4. Formulation of Contact Problems. 5. Numerical Procedures. 6. Numerical Examples. About the Authors Vladislav A. Yastrebov is a postdoctoral-fellow in ComputationalSolid Mechanics at MINES ParisTech in France. His work incomputational contact mechanics was recognized by the CSMA awardand by the Prix Paul Caseau of the French Academy of Technology andElectricité de France.* **Science Education in East Asia Pedagogical Innovations and Research-informed Practices Springer** *This book presents innovations in teaching and learning science, novel approaches to science curriculum, cultural and contextual factors in promoting science education and improving the standard and achievement of students in East Asian countries. The authors in this book discuss education reform and science curriculum changes and promotion of science and STEM education, parental roles and involvement in children's education, teacher preparation and professional development and research in science education in the context of international benchmarking tests to measure the knowledge of mathematics and science such as the Trends in Mathematics and Science Study (TIMSS) and achievement in science, mathematics and reading like Programme for International Student Assessment (PISA). Among the high achieving countries, the performance of the students in East Asian countries such as Singapore, Taiwan, Korea, Japan, Hong Kong and China (Shanghai) are notable. This book investigates the reasons why students from East Asian countries consistently claim the top places in each and every cycle of those study. It brings together prominent science educators and researchers from East Asia to share their experience and findings, reflection and vision on emerging trends, pedagogical innovations and research-informed practices in science education in the region. It provides insights into effective educational strategies and development of science education to international readers.* **Financial Risk Modelling and Portfolio Optimization with R John Wiley & Sons** *Financial Risk Modelling and Portfolio Optimization with R, 2nd Edition Bernhard Pfaff, Invesco Global Asset Allocation, Germany A must have text for risk modelling and portfolio optimization using R. This book introduces the latest techniques advocated for measuring financial market risk and portfolio optimization, and provides a plethora of R code examples that enable the reader to replicate the results featured throughout the book. This edition has been extensively revised to include new topics on risk surfaces and probabilistic utility optimization as well as an extended introduction to R language. Financial Risk Modelling and Portfolio Optimization with R: Demonstrates techniques in modelling financial risks and applying portfolio optimization techniques as well as recent advances in the field. Introduces stylized facts, loss function and risk measures, conditional and unconditional modelling of risk; extreme value theory, generalized hyperbolic distribution, volatility modelling and concepts for capturing dependencies. Explores portfolio risk concepts and optimization with risk constraints. Is accompanied by a supporting website featuring examples and case studies in R. Includes updated list of R packages for enabling the reader to replicate the results in the book. Graduate and postgraduate students in finance, economics, risk management as well as practitioners in finance and portfolio optimization will find this book beneficial. It also serves well as an accompanying text in computer-lab classes and is therefore suitable for self-study.* **Traffic Flow Dynamics Data, Models and Simulation Springer Science & Business Media** *This textbook provides a comprehensive and instructive coverage of vehicular traffic flow dynamics and modeling. It makes this fascinating interdisciplinary topic, which to date was only documented in parts by specialized monographs, accessible to a broad readership. Numerous figures and problems with solutions help the reader to quickly understand and practice the presented concepts. This book is targeted at students of physics and traffic engineering and, more generally, also at students and professionals in computer science, mathematics, and interdisciplinary topics. It also offers material for project work in programming and simulation at college and university level. The main part, after presenting different categories of traffic data, is devoted to a mathematical description of the dynamics of traffic flow, covering macroscopic models which describe traffic in terms of density, as well as microscopic many-particle models in which each particle corresponds to a vehicle and its driver. Focus chapters on traffic instabilities and model calibration/validation present these topics in a novel and systematic way. Finally, the theoretical framework is shown at work in selected applications such as traffic-state and travel-time estimation, intelligent transportation systems, traffic operations management, and a detailed physics-based model for fuel consumption and emissions.* **ICT Innovations 2013 ICT Innovations and Education Springer Science & Business Media** *Information communication technologies have become the necessity in everyday life enabling increased level of communication, processing and information exchange to extent that one could not imagine only a decade ago. Innovations in these technologies open new fields in areas such as: language processing, biology, medicine, robotics, security, urban planning, networking, governance and many others. The applications of these innovations are used to define services that not only ease, but also increase the quality of life. Good education is essential for establishing solid basis of individual development and performance. ICT is integrated part of education at every level and type. Therefore, the special focus should be given to possible deployment of the novel technologies in order to achieve educational paradigms adapted to possible educational consumer specific and individual needs. This book offers a collection of papers presented at the Fifth International Conference on ICT Innovations held in September 2013, in Ohrid, Macedonia. The conference gathered academics, professionals and practitioners in developing solutions and systems in the industrial and business arena especially innovative commercial implementations, novel applications of technology, and experience in applying recent ICT research advances to practical solutions.* **Foundations of Quantum Theory From Classical Concepts to Operator Algebras Springer** *This book studies the foundations of quantum theory through its relationship to classical physics. This idea goes back to the Copenhagen Interpretation (in the original version due to Bohr and Heisenberg), which the author relates to the mathematical formalism of operator algebras originally created by von Neumann. The book therefore includes comprehensive appendices on functional analysis and C*-algebras, as well as a briefer one on logic, category theory, and topos theory. Matters of foundational as well as mathematical interest that are covered in detail include symmetry (and its "spontaneous" breaking), the measurement problem, the Kochen-Specker, Free Will, and Bell Theorems, the Kadison-Singer conjecture, quantization, indistinguishable particles, the quantum theory of large systems, and quantum logic, the latter in connection with the topos approach to quantum theory. This book is Open Access under a CC BY licence.* **Recent Advances in Technology Research and Education Proceedings of the 16th International Conference on Global Research and Education Inter-Academia 2017 Springer** *This book presents selected contributions to the 16th International Conference on Global Research and Education Inter-Academia 2017 hosted by Alexandru Ioan Cuza University of Iaşi, Romania from 25 to 28 September 2017. It is the third volume in the series, following the editions from 2015 and 2016. Fundamental and applied research in natural sciences have led to crucial developments in the ongoing 4th global industrial revolution, in the course of which information technology has become deeply embedded in industrial management, research and innovation – and just as deeply in education and everyday life. Materials science and nanotechnology, plasma and solid state physics, photonics, electrical and electronic engineering, robotics and metrology, signal processing, e-learning, intelligent and soft computing have long since been central research priorities for the Inter-Academia Community (I-AC) – a body comprising 14 universities and research institutes from Japan and Central/East-European countries that agreed, in 2002, to coordinate their research and education programs so as to better address today's challenges. The book is intended for use in academic, government, and industrial R&D departments as a reference tool in research and technology education. The 42 peer-reviewed papers were written by more than 119 leading scientists from 14 countries, most of them affiliated to the I-AC.* **Brownian Motion, Martingales, and Stochastic Calculus Springer** *This book offers a rigorous and self-contained presentation of stochastic integration and stochastic calculus within the general framework of continuous semimartingales. The main tools of stochastic calculus, including Itô's formula, the optional stopping theorem and Girsanov's theorem, are treated in detail alongside many illustrative examples. The book also contains an introduction to Markov processes, with applications to solutions of stochastic differential equations and to connections between Brownian motion and partial differential equations. The theory of local times of semimartingales is discussed in the last chapter. Since its invention by Itô, stochastic calculus has proven to be one of the most important techniques of modern probability theory, and has been used in the most recent theoretical advances as well as in applications to other fields such as*

mathematical finance. Brownian Motion, Martingales, and Stochastic Calculus provides a strong theoretical background to the reader interested in such developments. Beginning graduate or advanced undergraduate students will benefit from this detailed approach to an essential area of probability theory. The emphasis is on concise and efficient presentation, without any concession to mathematical rigor. The material has been taught by the author for several years in graduate courses at two of the most prestigious French universities. The fact that proofs are given with full details makes the book particularly suitable for self-study. The numerous exercises help the reader to get acquainted with the tools of stochastic calculus. **Polymer Physics A Molecular Approach Springer Science & Business Media** A molecular view on the fundamental issues in polymer physics is provided with an aim at students in chemistry, chemical engineering, condensed matter physics and material science courses. An updated translation by the author, a renowned Chinese chemist, it has been proven to be an effective source of learning for many years. Up-to-date developments are reflected throughout the work in this concise presentation of the topic. The author aims at presenting the subject in an efficient manner, which makes this particularly suitable for teaching polymer physics in settings where time is limited, without having to sacrifice the extensive scope that this topic demands. **Population Health: Behavioral and Social Science Insights Government Printing Office** The purpose of this book is to gain a better understanding of the multitude of factors that determine longer life and improved quality of life in the years a person is alive. While the emphasis is primarily on the social and behavioral determinants that have an effect on the health and well-being of individuals, this publication also addresses quality of life factors and determinants more broadly. Each chapter in this book considers an area of investigation and ends with suggestions for future research and implications of current research for policy and practice. The introductory chapter summarizes the state of Americans' health and well-being in comparison to our international peers and presents background information concerning the limitations of current approaches to improving health and well-being. Following the introduction, there are 21 chapters that examine the effects of various behavioral risk factors on population health, identify trends in life expectancy and quality of life, and suggest avenues for research in the behavioral and social science arenas to address problems affecting the U.S. population and populations in other developed and developing countries around the world. Undergraduate and graduate students pursuing coursework in health statistics, health population demographics, behavioral and social science, and heatlh policy may be interested in this content. Additionally, policymakers, legislators, heatlh educators, and scientific organizations around the world may also have an interest in this resource. **DSE數學延伸部分(M2)模擬試卷 DSE Mathematics Extended Part(M2) Mock Exam Papers Zander Publishing Company** 香港中學文憑試數學延伸部分(M2)模擬試卷 [] Hong Kong DSE Math Extended Part(M2) Mock Exam Papers [Chinese and English Bilingual Version-for HK DSE Students] 6 *Extensive coverage of topics *Each chapter includes numerous exercises *Detailed answer key included *Each paper includes clearly explained solution manual *Designed with reference to HKDSE curriculum *Can be used with courses or for self-learning or assessment **Optical Properties of Solids Academic Press** Optical Properties of Solids covers the important concepts of intrinsic optical properties and photoelectric emission. The book starts by providing an introduction to the fundamental optical spectra of solids. The text then discusses Maxwell's equations and the dielectric function; absorption and dispersion; and the theory of free-electron metals. The quantum mechanical theory of direct and indirect transitions between bands; the applications of dispersion relations; and the derivation of an expression for the dielectric function in the self-consistent field approximation are also encompassed. The book further tackles current-current correlations; the fluctuation-dissipation theorem; and the effect of surface plasmons on optical properties and photoemission. People involved in the study of the optical properties of solids will find the book invaluable. **Modern Electrodynamics Cambridge University Press** An engaging writing style and a strong focus on the physics make this graduate-level textbook a must-have for electromagnetism students. **Seating at Work HSE Books** This guidance is aimed at those who are responsible for health and safety at work. It may also be useful for designers, manufacturers, employees and suppliers of office furniture. The book offers advice on how to ensure that seating in the workplace is suitable and safe and gives examples of good practice including information on seating design and selection. **The Sherrington-Kirkpatrick Model Springer Science & Business Media** The celebrated Parisi solution of the Sherrington-Kirkpatrick model for spin glasses is one of the most important achievements in the field of disordered systems. Over the last three decades, through the efforts of theoretical physicists and mathematicians, the essential aspects of the Parisi solution were clarified and proved mathematically. The core ideas of the theory that emerged are the subject of this book, including the recent solution of the Parisi ultrametricity conjecture and a conceptually simple proof of the Parisi formula for the free energy. The treatment is self-contained and should be accessible to graduate students with a background in probability theory, with no prior knowledge of spin glasses. The methods involved in the analysis of the Sherrington-Kirkpatrick model also serve as a good illustration of such classical topics in probability as the Gaussian interpolation and concentration of measure, Poisson processes, and representation results for exchangeable arrays. **Problems and Solutions in Euclidean Geometry Courier Corporation** Based on classical principles, this book is intended for a second course in Euclidean geometry and can be used as a refresher. Each chapter covers a different aspect of Euclidean geometry, lists relevant theorems and corollaries, and states and proves many propositions. Includes more than 200 problems, hints, and solutions. 1968 edition. **Simulation of Complex Systems IOP Publishing Limited** This book deals with the most fundamental and essential techniques to simulate complex systems, from the dynamics of molecules to the spreading of diseases, from optimization using ant colonies to the simulation of the Game of Life. Several natural systems found in physics, biology and engineering can be considered complex systems, because their behaviour is not easily predictable and is the result of complex interactions among their constituents. Examples of complex systems are a cell with its organelles, an organ, the human brain, social networks, transportation and communication systems, the stock market, ecosystems, systems with prey and predators, a swarm of bees. There are several specialized books focusing on different simulation methods, but there is not one fully devoted to complex systems. The "bottom-up" approach is innovative and allows the reader to conduct numerical experiments to explore the system's behaviour. Key Features: Composed of self-contained, independent chapters Illustrates simulation techniques in a broad range of fields from physics and biology to engineering, social science and economics Provides a hands-on approach with guided exercises Covers the fundamental numerical techniques in complex systems Ideal for self-study Contains supplementary example codes and video tutorials **Seismic Structural Health Monitoring From Theory to Successful Applications Springer** This book includes a collection of state-of-the-art contributions addressing both theoretical developments in, and successful applications of, seismic structural health monitoring (S2HM). Over the past few decades, Seismic SHM has expanded considerably, due to the growing demand among various stakeholders (owners, managers and engineering professionals) and researchers. The discipline has matured in the process, as can be seen by the number of S2HM systems currently installed worldwide. Furthermore, the responses recorded by S2HM systems hold great potential, both with regard to the management of emergency situations and to ordinary maintenance needs. The book's 17 chapters, prepared by leading international experts, are divided into four major sections. The first comprises six chapters describing the specific requirements of S2HM systems for different types of civil structures and infrastructures (buildings, bridges, cultural heritage, dams, structures with base isolation devices) and for monitoring different phenomena (e.g. soil-structure interaction and excessive drift). The second section describes available methods and computational tools for data processing, while the third is dedicated to hardware and software tools for S2HM. In the book's closing section, five chapters report on state-of-the-art applications of S2HM around the world. **Shrinkwrap Fundamentals of Corporate Finance** Fundamentals of Corporate Finance, by Richard A. Brealey, Stewart C. Myers and Alan J. Marcus, has been applauded for its modern approach and interesting examples. Professors praise the authors' well-organized and thoughtful writing style and their clear exposition of what many students consider difficult material. The authors accomplish this without sacrificing an up-to-date, technically correct treatment of core topic areas. Since this author team is known for their outstanding research, teaching efforts, and market-leading finance textbooks, it's no surprise that they have created an innovative and market-driven revision that is more student friendly than ever. Every chapter has been reviewed and revised to reflect the current environment in corporate finance. **Semantics Palgrave Macmillan** Providing a good understanding of a range of semantic phenomena and issues in semantics, this is an introductory level textbook for lower level undergraduates. It includes end of chapter exercises and suggestions for further reading. **Transport Theory John Wiley & Sons** Problems after each chapter **Aršāma and his World: The Bodleian Letters in Context Volume I: The Bodleian Letters Oxford University Press** During the Second World War the Bodleian Library in Oxford acquired a set of Aramaic letters, eight sealings, and the two leather bags in which the sealed letters were once stored. The letters concern the affairs of Aršāma, satrap of Egypt in the later fifth century. Taken with other material associated with him (mostly in Aramaic, Demotic Egyptian, and Akkadian), they illuminate the Achaemenid world of which Aršāma was a privileged member and evoke a wide range of social, economic, cultural, organizational, and political perspectives, from multi-lingual communication, storage and disbursement of resources, and satrapal remuneration, to cross-regional ethnic movement, long-distance travel, religious practice, and iconographic projection of ideological messages. Particular highlights include a travel authorization (the only example of something implicit in numerous Persepolis documents), texts about the religious life of the Judaean garrison at Elephantine, Aršāma's magnificent seal (a masterpiece of Achaemenid glyptic, inherited from a son of Darius I), and echoes of temporary disturbances to Persian management of Egypt. But what is also impressive is the underlying sense of systematic coherence founded on and expressed in the use of formal, even formalized, written communication as a means of control. The Aršāma dossier is not alone in evoking that sense, but its size, variety, and focus upon a single individual give it a unique quality. Though this material has not been hidden from view, it has been insufficiently explored: it is the purpose of the three volumes of Aršāma and his World: The Bodleian Letters in Context to provide the fullest presentation and historical contextualization of this extraordinary cache yet attempted. Volume I presents and translates the letters alongside a detailed line-by-line commentary, while Volume II reconstructs the two seals that made the clay bullae that sealed the letters, with special attention to Aršāma's magnificent heirloom seal. Volume III comprises a series of thematic essays which further explore the administrative, economic, military, ideological, religious, and artistic environment to which Aršāma and the letters belonged. **Railway Engineering** Railway Engineering has been specially designed for undergraduate students of civil engineering. From fundamental topics to modern technological developments, the book covers all aspects of the railways including various modernization plans covering tracks, locomotives, and rolling stock. Important statistical data about the Indian Railways and other useful information have also been incorporated to make the coverage comprehensive. A number of illustrative examples supplement text to aid easy understanding of the design methods discussed. The book should also serve the need of students of polytechnics and those appearing of the AMIE examination and would also be a ready reference for railway professionals. **Complexity Explained Springer Science & Business Media** This book explains why complex systems research is important in understanding the structure, function and dynamics of complex natural and social phenomena. It illuminates how complex collective behavior emerges from the parts of a system, due to the interaction between the system and its environment. Readers will learn the basic concepts and methods of complex system research. The book is not highly technical mathematically, but teaches and uses the basic mathematical notions of dynamical system theory, making the book useful for students of science majors and graduate courses. **HKDSE MOCK EXAM PAPERS： ENGLISH LANGUAGE Paper 1 Reading 模擬試卷** DSEAntonia Cheng2021DSEDSEDSE **The Challenge of Indigenous Education Practice and Perspectives UNESCO** Includes many case studies **Biology For the Ib Diploma Oxford University Press, USA** This comprehensive Study Guide reinforces all the key concepts for the 2014 syllabus, ensuring students develop a clear understanding of all the crucial topics at SL and HL. Breaking concepts down into manageable sections and with diagrams and illustrations to cement understanding, exampreparation material is integrated to build student confidence and assessment potential. Directly linked to the Oxford Biology Course Book to extend and sharpen comprehension, this book supports maximum achievement in the course and assessment.About the series:Reinforce student understanding of all the crucial material. Fully comprehensive and matched to the most recent syllabuses, these resources provide focused review of all important concepts, tangibly strengthening assessment potential. **The Explosion Problem for Branching Markov Processes O-level Additional Mathematics Challenging Exam Questions (Concise) (Yellowreef) Yellowreef Limited** • 3 sets of up-to-date ordinary examination papers with actual question-types • answer keys intentionally withheld to simulate actual examination condition • full solutions, mark schemes and exam reports for the questions, available separately • best used just before taking the actual examination • complete edition and concise edition eBooks available **Mathematical Feynman Path Integrals And Their Applications (Second Edition) World Scientific** Feynman path integrals are ubiquitous in quantum physics, even if a large part of the scientific community still considers them as a heuristic tool that lacks a sound mathematical definition. Our book aims to refute this prejudice, providing an extensive and self-contained description of the mathematical theory of Feynman path integration, from the earlier attempts to the latest developments, as well as its applications to quantum mechanics.This second edition presents a detailed discussion of the general theory of complex integration on infinite dimensional spaces, providing on one hand a unified view of the various existing approaches to the mathematical construction of Feynman path integrals and on the other hand a connection with the classical theory of stochastic processes. Moreover, new chapters containing recent applications to several dynamical systems have been added.This book bridges between the realms of stochastic analysis and the theory of Feynman path integration. It is accessible to both mathematicians and physicists. **Leadership At Scale Better leadership, better results Hachette UK** Traditional approaches to leadership development focus on a small number of individuals at the top. However, in today's world of constant change and decentralized decision-making, organizations need effective leaders at all levels of their organizations. That requires a much broader and deeper pool of leadership talent, and most organizations fall far short of what they need. Leadership at Scale defines a new approach. In it, top experts at McKinsey, the world's number one leadership factory, expose the secrets of how to drive leadership development that reaches the entire organization, adapts to diverse contexts and achieves impact at scale. Grounded in extensive research and the global experience of +25 leadership experts and illustrated with a fictional step-by-step case with numerous real-life examples, this book provides leaders with the systematic and fact-based approach they need to unlock organizational performance through leadership effectiveness.

Alternative Pathways to Complexity A Collection of Essays on Architecture, Economics, Power, and Cross-Cultural Analysis University Press of Colorado *Alternative Pathways to Complexity focuses on the themes of architecture, economics, and power in the evolution of complex societies. Case studies from Mesoamerica, Asia, Africa, and Europe examine the relationship between political structures and economic configurations of ancient chiefdoms and states through a framework of comparative archaeology. A group of highly distinguished scholars takes up important issues, theories, and methods stemming from the nascent body of research on comparative archaeology to showcase and apply important theories of households, power, and how the development of complex societies can be extended and refined. Drawing on the archaeological, ethnohistorical, and ethnographic records, the chapters in this volume contain critical investigations on the role of collective action, economics, and corporate cognitive codes in structuring complex societies. Alternative Pathways to Complexity is an important addition to theoretical development and empirical research on Mesoamerica, the Old World, and cross-cultural studies. The theoretical implications addressed in the chapters will have broad appeal for scholars grappling with alternative pathways to complexity in other regions as well as those addressing diverse cross-cultural research. Contributors: Sarah B. Barber, Cynthia L. Bedell, Christopher S. Beekman, Frances F. Berdan, Tim Earle, Carol R. Ember, Gary M. Feinman, Arthur A. Joyce, Stephen A. Kowalewski, Lisa J. LeCount, Linda M. Nicholas, Peter N. Peregrine, Peter Robertshaw, Barbara L. Stark, T. L. Thurston, Deborah Winslow, Rita Wright* **Advances in Wheat Genetics: From Genome to Field Proceedings of the 12th International Wheat Genetics Symposium Springer** *This proceedings is a collection of 46 selected papers that were presented at the 12th International Wheat Genetics Symposium (IWGS). Since the launch of the wheat genome sequencing project in 2005, the arrival of draft genome sequences has marked a new era in wheat genetics and genomics, catalyzing rapid advancement in the field. This book provides a comprehensive review of the forefront of wheat research, across various important topics such as germplasm and genetic diversity, cytogenetics and allopolyploid evolution, genome sequencing, structural and functional genomics, gene function and molecular biology, biotic stress, abiotic stress, grain quality, and classical and molecular breeding. Following an introduction, 9 parts of the book are dedicated to each of these topics. A final, 11th part entitled "Toward Sustainable Wheat Production" contains 7 excellent papers that were presented in the 12th IWGS Special Session supported by the OECD. With rapid population growth and radical climate changes, the world faces a global food crisis and is in need of another Green Revolution to boost yields of wheat and other widely grown staple crops. Although this book focuses on wheat, many of the newly developed techniques and results presented here can be applied to other plant species with large and complex genomes. As such, this volume is highly recommended for all students and researchers in wheat sciences and related plant sciences and for those who are interested in stable food production and food security.* **Machine Learning in Clinical Neuroimaging and Radiogenomics in Neuro-oncology Third International Workshop, MLCN 2020, and Second International Workshop, RNO-AI 2020, Held in Conjunction with MICCAI 2020, Lima, Peru, October 4–8, 2020, Proceedings Springer** *This book constitutes the refereed proceedings of the Third International Workshop on Machine Learning in Clinical Neuroimaging, MLCN 2020, and the Second International Workshop on Radiogenomics in Neuro-oncology, RNO-AI 2020, held in conjunction with MICCAI 2020, in Lima, Peru, in October 2020.* For MLCN 2020, 18 papers out of 28 submissions were accepted for publication. The accepted papers present novel contributions in both developing new machine learning methods and applications of existing methods to solve challenging problems in clinical neuroimaging. For RNO-AI 2020, all 8 submissions were accepted for publication. They focus on addressing the problems of applying machine learning to large and multi-site clinical neuroimaging datasets. The workshop aimed to bring together experts in both machine learning and clinical neuroimaging to discuss and hopefully bridge the existing challenges of applied machine learning in clinical neuroscience. *The workshops were held virtually due to the COVID-19 pandemic.*