

Mathematics 2014 Paper 1 Memorandum

This book presents the most recent advances in the research and applications of reconfigurable mechanisms and robots. It collects 93 independently reviewed papers presented at the Third ASME/IFTOMM International Conference on Reconfigurable Mechanisms and Robots (ReMAR 2015) held in Beijing, China, 20-22 July 2015. The conference papers are organized into seven parts to cover the reconfiguration theory, topology, kinematics and design of reconfigurable mechanisms including reconfigurable parallel mechanisms. The most recent results on reconfigurable robots are presented including their analysis, design, simulation and control. Bio-inspired mechanisms are also explored in the challenging fields of rehabilitation and minimally invasive surgery. This book further addresses deployable mechanisms and origami-inspired mechanisms and showcases a wide range of successful applications of reconfigurable mechanisms and robots. Advances in Reconfigurable Mechanisms and Robots II should be of interest for researchers, engineers and postgraduate students in mechanical engineering, electrical engineering, computer science and mathematics.

In *Mayor Michael Bloomberg*, Lynne A. Weikart dives into the mayoralty of Michael Bloomberg, offering an incisive analysis of Bloomberg's policies during his 2002–2014 tenure as mayor of New York and highlighting his impact on New York City politics. Michael Bloomberg became mayor of New York just four months after the 9/11 terrorist destruction of the World Trade Center and he led the rebuilding of a physically and emotionally devastated city so well that within two years, the city had budget surpluses. Weikart reveals how state and federal governments constrained Bloomberg's efforts to set municipal policy and implement his strategic goals in the areas of homelessness, low-income housing, poverty, education, and crime. External powers of state and federal governments are strong currents and Bloomberg's navigation of these currents often determined the outcome of his efforts. Weikart evaluates Michael Bloomberg's mayoral successes and failures in the face of various challenges: externally, the constraints of state government, and mandates imposed by federal and state courts; and, internally, the impasse between labor unions and Bloomberg. Weikart identifies and explores both the self-created restrictions of Mayor Bloomberg's own management style and the courage of Mike Bloomberg's leadership.

Return migration has received growing levels of attention in both academic and policy circles in recent years, as the African diaspora's role in contributing to the development of their country of origin has become apparent. However, little is known about the lived experiences of those who come back, and even less about the ways in which their return shapes socio-political dynamics on the ground. This book aims to unpack the complexities of migrant transnational experiences as situated in global political and economic processes. In particular, the book

takes the case of the return of skilled and educated Somalis from Western Europe and North America, in an attempt to recast the idea of diaspora return and transnational ethnography in a more political light, and to show how these returnees are both subject to and generative of important political conditions that are transforming Somaliland society. Overall, the book captures the complexities of the migrant's position, showing that "return" is rarely permanent, and that success comes from perpetuating the transnational stance. This book will appeal to scholars of migration, diaspora, development and African studies, as well as to those interested in the Somali case specifically, the third biggest community of refugees in the world.

This book provides an accessible, undergraduate-level introduction to computable general equilibrium (CGE) models, a class of model that has come to play an important role in government policy decisions. The book uses a graphical approach to explain the economic theory that underlies a CGE model, and provides results from simple, small-scale CGE models to illustrate the links between theory and model outcomes. The book includes eleven guided, hands-on exercises that introduce modeling techniques that are applied to real-world economic problems. Students will learn how to integrate their separate fields of economic study into a comprehensive, general equilibrium perspective as they develop their skills as producers or consumers of CGE-based analysis.

This book constitutes the refereed proceedings of the 13th Conference on Computability in Europe, CiE 2017, held in Turku, Finland, in June 2017. The 24 revised full papers and 12 invited papers were carefully reviewed and selected from 69 submissions. The conference CiE 2016 has six special sessions, namely: algorithmics for biology; combinatorics and algorithmics on words; computability in analysis, algebra, and geometry; cryptography and information theory; formal languages and automata theory; and history and philosophy of computing.

By most accounts, rural Malawi has lacked dynamism in the past decade. Growth has been mostly volatile, in large part due to unstable macroeconomic fundamentals evidenced by high inflation, fiscal deficits, and interest rates. When rapid economic growth has materialized, the gains have not always reached the poorest. Poverty remains high and the rural poor face significant challenges in consistently securing enough food. Several factors contribute to stubbornly high rural poverty. They include a low-productivity and non-diversified agriculture, macroeconomic and recurrent climatic shocks, limited non-farm opportunities and low returns to such activities, especially for the poor, and poor performance from some of the prominent safety net programs. The Report proposes complementary policy actions that offer a possible path for a more dynamic and prosperous rural economy. The key pillars of this comprise macroeconomic stability, increased productivity in agriculture, faster urbanization, better functioning safety nets, and more inclusive financial markets. Some recommendations call for a reorientation of existing programs such as the Malawi Farm Input Subsidy Program (FISP) and the Malawi Social Action Fund Public

Works Program (MASAF-PWP). Others identify promising new areas of intervention, such as the introduction of digital IDs and biometric technologies to enhance the reach of mobile banking and deepen financial inclusion. Finally, and importantly, the report recommends the scaling up of investments on girls' secondary education to curb early child marriage and early child bearing among adolescents. This will empower women at home and work and bend the trajectory of fertility rates in rural areas in order to boost human development and reduce poverty.

The authors have done a masterful job of charting the important story of DARPA, one of the key catalysts of technological innovation in US recent history. By plotting the development, achievements and structure of the leading world agency of this kind, this book stimulates new thinking in the field of technological innovation with bearing on how to respond to climate change, pandemics, cyber security and other global problems of our time. The DARPA Model provides a useful guide for governmental agency and policy leaders, and for anybody interested in the role of governments in technological innovation. —Dr. Kent Hughes, Woodrow Wilson International Center for Scholars

This volume contains a remarkable collection of extremely insightful articles on the world's most successful advanced technology agency. Drafted by the leading US experts on DARPA, it provides a variety of perspectives that in turn benefit from being presented together in a comprehensive volume. It reviews DARPA's unique role in the U.S. innovation system, as well as the challenges DARPA and its clones face today. As the American model is being considered for adoption by a number of countries worldwide, this book makes a welcome and timely contribution to the policy dialogue on the role played by governments in stimulating technological innovation. — Prof. Charles Wessner, Georgetown University

The U.S. Defense Advanced Research Projects Agency (DARPA) has played a remarkable role in the creation new transformative technologies, revolutionizing defense with drones and precision-guided munitions, and transforming civilian life with portable GPS receivers, voice-recognition software, self-driving cars, unmanned aerial vehicles, and, most famously, the ARPANET and its successor, the Internet. Other parts of the U.S. Government and some foreign governments have tried to apply the 'DARPA model' to help develop valuable new technologies. But how and why has DARPA succeeded? Which features of its operation and environment contribute to this success? And what lessons does its experience offer for other U.S. agencies and other governments that want to develop and demonstrate their own 'transformative technologies'? This book is a remarkable collection of leading academic research on DARPA from a wide range of perspectives, combining to chart an important story from the Agency's founding in the wake of Sputnik, to the current attempts to adapt it to use by other federal agencies. Informative and insightful, this guide is essential reading for political and policy leaders, as well as researchers and students interested in understanding the success of this agency and the lessons it offers to others.

This book constitutes the refereed proceedings of the 10th Conference on Computability in Europe, CiE 2014, held in Budapest, Hungary, in June 2014. The 42 revised papers presented were carefully reviewed and selected from 78 submissions and included together with 15 invited papers in this proceedings. The conference had six special sessions: computational linguistics, bio-inspired computation, history and philosophy of computing, computability theory, online algorithms and complexity in automata theory.

Equivalence: Elizabeth L. Scott at Berkeley is the compelling story of one pioneering statistician's relentless twenty-year effort to promote the status of women in academe and science. Part biography and part microhistory, the book provides the context and background to understand Scott's masterfulness at using statistics to help solve societal problems. In addition to being one of the first researchers to work at the interface of astronomy and statistics and an early practitioner of statistics using high-speed computers, Scott worked on an impressively broad range of questions in science, from whether cloud seeding actually works to whether ozone depletion causes skin cancer. Later in her career, Scott became swept up in the academic women's movement. She used her well-developed scientific research skills together with the advocacy skills she had honed, in such activities as raising funds for Martin Luther King Jr. and keeping Free Speech Movement students out of jail, toward policy making that would improve the condition of the academic workforce for women. The book invites the reader into Scott's universe, a window of inspiration made possible by the fact that she saved and dated every piece of paper that came across her desk.

This book contains the proceedings of the 17th European Conference on Mathematics for Industry, ECMI2012, held in Lund, Sweden, July 2012, at which ECMI celebrated its 25th anniversary. It covers mathematics in a wide range of applications and methods, from circuit and electromagnetic devices, environment, fibers, flow, medicine, robotics and automotive industry, further applications to methods and education. The book includes contributions from leading figures in business, science and academia that promote the application of mathematics to industry and emphasize industrial sectors that offer the most exciting opportunities. The contributions reinforce the role of mathematics as being a catalyst for innovation as well as an overarching resource for industry and business. The book features an accessible presentation of real-world problems in industry and finance, provides insight and tools for engineers and scientists who will help them to solve similar problems and offers modeling and simulation techniques that will provide mathematicians with a source of fresh ideas and inspiration. *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.

- Solved Board Examination Paper 2020 along with CBSE Marking Scheme from 2016 to 2019 for in-depth study.
- Previous Years' Board Examination Questions with Solutions from March 2016 to March 2019 to facilitate focused study.
- Handwritten Toppers' Answer sheets from 2016-2019 for perfection in answering Board Examination Questions
- Detailed answers have been provided wherever necessary for clarity of concepts
- Hybrid edition for Digital Learning

The compiled works of the man behind the evolution of quantitative finance Finance, Economics, and Mathematics is the complete Vasicek reference work, including published and unpublished work and interviews with the man himself. The name Oldrich A. Vasicek is synonymous with cutting-edge research in the finance fields, and this book comes straight from the source to bring you the undiluted mother lode of quant wisdom from one of the founders of the field. From his early work in yield curve dynamics, to the mean-reverting short-rate model, to his thoughts on derivatives pricing, to his work on credit risk, to his most recent research on the economics of interest rates, this book represents the life's work of an industry leader. Going beyond the papers, you'll also find the more personal side inspirational as Vasicek talks about the academics and professionals who made lasting impressions and collaborated, debated, and ultimately helped spawn some of his greatest thinking. Oldrich Vasicek has won virtually every important award and prize for his groundbreaking research in quantitative finance. You've followed his work for years; this book puts it all in a single volume to give you the definitive reference you'll turn to again and again. Explore Vasicek's insights on topics he helped create Discover his research and ideas that have gone unpublished—until now Understand yield curves and the Vasicek model from the source himself Gain a reference collection of some of the most influential work in quantitative finance Vasicek's research is the foundation of one of the most important innovations in finance. Quants around the world have been influenced by his ideas, and his status as thought leader is cemented in the annals of finance history. Finance, Economics, and Mathematics is the definitive Vasicek reference every finance professional needs.

Based on years of research conducted at the NASA Jet Propulsion Laboratory, Low-Energy Lunar Trajectory Design provides high-level information to mission managers and detailed information to mission designers about low-energy transfers between Earth and the moon. The book answers high-level questions about the availability and performance of such transfers in any given month and year. Low-energy lunar transfers are compared with various other types of transfers, and placed within the context of historical missions. Using this book, designers may reconstruct any transfer described therein, as well as design similar transfers with particular design parameters. An Appendix, "Locating the Lagrange Points," and a useful list of terms and constants completes this technical reference. Surveys thousands of possible trajectories that may

be used to transfer spacecraft between Earth and the moon, including transfers to lunar libration orbits, low lunar orbits, and the lunar surface Provides information about the methods, models, and tools used to design low-energy lunar transfers Includes discussion about the variations of these transfers from one month to the next, and the important operational aspects of implementing a low-energy lunar transfer Additional discussions address navigation, station-keeping, and spacecraft systems issues As the need for sustainable development practices around the world continues to grow, it has become imperative for citizens to become actively engaged in the global transition. By evaluating data collected from various global programs, researchers are able to identify strategies and challenges in implementing civic engagement initiatives. Analyzing the Role of Citizen Science in Modern Research focuses on analyzing data on current initiatives and best practices in citizen engagement and education programs across various disciplines. Highlighting emergent research and application techniques within citizen science initiatives, this publication appeals to academicians, researchers, policy makers, government officials, technology developers, advanced-level students and program developers interested in launching or improving citizen science programs across the globe.

This two-volume set LNCS 10915 and 10916 constitutes the refereed proceedings of the 12th International Conference on Augmented Cognition, AC 2018, held as part of the 20th International Conference on Human-Computer Interaction, HCII 2018, in Las Vegas, NV, USA in July 2018. The 1171 papers presented at HCII 2018 conferences were carefully reviewed and selected from 4346 submissions. The papers cover the entire field of human-computer interaction, addressing major advances in knowledge and effective use of computers in a variety of applications areas. The papers in this volume are organized in the following topical sections: Cognitive modeling, perception, emotion and interaction, augmented learning and training, shared cognition, team performance and decision-making.

What is important for citizens to know and be able to do? The OECD Programme for International Student Assessment (PISA) seeks to answer that question through the most comprehensive and rigorous international assessment of student knowledge and skills. History of Programming Languages presents information pertinent to the technical aspects of the language design and creation. This book provides an understanding of the processes of language design as related to the environment in which languages are developed and the knowledge base available to the originators. Organized into 14 sections encompassing 77 chapters, this book begins with an overview of the programming techniques to use to help the system produce efficient programs. This text then discusses how to use parentheses to help the system identify identical subexpressions within an expression and thereby eliminate their duplicate calculation. Other chapters consider FORTRAN programming techniques needed to produce optimum object programs. This book discusses as well the developments leading to ALGOL 60. The final chapter presents the biography of Adin D. Falkoff. This book is a valuable resource for graduate students, practitioners, historians, statisticians, mathematicians, programmers, as well as computer scientists and specialists.

This book, Teaching Learners with Visual Impairment, focuses on holistic support to learners with visual impairment in and beyond the classroom and school context. Special attention is given to classroom practice, learning support, curriculum differentiation and assessment practices, to mention but a few areas of focus covered in the book. In this manner, this book makes a significant contribution to the existing body of knowledge on the implementation of inclusive education policy with learners affected by visual impairment.

This is the first in a series of volumes, which provide an extensive overview of conjectures and open problems in graph theory. The readership of each volume is geared toward graduate students who may be searching for research ideas. However, the well-established mathematician will find the overall exposition engaging and enlightening. Each chapter, presented in a story-telling style, includes more than a simple collection of results on a particular topic. Each contribution conveys the history, evolution, and techniques used to solve the authors' favorite conjectures and open problems, enhancing the reader's overall comprehension and enthusiasm. The editors were inspired to create these volumes by the popular and well attended special sessions, entitled "My Favorite Graph Theory Conjectures," which were held at the winter AMS/MAA Joint Meeting in Boston (January, 2012), the SIAM Conference on Discrete Mathematics in Halifax (June, 2012) and the winter AMS/MAA Joint meeting in Baltimore (January, 2014). In an effort to aid in the creation and dissemination of open problems, which is crucial to the growth and development of a field, the editors requested the speakers, as well as notable experts in graph theory, to contribute to these volumes.

There is widespread agreement that status or standing in the international system is a critical element in world politics. The desire for status is recognized as a key factor in nuclear proliferation, the rise of China, and other contemporary foreign policy issues, and has long been implicated in foundational theories of international relations and foreign policy. Despite the consensus that status matters, we lack a basic understanding of status dynamics in international politics. The first book to comprehensively examine this subject, *Fighting for Status* presents a theory of status dissatisfaction that delves into the nature of prestige in international conflicts and specifies why states want status and how they get it. What actions do status concerns trigger, and what strategies do states use to maximize or salvage their standing? When does status matter, and under what circumstances do concerns over relative position overshadow the myriad other concerns that leaders face? In examining these questions, Jonathan Renshon moves beyond a focus on major powers and shows how different states construct status communities of peer competitors that shift over time as states move up or down, or out, of various groups. Combining innovative network-based statistical analysis, historical case studies, and a lab experiment that uses a sample of real-world political and military leaders, *Fighting for Status* provides a compelling look at the causes and consequences of status on the global stage.

This volume argues that districts are important as a lever for change given the limited success of school-by-school efforts. Policies that focus on skill development, recognize and support performance, create opportunities for collaboration, build leader capacity, and create networks of knowledge sharing hold great potential for improving districts but it will require a paradigm shift in the way we view our public school system and those who work within it - away from blame and toward complex systems change.

The concept of 'readiness for school' is attractive to policy-makers, but many academics, researchers and practitioners argue that an early start to formal learning may be misguided. This book introduces readers to an increasing body of evidence which demonstrates that young children need opportunities to learn and develop in environments that support their emotional and cognitive needs, offering opportunities to develop autonomy, competence and self-regulation skills. With advice on implementing research findings in practice, this book provides clear guidance on how to foster and develop these attributes, scaffold steps into new areas of learning and support children in facing new challenges. Chapters cover: Policy and discourses; Taking account of development; Approaches to Early Years Learning; The Diversity of Children's Early Experiences; Transitions and starting school; Where to in the Future? Exploring the Contexts for Early Learning will be essential reading for students, practitioners, policy-makers and all those interested in the school readiness agenda.

This textbook covers fundamental and advanced topics in orbital mechanics and

astrodynamics to expose the student to the basic dynamics of space flight. The engineers and graduate students who read this class-tested text will be able to apply their knowledge to mission design and navigation of space missions. Through highlighting basic, analytic and computer-based methods for designing interplanetary and orbital trajectories, this text provides excellent insight into astronautical techniques and tools. This book is ideal for graduate students in Astronautical or Aerospace Engineering and related fields of study, researchers in space industrial and governmental research and development facilities, as well as researchers in astronautics. This book also:

- Illustrates all key concepts with examples
- Includes exercises for each chapter
- Explains concepts and engineering tools a student or experienced engineer can apply to mission design and navigation of space missions
- Covers fundamental principles to expose the student to the basic dynamics of space flight

Digital integration is the driving force of teaching and learning at all levels of education. As more non-traditional students seek credentialing, certification, and degrees, institutions continue to push the boundaries of innovative practices to meet the needs of diverse students. Programs and faculty have moved from merely using technology and learning management systems to unique and innovative ways to engage learners. The Handbook of Research on Innovative Digital Practices to Engage Learners is an essential scholarly publication that offers theoretical frameworks, delivery models, current guidelines, and digital design techniques for integrating technological advancements in education contexts to enforce student engagement and positive student outcomes.

Featuring a wide range of topics such as gamification, wearable technologies, and distance education, this book is ideal for teachers, curriculum developers, instructional designers, principals, deans, administrators, researchers, academicians, education professionals, and students.

Wartime is not just about military success. *Economists at War* tells a different story - about a group of remarkable economists who used their skills to help their countries fight their battles during the Chinese-Japanese War, Second World War, and the Cold War. 1935-55 was a time of conflict, confrontation, and destruction. It was also a time when the skills of economists were called upon to finance the military, to identify economic vulnerabilities, and to help reconstruction. *Economists at War: How a Handful of Economists Helped Win and Lose the World Wars* focuses on the achievements of seven finance ministers, advisors, and central bankers from Japan, China, Germany, the UK, the USSR, and the US. It is a story of good and bad economic thinking, good and bad policy, and good and bad moral positions. The economists suffered threats, imprisonment, trial, and assassination. They all believed in the power of economics to make a difference, and their contributions had a significant impact on political outcomes and military ends. *Economists at War* shows the history of this turbulent period through a unique lens. It details the tension between civilian resources and military requirements; the desperate attempts to control economies wracked with inflation, depression, political argument, and fighting; and the clever schemes used to evade sanctions, develop barter trade, and use economic espionage. Politicians and generals cannot win wars if they do not

have the resources. This book tells the human stories behind the economics of wartime.

“What is important for citizens to know and be able to do?” The OECD Programme for International Student Assessment (PISA) seeks to answer that question through the most comprehensive and rigorous international assessment of student knowledge and skills.

Exploring a vast array of topics related to computation, *Computing: A Historical and Technical Perspective* covers the historical and technical foundation of ancient and modern-day computing. The book starts with the earliest references to counting by humans, introduces various number systems, and discusses mathematics in early civilizations. It guides readers all the way through the latest advances in computer science, such as the design and analysis of computer algorithms. Through historical accounts, brief technical explanations, and examples, the book answers a host of questions, including: Why do humans count differently from the way current electronic computers do? Why are there 24 hours in a day, 60 minutes in an hour, etc.? Who invented numbers, when were they invented, and why are there different kinds? How do secret writings and cryptography date back to ancient civilizations? Innumerable individuals from many cultures have contributed their talents and creativity to formulate what has become our mathematical and computing heritage. By bringing together the historical and technical aspects of computing, this book enables readers to gain a deep appreciation of the long evolutionary processes of the field developed over thousands of years. Suitable as a supplement in undergraduate courses, it provides a self-contained historical reference source for anyone interested in this important and evolving field.

The second edition of the *Handbook of Test Development* provides graduate students and professionals with an up-to-date, research-oriented guide to the latest developments in the field. Including thirty-two chapters by well-known scholars and practitioners, it is divided into five sections, covering the foundations of test development, content definition, item development, test design and form assembly, and the processes of test administration, documentation, and evaluation. Keenly aware of developments in the field since the publication of the first edition, including changes in technology, the evolution of psychometric theory, and the increased demands for effective tests via educational policy, the editors of this edition include new chapters on assessing noncognitive skills, measuring growth and learning progressions, automated item generation and test assembly, and computerized scoring of constructed responses. The volume also includes expanded coverage of performance testing, validity, fairness, and numerous other topics. Edited by Suzanne Lane, Mark R. Raymond, and Thomas M. Haladyna, *The Handbook of Test Development*, 2nd edition, is based on the revised Standards for Educational and Psychological Testing, and is appropriate for graduate courses and seminars that deal with test development and usage, professional testing services and credentialing agencies, state and

local boards of education, and academic libraries serving these groups. “What is important for citizens to know and be able to do?” The OECD Programme for International Student Assessment (PISA) seeks to answer that question through the most comprehensive and rigorous international assessment of student knowledge and skills. As more countries join its ranks, PISA ... This book is a printed edition of the Special Issue "Fuzzy Mathematics" that was published in Mathematics

This book presents a historical and philosophical analysis of programming systems, intended as large computational systems like, for instance, operating systems, programmed to control processes. The introduction to the volume emphasizes the contemporary need of providing a foundational analysis of such systems, rooted in a broader historical and philosophical discussion. The different chapters are grouped around three major themes. The first concerns the early history of large systems developed against the background of issues related to the growing semantic gap between hardware and code. The second revisits the fundamental issue of complexity of large systems, dealt with by the use of formal methods and the development of ‘grand designs’ like Unix. Finally, a third part considers several issues related to programming systems in the real world, including chapters on aesthetical, ethical and political issues. This book will interest researchers from a diversity of backgrounds. It will appeal to historians, philosophers, as well as logicians and computer scientists who want to engage with topics relevant to the history and philosophy of programming and more specifically the role of programming systems in the foundations of computing. Geothermal energy stands out because it can be used as a baseload resource. This book, unlike others, examines the geology related to geothermal applications. Geology dictates (a) how geothermal resources can be found, (b) the nature of the geothermal resource (such as liquid- or vapor-dominated) and (c) how the resource might be developed ultimately (such as flash or binary geothermal plants). The compilation and distillation of geological elements of geothermal systems into a single reference fills a notable gap.

To help researchers from different areas of science understand and unlock the potential of the Polish Grid Infrastructure and to define their requirements and expectations, the following 13 pilot communities have been organized and involved in the PLGrid Plus project: Acoustics, AstroGrid-PL, Bioinformatics, Ecology, Energy Sector, Health Sciences, HEPGrid, Life Science, Materials, Metallurgy, Nanotechnologies, Quantum Chemistry and Molecular Physics, and SynchroGrid. The book describes the experience and scientific results achieved by the project partners. Chapters 1 to 8 provide a general overview of research and development activities in the framework of the project with emphasis on services for different scientific areas and an update on the status of the PL-Grid infrastructure, describing new developments in security and middleware. Chapters 9 to 13 discuss new environments and services which may be applied by all scientific communities. Chapters 14 to 36 present how the PLGrid Plus

environments, tools and services are used in advanced domain specific computer simulations; these chapters present computational models, new algorithms, and ways in which they are implemented. The book also provides a glossary of terms and concepts. This book may serve as a resource for researchers, developers and system administrators working on efficient exploitation of available e-infrastructures, promoting collaboration and exchange of ideas in the process of constructing a common European e-infrastructure.

This collection brings together the research of an eclectic mix of leading names in home-based education studies worldwide. It uses home education to explore contemporary education outside of school and place it into a global, political and critical context, and will be essential reading for home educators, academics and policymakers alike.

Save almost 25% on this two-book set from Bruce Schneier covering issues of social trust and security This set includes two books from security expert Bruce Schneier, *Liars and Outliers: Enabling the Trust that Society Needs to Thrive* and *Carry On: Sounds Advice from Schneier on Security*. In *Liars and Outliers*, Schneier covers the topic of trust in society and how issues of trust are critical to solving problems as diverse as corporate responsibility, global warming, and the political system. Insightful and entertaining, he weaves together ideas from across the social and biological sciences to explain how society induces trust and how trust facilitates and stabilizes society. *Carry On* features more than 140 articles by Schneier, including more than twenty unpublished articles, covering such security issues as crime and terrorism, human security, privacy and surveillance, the psychology of security, security and technology, travel and security, and more. A two-book set from a renowned author, technologist, and security expert Covers such current topics as the Internet as surveillance state, Chinese cyberattacks, privacy and social networking, aviation security, and more Ideal for IT professionals, security and networking engineers, hackers, consultants, and technology vendors Together, these two books offer deep and practical insight into a wide range of security topics for professionals in technology fields, as well as anyone interested in the larger philosophical issues of security.

This book is an authoritative volume of scholarship through qualitative and quantitative methodologies on postsecondary transition services for a diverse readership. The editor's intended audience is composed of students with disabilities, school administrators, special education coordinators, colleges and university faculty, staff, and administrators, among other scholars, practitioners, and advocates. Readers of this volume will be educated on the postsecondary transition process, and the lifelong commitment of educators who guides students with disabilities through their rigorous, yet rewarding journey. This book also can be used by student personnel administrators, employers, student retention coordinators, and workforce development professionals to improve the implementation of postsecondary transition services. The importance of

comprehensive transition planning for students with disabilities is the impetus for bringing this collaborative effort to print. Topics in this volume highlight areas that have critical implications for children and adolescents' preparation for adulthood. Contributors' presents potent research regarding various topics addressing P-16 students' needs, and have been active practitioners in both areas – transition services and disabilities as defined under the Individuals with Disabilities Education Act (IDEA) of 2004. Ultimately, this book is a collection of interrelated chapters that offer rich content and insights into current trends for individuals with disabilities who are moving through various stages of their lives.

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