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KEY=CETRARO - KARSYN JOSIAH

Modelling and Optimisation of Flows on Networks Cetraro, Italy 2009, Editors: Benedetto Piccoli, Michel Rascle [Springer](#) In recent years flows in networks have attracted the interest of many researchers from different areas, e.g. applied mathematicians, engineers, physicists, economists. The main reason for this ubiquity is the wide and diverse range of applications, such as vehicular traffic, supply chains, blood flow, irrigation channels, data networks and others. This book presents an extensive set of notes by world leaders on the main mathematical techniques used to address such problems, together with investigations into specific applications. The main focus is on partial differential equations in networks, but ordinary differential equations and optimal transport are also included. Moreover, the modeling is completed by analysis, numerics, control and optimization of flows in networks. The book will be a valuable resource for every researcher or student interested in the subject. The Ricci Flow in Riemannian Geometry A Complete Proof of the Differentiable 1/4-Pinching Sphere Theorem [Springer Science & Business Media](#) This book focuses on Hamilton's Ricci flow, beginning with a detailed discussion of the required aspects of differential geometry, progressing through existence and regularity theory, compactness theorems for Riemannian manifolds, and Perelman's noncollapsing results, and culminating in a detailed analysis of the evolution of curvature, where recent breakthroughs of Böhm and Wilking and Brendle and Schoen have led to a proof of the differentiable 1/4-pinching sphere theorem. Optimal Boundary Control and Boundary Stabilization of Hyperbolic Systems [Birkhäuser](#) This brief considers recent

results on optimal control and stabilization of systems governed by hyperbolic partial differential equations, specifically those in which the control action takes place at the boundary. The wave equation is used as a typical example of a linear system, through which the author explores initial boundary value problems, concepts of exact controllability, optimal exact control, and boundary stabilization. Nonlinear systems are also covered, with the Korteweg-de Vries and Burgers Equations serving as standard examples. To keep the presentation as accessible as possible, the author uses the case of a system with a state that is defined on a finite space interval, so that there are only two boundary points where the system can be controlled. Graduate and post-graduate students as well as researchers in the field will find this to be an accessible introduction to problems of optimal control and stabilization. **Numerical Approximation of Hyperbolic Systems of Conservation Laws** [Springer Nature](#) This monograph is devoted to the theory and approximation by finite volume methods of nonlinear hyperbolic systems of conservation laws in one or two space variables. It follows directly a previous publication on hyperbolic systems of conservation laws by the same authors. Since the earlier work concentrated on the mathematical theory of multidimensional scalar conservation laws, this book will focus on systems and the theoretical aspects which are needed in the applications, such as the solution of the Riemann problem and further insights into more sophisticated problems, with special attention to the system of gas dynamics. This new edition includes more examples such as MHD and shallow water, with an insight on multiphase flows. Additionally, the text includes source terms and well-balanced/asymptotic preserving schemes, introducing relaxation schemes and addressing problems related to resonance and discontinuous fluxes while adding details on the low Mach number situation. **Optimal Transportation Networks Models and Theory** [Springer Science & Business Media](#) The transportation problem can be formalized as the problem of finding the optimal way to transport a given measure into another with the same mass. In contrast to the Monge-Kantorovitch problem, recent approaches model the branched structure of such supply networks as minima of an energy functional whose essential feature is to favour wide roads. Such a branched structure is observable in ground transportation networks, in draining and irrigation systems, in electrical power supply systems and in natural counterparts such as blood vessels or the branches of trees. These lectures provide mathematical proof of several existence, structure and regularity properties empirically observed in transportation networks. The link with previous discrete physical models of irrigation and erosion models in geomorphology and with discrete telecommunication and transportation models is discussed. It will be mathematically proven that the majority fit in the simple model sketched in this volume. **Multi-agent Optimization** Cetraro, Italy 2014 [Springer](#) This book contains three well-written research tutorials that inform the graduate reader about the forefront of current research in multi-agent optimization. These tutorials

cover topics that have not yet found their way in standard books and offer the reader the unique opportunity to be guided by major researchers in the respective fields. Multi-agent optimization, lying at the intersection of classical optimization, game theory, and variational inequality theory, is at the forefront of modern optimization and has recently undergone a dramatic development. It seems timely to provide an overview that describes in detail ongoing research and important trends. This book concentrates on Distributed Optimization over Networks; Differential Variational Inequalities; and Advanced Decomposition Algorithms for Multi-agent Systems. This book will appeal to both mathematicians and mathematically oriented engineers and will be the source of inspiration for PhD students and researchers. Stability and Bifurcation Theory for Non-Autonomous Differential Equations Cetraro, Italy 2011, Editors: Russell Johnson, Maria Patrizia Pera [Springer](#) This volume contains the notes from five lecture courses devoted to nonautonomous differential systems, in which appropriate topological and dynamical techniques were described and applied to a variety of problems. The courses took place during the C.I.M.E. Session "Stability and Bifurcation Problems for Non-Autonomous Differential Equations," held in Cetraro, Italy, June 19-25 2011. Anna Capietto and Jean Mawhin lectured on nonlinear boundary value problems; they applied the Maslov index and degree-theoretic methods in this context. Rafael Ortega discussed the theory of twist maps with nonperiodic phase and presented applications. Peter Kloeden and Sylvia Novo showed how dynamical methods can be used to study the stability/bifurcation properties of bounded solutions and of attracting sets for nonautonomous differential and functional-differential equations. The volume will be of interest to all researchers working in these and related fields. Brain-Inspired Computing Second International Workshop, BrainComp 2015, Cetraro, Italy, July 6-10, 2015, Revised Selected Papers [Springer](#) This book constitutes revised selected papers from the Second International Workshop on Brain-Inspired Computing, BrainComp 2015, held in Cetraro, Italy, in July 2015. The 14 papers presented in this volume were carefully reviewed and selected for inclusion in this book. They deal with brain structure and function; computational models and brain-inspired computing methods with practical applications; high performance computing; and visualization for brain simulations. Numerical Control: Part A [Elsevier](#) Numerical Control: Part A, Volume 23 in the Handbook of Numerical Analysis series, highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors. Chapters in this volume include Numerics for finite-dimensional control systems, Moments and convex optimization for analysis and control of nonlinear PDEs, The turnpike property in optimal control, Structure-Preserving Numerical Schemes for Hamiltonian Dynamics, Optimal Control of PDEs and FE-Approximation, Filtration techniques for the uniform controllability of semi-discrete hyperbolic equations, Numerical controllability properties of fractional partial

differential equations, Optimal Control, Numerics, and Applications of Fractional PDEs, and much more. Provides the authority and expertise of leading contributors from an international board of authors Presents the latest release in the Handbook of Numerical Analysis series Updated release includes the latest information on Numerical Control Brain-Inspired Computing International Workshop, BrainComp 2013, Cetraro, Italy, July 8-11, 2013, Revised Selected Papers [Springer](#) This book constitutes the thoroughly refereed conference proceedings of the International Workshop on Brain-inspired Computing, BrainComp 2013, held in Cetraro, Italy, in July 2013. The 16 revised full papers were carefully reviewed and selected from numerous submissions and cover topics such as brain structure and function as a neuroscience perspective, computational models and brain-inspired computing, HPC and visualization for human brain simulations. A Minicourse on Stochastic Partial Differential Equations [Springer Science & Business Media](#) This title contains lectures that offer an introduction to modern topics in stochastic partial differential equations and bring together experts whose research is centered on the interface between Gaussian analysis, stochastic analysis, and stochastic PDEs. Lecture Notes on Functional Analysis With Applications to Linear Partial Differential Equations [American Mathematical Soc.](#) This textbook is addressed to graduate students in mathematics or other disciplines who wish to understand the essential concepts of functional analysis and their applications to partial differential equations. The book is intentionally concise, presenting all the fundamental concepts and results but omitting the more specialized topics. Enough of the theory of Sobolev spaces and semigroups of linear operators is included as needed to develop significant applications to elliptic, parabolic, and hyperbolic PDEs. Throughout the book, care has been taken to explain the connections between theorems in functional analysis and familiar results of finite-dimensional linear algebra. The main concepts and ideas used in the proofs are illustrated with a large number of figures. A rich collection of homework problems is included at the end of most chapters. The book is suitable as a text for a one-semester graduate course. Operator-Valued Measures and Integrals for Cone-Valued Functions [Springer Science & Business Media](#) Integration theory deals with extended real-valued, vector-valued, or operator-valued measures and functions, but different approaches are used for each case. This book develops a general theory of integration that simultaneously deals with all three cases. Modules over Operads and Functors [Springer](#) This monograph presents a review of the basis of operad theory. It also studies structures of modules over operads as a new device to model functors between categories of algebras as effectively as operads model categories of algebras. Penalising Brownian Paths [Springer](#) Penalising a process is to modify its distribution with a limiting procedure, thus defining a new process whose properties differ somewhat from those of the original one. We are presenting a number of examples of such penalisations in the Brownian and Bessel processes framework. The Martingale theory plays a crucial role. A general

principle for penalisation emerges from these examples. In particular, it is shown in the Brownian framework that a positive sigma-finite measure takes a large class of penalisations into account. Large random matrices [Springer Science & Business Media](#) These lectures emphasize the relation between the problem of enumerating complicated graphs and the related large deviations questions. Such questions are closely related with the asymptotic distribution of matrices. Methods of Contemporary Mathematical Statistical Physics [Springer](#) This volume presents a collection of courses introducing the reader to the recent progress with attention being paid to laying solid grounds and developing various basic tools. It presents new results on phase transitions for gradient lattice models. Lectures on Optimal Transport [Springer Nature](#) This textbook is addressed to PhD or senior undergraduate students in mathematics, with interests in analysis, calculus of variations, probability and optimal transport. It originated from the teaching experience of the first author in the Scuola Normale Superiore, where a course on optimal transport and its applications has been given many times during the last 20 years. The topics and the tools were chosen at a sufficiently general and advanced level so that the student or scholar interested in a more specific theme would gain from the book the necessary background to explore it. After a large and detailed introduction to classical theory, more specific attention is devoted to applications to geometric and functional inequalities and to partial differential equations. High Performance Computing From Grids and Clouds to Exascale [Ios Press Inc](#) In the last decade, parallel computing technologies have transformed high-performance computing. Two trends have emerged massively parallel computing leading to exascale on the one hand and moderately parallel applications, which have opened up high-perf Topics on Analysis in Metric Spaces [Oxford University Press on Demand](#) This book presents the main mathematical prerequisites for analysis in metric spaces. It covers abstract measure theory, Hausdorff measures, Lipschitz functions, covering theorems, lower semicontinuity of the one-dimensional Hausdorff measure, Sobolev spaces of maps between metric spaces, and Gromov-Hausdorff theory, all developed in a general metric setting. The existence of geodesics (and more generally of minimal Steiner connections) is discussed on general metric spaces and as an application of the Gromov-Hausdorff theory, even in some cases when the ambient space is not locally compact. A brief and very general description of the theory of integration with respect to non-decreasing set functions is presented following the Di Giorgi method of using the 'cavalieri' formula as the definition of the integral. Based on lecture notes from Scuola Normale, this book presents the main mathematical prerequisites for analysis in metric spaces. Supplemented with exercises of varying difficulty it is ideal for a graduate-level short course for applied mathematicians and engineers. Advanced Concepts, Methodologies and Technologies for Transportation and Logistics [Springer](#) This book is a collection of original papers produced by the members of the Euro Working Group on Transportation (EWGT) in

the last several years (2015-2017). The respective chapters present the results of various research projects carried out by the members of the EWGT and extended versions of presentations given at the last several meetings of the EWGT. The book offers a representative sampling of the EWGT's research activities and covers the state-of-the-art in quantitative oriented transportation/logistics research. It highlights a range of advanced concepts, methodologies and technologies, divided into four major thematic streams: Multiple Criteria Analysis in Transportation and Logistics; Urban Transportation and City Logistics; Road Safety and Artificial Intelligence and Soft Computing in Transportation and Logistics. The book is intended for academics/researchers, analysts, business consultants, and graduate students who are interested in advanced techniques of mathematical modeling and computational procedures applied in transportation and logistics.

Toxic Chemical and Biological Agents Detection, Diagnosis and Health Concerns [Springer Nature](#) This book critically assesses the current state of knowledge on new and important detection technologies, e.g. mass spectrometry, tandem mass spectrometry, biosensor detection and tissue imaging, in connection with toxic chemical and biological agents. In general, the main topics discussed concern the risks and consequences of chemical and biological agents for human health in general, with special emphasis on all biochemical and metabolic pathways including the reproductive system. The exposome, genetic risks and the environment, various health hazard agents, risk assessment, environmental assessment and preparedness, and analysis of sub-lethal effects at the molecular level are also discussed. In closing, the book provides comprehensive information on the diagnosis of exposure, and on health concerns related to toxic chemical and biological agents.

Introduction to Measure Theory and Integration [Springer Science & Business Media](#) This textbook collects the notes for an introductory course in measure theory and integration. The course was taught by the authors to undergraduate students of the Scuola Normale Superiore, in the years 2000-2011. The goal of the course was to present, in a quick but rigorous way, the modern point of view on measure theory and integration, putting Lebesgue's Euclidean space theory into a more general context and presenting the basic applications to Fourier series, calculus and real analysis. The text can also pave the way to more advanced courses in probability, stochastic processes or geometric measure theory. Prerequisites for the book are a basic knowledge of calculus in one and several variables, metric spaces and linear algebra. All results presented here, as well as their proofs, are classical. The authors claim some originality only in the presentation and in the choice of the exercises. Detailed solutions to the exercises are provided in the final part of the book.

Proceedings of the ... International Symposium on Remote Sensing of Environment Calculus of Variations and Partial Differential Equations Topics on Geometrical Evolution Problems and Degree Theory [Springer Science & Business Media](#) At the summer school in Pisa in September 1996, Luigi

Ambrosio and Norman Dancer each gave a course on the geometric problem of evolution of a surface by mean curvature, and degree theory with applications to PDEs respectively. This self-contained presentation accessible to PhD students bridged the gap between standard courses and advanced research on these topics. The resulting book is divided accordingly into 2 parts, and neatly illustrates the 2-way interaction of problems and methods. Each of the courses is augmented and complemented by additional short chapters by other authors describing current research problems and results.

The Making of a New Science A Personal Journey Through the Early Years of Theoretical Computer Science This book explains the development of theoretical computer science in its early stages, specifically from 1965 to 1990. The author is among the pioneers of theoretical computer science, and he guides the reader through the early stages of development of this new discipline. He explains the origins of the field, arising from disciplines such as logic, mathematics, and electronics, and he describes the evolution of the key principles of computing in strands such as computability, algorithms, and programming. But mainly it's a story about people - pioneers with diverse backgrounds and characters came together to overcome philosophical and institutional challenges and build a community. They collaborated on research efforts, they established schools and conferences, they developed the first related university courses, they taught generations of future researchers and practitioners, and they set up the key publications to communicate and archive their knowledge. The book is a fascinating insight into the field as it existed and evolved, it will be valuable reading for anyone interested in the history of computing.

Brain-Inspired Computing 4th International Workshop, BrainComp 2019, Cetraro, Italy, July 15-19, 2019, Revised Selected Papers [Springer Nature](#) This open access book constitutes revised selected papers from the 4th International Workshop on Brain-Inspired Computing, BrainComp 2019, held in Cetraro, Italy, in July 2019. The 11 papers presented in this volume were carefully reviewed and selected for inclusion in this book. They deal with research on brain atlas, multi-scale models and simulation, HPC and data infra-structures for neuroscience as well as artificial and natural neural architectures.

Lectures on Elliptic Partial Differential Equations [Springer](#) The book originates from the Elliptic PDE course given by the first author at the Scuola Normale Superiore in recent years. It covers the most classical aspects of the theory of Elliptic Partial Differential Equations and Calculus of Variations, including also more recent developments on partial regularity for systems and the theory of viscosity solutions.

Harmonic Analysis on Spaces of Homogeneous Type [Springer Science & Business Media](#) This book could have been entitled "Analysis and Geometry." The authors are addressing the following issue: Is it possible to perform some harmonic analysis on a set? Harmonic analysis on groups has a long tradition. Here we are given a metric set X with a (positive) Borel measure μ and we would like to construct some algorithms which in the classical setting rely on the Fourier

transformation. Needless to say, the Fourier transformation does not exist on an arbitrary metric set. This endeavor is not a revolution. It is a continuation of a line of research which was initiated, a century ago, with two fundamental papers that I would like to discuss briefly. The first paper is the doctoral dissertation of Alfred Haar, which was submitted at the University of Göttingen in July 1907. At that time it was known that the Fourier series expansion of a continuous function may diverge at a given point. Haar wanted to know if this phenomenon happens for every 2 orthonormal basis of $L^2[0,1]$. He answered this question by constructing an orthonormal basis (today known as the Haar basis) with the property that the expansion (in this basis) of any continuous function uniformly converges to that function.

System Reduction for Nanoscale IC Design [Springer](#) This book describes the computational challenges posed by the progression toward nanoscale electronic devices and increasingly short design cycles in the microelectronics industry, and proposes methods of model reduction which facilitate circuit and device simulation for specific tasks in the design cycle. The goal is to develop and compare methods for system reduction in the design of high dimensional nanoelectronic ICs, and to test these methods in the practice of semiconductor development. Six chapters describe the challenges for numerical simulation of nanoelectronic circuits and suggest model reduction methods for constituting equations. These include linear and nonlinear differential equations tailored to circuit equations and drift diffusion equations for semiconductor devices. The performance of these methods is illustrated with numerical experiments using real-world data. Readers will benefit from an up-to-date overview of the latest model reduction methods in computational nanoelectronics.

The Analysis of Fractional Differential Equations An Application-Oriented Exposition Using Differential Operators of Caputo Type [Springer](#) Fractional calculus was first developed by pure mathematicians in the middle of the 19th century. Some 100 years later, engineers and physicists have found applications for these concepts in their areas. However there has traditionally been little interaction between these two communities. In particular, typical mathematical works provide extensive findings on aspects with comparatively little significance in applications, and the engineering literature often lacks mathematical detail and precision. This book bridges the gap between the two communities. It concentrates on the class of fractional derivatives most important in applications, the Caputo operators, and provides a self-contained, thorough and mathematically rigorous study of their properties and of the corresponding differential equations. The text is a useful tool for mathematicians and researchers from the applied sciences alike. It can also be used as a basis for teaching graduate courses on fractional differential equations.

Close Air Support Upgraded A-7 Aircraft's Mission Effectiveness and Total Cost Unknown Gradient Flows In Metric Spaces and in the Space of Probability Measures [Springer Science & Business Media](#) The book is devoted to the theory of

gradient flows in the general framework of metric spaces, and in the more specific setting of the space of probability measures, which provide a surprising link between optimal transportation theory and many evolutionary PDE's related to (non)linear diffusion. Particular emphasis is given to the convergence of the implicit time discretization method and to the error estimates for this discretization, extending the well established theory in Hilbert spaces. The book is split in two main parts that can be read independently of each other. **Selected Papers** [Springer](#) The book contains a selection of 43 scientific papers by the great mathematician Ennio De Giorgi (1928-1996), which display the broad range of his achievements and his entire intellectual career as a problem solver and as a proponent of deep and ambitious mathematical theories. All papers are written in English and 17 of them appear also in their original Italian version in order to give an impression of De Giorgi's original style. The editors also provide a short biography of Ennio De Giorgi and a detailed account of his scientific achievements, ranging from his seminal paper on the solution of Hilbert's 19th problem to the theory of perimeter and minimal surfaces, the theory of G-convergence and the foundations of mathematics. **Operational Oceanography Implementation at the European and Regional Scales** [Elsevier](#) The Global Ocean Observing System (GOOS) is an international programme for a permanent global framework of observations, modelling and analysis of ocean variables that are needed to support operational services around the world. The EuroGOOS strategy has two streams: the first is to improve the quality of marine information in European home waters, and the second is to collaborate with similar organisations in other continents to create a new global ocean observing and modelling system that will provide the open ocean forecasts needed to achieve the best possible performance by local marine information services everywhere. EuroGOOS held its second international conference in The Hague in 1999. Here, the operational services already in place in the EuroGOOS regions were presented and evaluated. In addition, a "Forward Look" was presented, with targets for the next 5-10 years. The proceedings of the first EuroGOOS conference were published by Elsevier in the [/locate/inca/600827EOS](#) Series No. 62 Editors: Stel et al, ISBN 0-444-82892-3. **Pattern Recognition. ICPR International Workshops and Challenges Virtual Event, January 10-15, 2021, Proceedings, Part I** [Springer Nature](#) This 8-volumes set constitutes the refereed of the 25th International Conference on Pattern Recognition Workshops, ICPR 2020, held virtually in Milan, Italy and rescheduled to January 10 - 11, 2021 due to Covid-19 pandemic. The 416 full papers presented in these 8 volumes were carefully reviewed and selected from about 700 submissions. The 46 workshops cover a wide range of areas including machine learning, pattern analysis, healthcare, human behavior, environment, surveillance, forensics and biometrics, robotics and egovision, cultural heritage and document analysis, retrieval, and women at ICPR2020. **Fragile Networks Identifying Vulnerabilities and Synergies in an Uncertain World** [John Wiley & Sons A](#)

unified treatment of the vulnerabilities that exist in real-world network systems—with tools to identify synergies for mergers and acquisitions

Fragile Networks: Identifying Vulnerabilities and Synergies in an Uncertain World presents a comprehensive study of network systems and the roles these systems play in our everyday lives. This book successfully conceptualizes, defines, and constructs mathematically rigorous, computer-based tools for the assessment of network performance and efficiency, along with robustness and vulnerability analysis. The result is a thorough exploration that promotes an understanding of the critical infrastructure of today's network systems, from congested urban transportation networks and supply chain networks under disruption to financial networks and the Internet. The authors approach the analyses by abstracting not only topological structures of networks, but also the behavior of network users, the demand for resources, the resulting flows, and the associated costs. Following an introduction to the fundamental methodologies and tools required for network analysis and network vulnerability, the book is organized into three self-contained parts: Part I—Network Fundamentals, Efficiency Measurement, and Vulnerability Analysis explores the theoretical and practical foundations for a new network efficiency measure in order to assess the importance of network components in various network systems. Methodologies for distinct decision-making behaviors are outlined, along with the tools for qualitative analysis, the algorithms for the computation of solutions, and a thorough discussion of the unified network efficient measure and network robustness with the unified measure. Part II—Applications and Extensions examines the efficiency changes and the associated cost increments after network components are eliminated or partially damaged. A discussion of the recently established connections between transportation networks and different critical networks is provided, which demonstrates how the new network measures and robustness indices can be applied to different supply chain, financial, and dynamic networks, including the Internet and electronic power networks. Part III—Mergers and Acquisitions, Network Integration, and Synergies reveals the connections between transportation networks and different network systems and quantifies the synergies associated with the network systems, from total cost reduction to environmental impact assessment. In the case of mergers and acquisitions, the focus is on supply chain networks. The authors outline a system-optimization perspective for supply chain networks and also formalize coalition formation using game theory with insights into the merger paradox. With its numerous network examples and real-world applications, **Fragile Networks: Identifying Vulnerabilities and Synergies in an Uncertain World** is an excellent book for courses in network science, transportation science, operations management, and financial networks at the upper-undergraduate and graduate levels. It is also a valuable reference for researchers and practitioners in the areas of applied mathematics, computer science, operations research, management science, finance, and

economics, as well as industrial, systems, and civil engineering. Listen to Dr. Nagurney's podcast **Supernetworks: Building Better Real and Virtual Highways** at <http://www.scienceofbetter.org/podcast/> .

Mediterranean Climate Variability [Elsevier](#) This multi-authored book provides an updated description of climate variability in the Mediterranean basin, focusing on decadal and centennial time scales and on the results available on the impact of future emission scenarios at regional scale. The authors describes both local physical processes responsible for these variability - such as changes in the surface properties and land use- and global processes - such as changes in the large scale atmospheric circulation associated to global warming, NAO, tropical monsoon and ENSO. Regional climate change issues are also addressed. **Mediterranean Climate Variability** aims to review the research on this region and to provide at the same time both an introduction and a reference for researchers. It covers topics typical of Climatology, Climate history, Meteorology, Oceanography, Environmental Science but the information here provided would also be useful for research in agriculture, social and economic studies. It is addressed to scientists and students interested in the Mediterranean climate and environment. Some topics have interesting connections to nearby regions: Northern Atlantic, West Africa, central and Eastern Europe. Each chapter will contain a summary meant to provide information to policy makers, researchers from other fields, and in general to a wide audience without a technical expertise on climate. * Provides an updated analysis of the Mediterranean climate features and guidelines for future research * Considers both oceanographic and atmospheric aspects * Analyzes the Mediterranean climate in a global perspective

Cloud Computing and Software Services Theory and Techniques [CRC Press](#) Whether you're already in the cloud, or determining whether or not it makes sense for your organization, **Cloud Computing and Software Services: Theory and Techniques** provides the technical understanding needed to develop and maintain state-of-the-art cloud computing and software services. From basic concepts and recent research findings to fut

Transport Equations and Multi-D Hyperbolic Conservation Laws [Springer Science & Business Media](#) The theory of nonlinear hyperbolic equations in several space dimensions has recently obtained remarkable achievements. This volume provides an up-to-date overview of the status and perspectives of two areas of research in PDEs, related to hyperbolic conservation laws. The captivating volume contains surveys of recent deep results and provides an overview of further developments and related open problems. Readers should have basic knowledge of PDE and measure theory.