

Efficient And Adaptive Estimation For Semiparametric Models

Adaptive Markets: Financial Evolution at the... by Andrew W. Lo · Audiobook preview The Phase 3 VALOR Trial: Adaptive Sample Size Re-estimation BSU seminar: 'Estimating treatment effects from adaptive clinical trials' Improving Stability and Convergence for Adaptive Radial Basis Function Neural Network | RTCL.TV Effective Project Management by Robert K. Wysocki: 11 Minute Summary Improving the Efficiency of Prevention Research Using Responsive Adaptive Survey Design (MtG) ELOC: Lieven Verschaffel: Routine versus adaptive expertise in mathematics education Adversarial Machine Learning and Instrumental Variables for Flexible Causal Modeling Adaptive Trial Designs - Introduction for Non-Statisticians L12.4 Adam: Combining Adaptive Learning Rates and Momentum How to do relative size estimation at epic/feature level? Computational Efficiency and Robust Statistics Online Parameter Estimation and Adaptive Control Adaptive Experimental Design for Best Identification and Multiple Testing Smart Signal Processing for Massive MIMO in 5G and Beyond Group Sequential Designs and Sample Size Re-estimation - Modern Uses Adaptive Estimation via Optimal Decision Trees by Subhajit Goswami Dimitri Bertsekas - Lessons from AlphaZero for Optimal, Model Predictive, and Adaptive Control 1. Targeted Machine Learning for Causal Inference based on Real World Data

Frontiers in Statistics
 Adaptive Filters
 Adaptive Treatment Strategies in Practice: Planning Trials and Analyzing Data for Personalized Medicine
 Adaptive Control Approach for Software Quality Improvement
 Adaptive Optics for Vision Science
 Supercomputing in Engineering Analysis
 Essays on Semiparametric Efficient Adaptive Estimation and Empirical Applications in Finance [microform]
 Data-adaptive Estimation in Longitudinal Data Structures with Applications in Vaccine Efficacy Trials
 Adaptive Estimation of Autoregression Models with Time-Varying Variances
 Selected Proceedings of the Symposium on Estimating Functions
 Efficient and Adaptive Estimation for Semiparametric Models
 Adaptive Estimation in Time Series Regression Models
 Festschrift for Constance Van Eeden
 Dedicated to Peter John Bickel in Honor of His 65th Birthday
 Reinforcement Learning, second edition
 Modeling, Mesh Generation, and Adaptive Numerical Methods for Partial Differential Equations
 Adaptive Methods for Partial Differential Equations
 Selected Works of Peter J. Bickel
 Application to Adaptive Estimation to Temperature Forecasting
 Adaptive Radiation Therapy
 Adaptive Computational Methods for Partial Differential Equations
 Research Directions in Computational Mechanics
 A Conditional Property of Adaptive Estimators
 Decision Making Applications in Modern Power Systems
 Semiparametric Regression
 Robust and Efficient Adaptive Estimation of Binary-choice Regression Models

Efficient And Adaptive Estimation For Semiparametric Models

OMB No. 4405259061987 edited by

NEAL CARTER

Frontiers in Statistics John Wiley & Sons

Stable autoregressive models of known finite order are considered with martingale differences errors scaled by an unknown nonparametric time-varying function generating heterogeneity. An important special case involves structural change in the error variance, but in most practical cases the pattern of variance change over time is unknown and may involve shifts at unknown discrete points in time, continuous evolution or combinations of the two. This paper develops kernel-based estimators of the residual variances and associated adaptive least squares (ALS) estimators of the autoregressive coefficients. These are shown to be asymptotically efficient, having the same limit distribution as the infeasible generalized least squares (GLS). Comparisons of the efficient procedure and the ordinary least squares (OLS) reveal that least squares can be extremely inefficient in some cases while nearly optimal in others. Simulations show that, when least squares work well, the adaptive estimators perform comparably well, whereas when least squares work poorly, major efficiency gains are achieved by the new estimators.

Adaptive Filters CRC Press

"Proceedings of the Workshop on Adaptive Computational Methods for Partial Differential Equations, Rensselaer Polytechnic Institute, October 13-15, 1988"--T.p. verso.

Adaptive Treatment Strategies in Practice: Planning Trials and Analyzing Data for

Personalized Medicine IMS

Order selection based on criteria by Akaike (1974), AIC, Schwarz (1978), BIC or Hannan and Quinn (1979) HIC is often applied in empirical examples. They have been used in the context of order selection of weakly dependent ARMA models, AR models with unit or explosive roots and in the context of regression or distributed lag regression models for weakly dependent data. On the other hand, it has been observed that data exhibits the so-called strong dependence in many areas. Because of the interest in this type of data, our main objective in this paper is to examine order selection for a distributed lag regression model that covers in a unified form weak and strong dependence. To that end, and because of the possible adverse properties of the aforementioned criteria, we propose a criterion function based on the decomposition of the variance of the innovations of the model in terms of their frequency components. Assuming that the order of the model is finite, say p_0 , we show that the proposed criterion consistently estimates, p_0 . In addition, we show that adaptive estimation for the parameters of the model is possible without knowledge of p_0 . Finally, a small Monte-Carlo experiment is included to illustrate the finite sample performance of the proposed criterion.

ADAPTIVE CONTROL APPROACH FOR SOFTWARE QUALITY IMPROVEMENT

Open Dissertation Press

The Fifth Purdue International Symposium on Statistical Decision The was held at Purdue University during the period of ory and Related Topics June 14-19,1992. The symposium brought together many prominent leaders and younger researchers in statistical decision theory and related areas.

The format of the Fifth Symposium was different from the previous symposia in that in addition to the 54 invited papers, there were 81 papers presented in contributed paper sessions. Of the 54 invited papers presented at the symposium, 42 are collected in this volume. The papers are grouped into a total of six parts: Part 1 - Retrospective on Wald's Decision Theory and Sequential Analysis; Part 2 - Asymptotics and Nonparametrics; Part 3 - Bayesian Analysis; Part 4 - Decision Theory and Selection Procedures; Part 5 - Probability and Probabilistic Structures; and Part 6 - Sequential, Adaptive, and Filtering Problems. While many of the papers in the volume give the latest theoretical developments in these areas, a large number are either applied or creative review papers.

Adaptive Optics for Vision Science Springer

During the last two decades, many areas of statistical inference have experienced phenomenal growth. This book presents a timely analysis and overview of some of these new developments and a contemporary outlook on the various frontiers of statistics. Eminent leaders in the field have contributed 16 review articles and 6 research articles covering areas including semi-parametric models, data analytical nonparametric methods, statistical learning, network tomography, longitudinal data analysis, financial econometrics, time series, bootstrap and other re-sampling methodologies, statistical computing, generalized nonlinear regression and mixed effects models, martingale transform tests for model diagnostics, robust multivariate analysis, single index models and wavelets. This volume is dedicated to Prof. Peter J Bickel in honor of his 65th birthday. The first article of this volume summarizes some of Prof. Bickel's distinguished contributions.

SUPERCOMPUTING IN ENGINEERING ANALYSIS

North Holland

This volume presents selections of Peter J. Bickel's major papers, along with comments on their novelty and impact on the subsequent development of statistics as a discipline. Each of the eight parts concerns a particular area of research and provides new commentary by experts in the area. The parts range from Rank-Based Nonparametrics to Function Estimation and Bootstrap Resampling. Peter's amazing career encompasses the majority of statistical developments in the last half-century or about half of the entire history of the systematic development of statistics. This volume shares insights on these exciting statistical developments with future generations of statisticians. The compilation of supporting material about Peter's life and work help readers understand the environment under which his research was conducted. The material will also inspire readers in their own research-based pursuits. This volume includes new photos of Peter Bickel, his biography, publication list, and a list of his students. These give the reader a more complete picture of Peter Bickel as a teacher, a friend, a colleague, and a family man.

ESSAYS ON SEMIPARAMETRIC EFFICIENT ADAPTIVE ESTIMATION AND EMPIRICAL APPLICATIONS IN FINANCE [MICROFORM]

Springer Science & Business Media

Finite Element Methods are used for numerous engineering applications where numerical solutions of partial differential equations are needed. As computers can now deal with the millions of parameters used in these methods, automatic error estimation and automatic adaptation of the utilised method (according to this error estimation), has become a hot research topic. This text offers comprehensive coverage of this new field of automatic adaptation and error estimation, bringing together the work of eight outstanding researchers in this field who have completed a six year national research project within the German Science Foundation. The result is a state-of-the-art work in true reference style. Each chapter is self-contained and covers theoretical, algorithmic and software presentations as well as solved problems. A main feature consists of several carefully elaborated benchmarks of 2D- and 3D- applications. * First book to go beyond the Finite Element Method in itself * Covers material from a new research area * Presents benchmarks of 2D- and 3D- applications * Fits with the new trend for genetic strategies in engineering

DATA-ADAPTIVE ESTIMATION IN LONGITUDINAL DATA STRUCTURES WITH APPLICATIONS IN VACCINE EFFICACY TRIALS

Springer Nature

Leading experts present the latest technology and applications in adaptive optics for vision science. Featuring contributions from the foremost researchers in the field, Adaptive Optics for Vision Science is the first book devoted entirely to providing the fundamentals of adaptive optics along with its practical applications in vision science. The material for this book stems from collaborations fostered by the Center for Adaptive Optics, a consortium of more than thirty universities, government laboratories, and corporations. Although the book is written primarily for researchers in vision science and ophthalmology, the field of adaptive optics has strong roots in astronomy. Researchers in both fields share this technology and, for this reason, the book includes chapters by both astronomers and vision scientists. Following the introduction, chapters are divided into the following sections: * Wavefront Measurement and Correction * Retinal Imaging Applications * Vision Correction Applications * Design Examples Readers will discover the remarkable proliferation of new applications of wavefront-related technologies developed for the human eye. For example, the book explores how wavefront sensors offer the promise of a new generation of vision correction methods that can deal with higher order aberrations beyond defocus and astigmatism, and how adaptive optics can produce images of the living retina with unprecedented resolution. An appendix includes the Optical Society of America's Standards for Reporting Optical Aberrations. A glossary of terms and a symbol table are also included. Adaptive Optics for Vision Science arms engineers, scientists, clinicians, and students with the basic concepts, engineering tools, and techniques needed to master adaptive optics applications in vision science and ophthalmology. Moreover, readers will discover the latest thinking and findings from the leading innovators in the field.

Adaptive Estimation of Autoregression Models with Time-Varying Variances Imperial College Press

With considerations such as complex-dimensional geometries and nonlinearity, the computational solution of partial differential systems has become so involved that it is important to automate decisions that have been normally left to the individual. This book covers such decisions: 1) mesh generation with links to the software generating the domain geometry, 2) solution accuracy and reliability with mesh selection linked to solution generation. This book is suited for mathematicians, computer scientists and engineers and is intended to encourage interdisciplinary interaction between the diverse groups.

SELECTED PROCEEDINGS OF THE SYMPOSIUM ON ESTIMATING FUNCTIONS

MIT Press

Computational mechanics is a scientific discipline that marries physics, computers, and mathematics to emulate natural physical phenomena. It is a technology that allows scientists to study and predict the performance of various products—important for research and development in the industrialized world. This book describes current trends and future research directions in computational mechanics in areas where gaps exist in current knowledge and where major advances are crucial to continued technological developments in the United States.

Efficient and Adaptive Estimation for Semiparametric Models John Wiley & Sons

This dissertation develops methodology for data-adaptive estimation of parameters defined on longitudinal data structures, while this abstract serves as an introduction to the material covered herein. The dissertation is organized into three related, but distinct chapters. Each chapter considers a similar data structure, wherein subjects are enrolled and followed over a period of time to obtain additional measurements, for example their failure status. During this followup period, subjects may drop out and therefore researchers are unable to observe the entire study population at all time points. Using the observed data, this dissertation develops asymptotically efficient estimators that may draw valid inferences on the original study population. Data from preventive vaccine trials serve as the motivation for much of the work in this dissertation. In such trials, subjects are randomized to receive an active vaccine or placebo vaccine and are subsequently followed over some period of time to ascertain infection status. This infection data may be augmented with pathogen genetic data. Scientific interest may lie in assessing the vaccine's efficacy to prevent infections of a certain genotype; this problem is considered in Chapter 1. Researchers may possess additional information on the expected incidence of an infection in the population under study. For example, such information may be ascertained from previous studies in the same population. In Chapter 2, we show how this information may be included in the estimation procedure to improve performance. The third and final chapter explores the construction of estimators that enjoy the unique property of being robust to model misspecification in terms of both estimation and inference drawn from the estimator.

ADAPTIVE ESTIMATION IN TIME SERIES REGRESSION MODELS

National Academies Press

The first volume in this new series has a companion in volume 2 (unseen), Parallel processing in computational mechanics. The first six contributions present general aspects of supercomputing from both hardware and software engineering points of view. Subsequent chapters discuss homotopy algorithms

FESTSCHRIFT FOR CONSTANCE VAN EEDEN

CRC Press

Modern medical imaging and radiation therapy technologies are so complex and computer driven that it is difficult for physicians and technologists to know exactly what is happening at the point-of-care. Medical physicists responsible for filling this gap in knowledge must stay abreast of the latest advances at the intersection of medical imaging and radiation therapy. This book provides medical physicists and radiation oncologists current and relevant information on Adaptive Radiation Therapy (ART), a state-of-the-art approach that uses a feedback process to account for patient-specific anatomic and/or biological changes, thus delivering highly individualized radiation therapy for cancer patients. The book should also benefit medical dosimetrists and radiation therapists. Adaptive Radiation Therapy describes technological and methodological advances in the field of ART, as well as initial clinical experiences using ART for selected anatomic sites. Divided into three sections (radiobiological basis, current technologies, and clinical applications), the book covers: Morphological and biological biomarkers for patient-specific planning Design and

optimization of treatment plans Delivery of IMRT and IGRT intervention methodologies of ART Management of intrafraction variations, particularly with respiratory motion Quality assurance needed to ensure the safe delivery of ART ART applications in several common cancer types / anatomic sites The technology and methodology for ART have advanced significantly in the last few years and accumulated clinical data have demonstrated the need for ART in clinical settings, assisted by the wide application of intensity modulated radiation therapy (IMRT) and image-guided radiation therapy (IGRT). This book shows the real potential for supplying every patient with individualized radiation therapy that is maximally accurate and precise.

Dedicated to Peter John Bickel in Honor of His 65th Birthday National Library of Canada = Bibliothèque nationale du Canada

Efficient and Adaptive Estimation for Semiparametric Models Springer

Reinforcement Learning, second edition IMS

In response to the US FDA's Critical Path Initiative, innovative adaptive designs are being used more and more in clinical trials due to their flexibility and efficiency, especially during early phase development. Handbook of Adaptive Designs in Pharmaceutical and Clinical Development provides a comprehensive and unified presentation of the principles of *Modeling, Mesh Generation, and Adaptive Numerical Methods for Partial Differential Equations* Academic Press

List of participants; Elliptic equations; Parabolic equations; Hyperbolic equations.

Adaptive Methods for Partial Differential Equations SIAM

Stable autoregressive models of known finite order are considered with martingale differences errors scaled by an unknown nonparametric time-varying function generating heterogeneity. An important special case involves structural change in the error variance, but in most practical cases the pattern of variance change over time is unknown and may involve shifts at unknown discrete points in time, continuous evolution or combinations of the two. This paper develops kernel-based estimators of the residual variances and associated adaptive least squares (ALS) estimators of the autoregressive coefficients. These are shown to be asymptotically efficient, having the same limit distribution as the infeasible generalized least squares (GLS). Comparisons of the efficient procedure and ordinary least squares (OLS) reveal that least squares can be extremely inefficient in some cases while nearly optimal in others. Simulations show that, when least squares work well, the adaptive estimators perform comparably well, whereas when least squares work poorly, major efficiency gains are achieved by the new estimators.

Selected Works of Peter J. Bickel CRC Press

This book focuses on the topic of improving software quality using adaptive control approaches. As software systems grow in complexity, some of the central challenges include their ability to self-manage and adapt at run time, responding to changing user needs and environments, faults, and vulnerabilities. Control theory approaches presented in the book provide some of the answers to these challenges. The book weaves together diverse research topics (such as requirements engineering, software development processes, pervasive and autonomic computing, service-oriented architectures, on-line adaptation of software behavior, testing and QoS control) into a coherent whole. Written by world-renowned experts, this book is truly a noteworthy and authoritative reference for students, researchers and practitioners to better understand how the adaptive control approach can be applied to improve the quality of software systems. Book chapters also outline future theoretical and experimental challenges for researchers in this area. Contents: Prioritizing Coverage-Oriented Testing Process — An Adaptive-Learning-Based Approach and Case Study (Fevzi Belli, Mubariz Eminov, Nida Gökçe & W Eric Wong) Statistical Evaluation Methods for V&V of Neuro-Adaptive Systems (Y Liu, J Schumann & B Cukic) Adaptive Random Testing (Dave Towey) Transparent Shaping: A Methodology for Adding Adaptive Behavior to Existing Software Systems and Applications (S Masoud Sadjadi, Philip K McKinley & Betty H C Cheng) Rule Extraction to Understand Changes in an Adaptive System (Marjorie A Darrah & Brian J Taylor) Requirements Engineering Via Lyapunov Analysis for Adaptive Flight Control Systems (Giampiero Campa, Marco Mammarella, Mario L Fravolini & Bojan Cukic) Quantitative Modeling for Incremental Software Process Control (Scott D Miller, Raymond A DeCarlo & Aditya P Mathur) Proactive Monitoring and Control of Workflow Execution in Adaptive Service-based Systems (Stephen S Yau & Dazhi Huang) Accelerated Life Tests and Software Aging (Rivalino Matias Jr & Kishor S Trivedi) Readership: Students, researchers and practitioners in software engineering, as well as applied optimization and control theory. Keywords: Software Quality; Control; Software Cybernetics

Application to Adaptive Estimation to Temperature Forecasting World Scientific

An up-to-date, one-stop reference-complete with applications This volume presents the most up-to-date information available on a posteriori error estimation for finite element approximation in mechanics and mathematics. It emphasizes methods for elliptic boundary value problems and includes applications to incompressible flow and nonlinear problems. Recent years have seen an explosion in the study of a posteriori error estimators due to their remarkable influence on improving both accuracy and reliability in scientific computing. In an effort to provide an accessible source, the authors have sought to present key ideas and common principles on a sound mathematical footing. Topics covered in this timely reference include: * Implicit and explicit a

posteriori error estimators * Recovery-based error estimators * Estimators, indicators, and hierarchic bases * The equilibrated residual method * Methodology for the comparison of estimators * Estimation of errors in quantities of interest A Posteriori Error Estimation in Finite Element Analysis is a lucid and convenient resource for researchers in almost any field of finite element methods, and for applied mathematicians and engineers who have an interest in error estimation and/or finite elements.

Adaptive Radiation Therapy John Wiley & Sons

The work is an application of adaptive estimation to temperature forecasting. It is presented as a feasibility study demonstrating the efficacy of the adaptive approach. The local station temperature forecasting problem is chosen to focus the discussion on the efficiency of the filtering

algorithm by using only surface level single geographic location data. A diagnostic study is made to ascertain the appropriate statistical properties of the weather data for algorithm selection. A phenomenological approach is taken since no differential equation or complete quantitative description exists to describe the temperature process. The Lainiotis Filter is chosen for model identification and classification as well as prediction results. The Lainiotis Filter, given in the Partition Theorem, provides an efficient, powerful tool in the application of adaptive estimation techniques. The feasibility of the adaptive approach is established with comparative results with previous objective forecast methods while greatly reducing the amount and variety of required input data. (Author).

Related with Efficient And Adaptive Estimation For Semiparametric Models:

[© Efficient And Adaptive Estimation For Semiparametric Models Match Beginning Sounds Worksheet](#)

[© Efficient And Adaptive Estimation For Semiparametric Models Match Game Questions And Answers](#)

[© Efficient And Adaptive Estimation For Semiparametric Models Math 111 College Algebra](#)