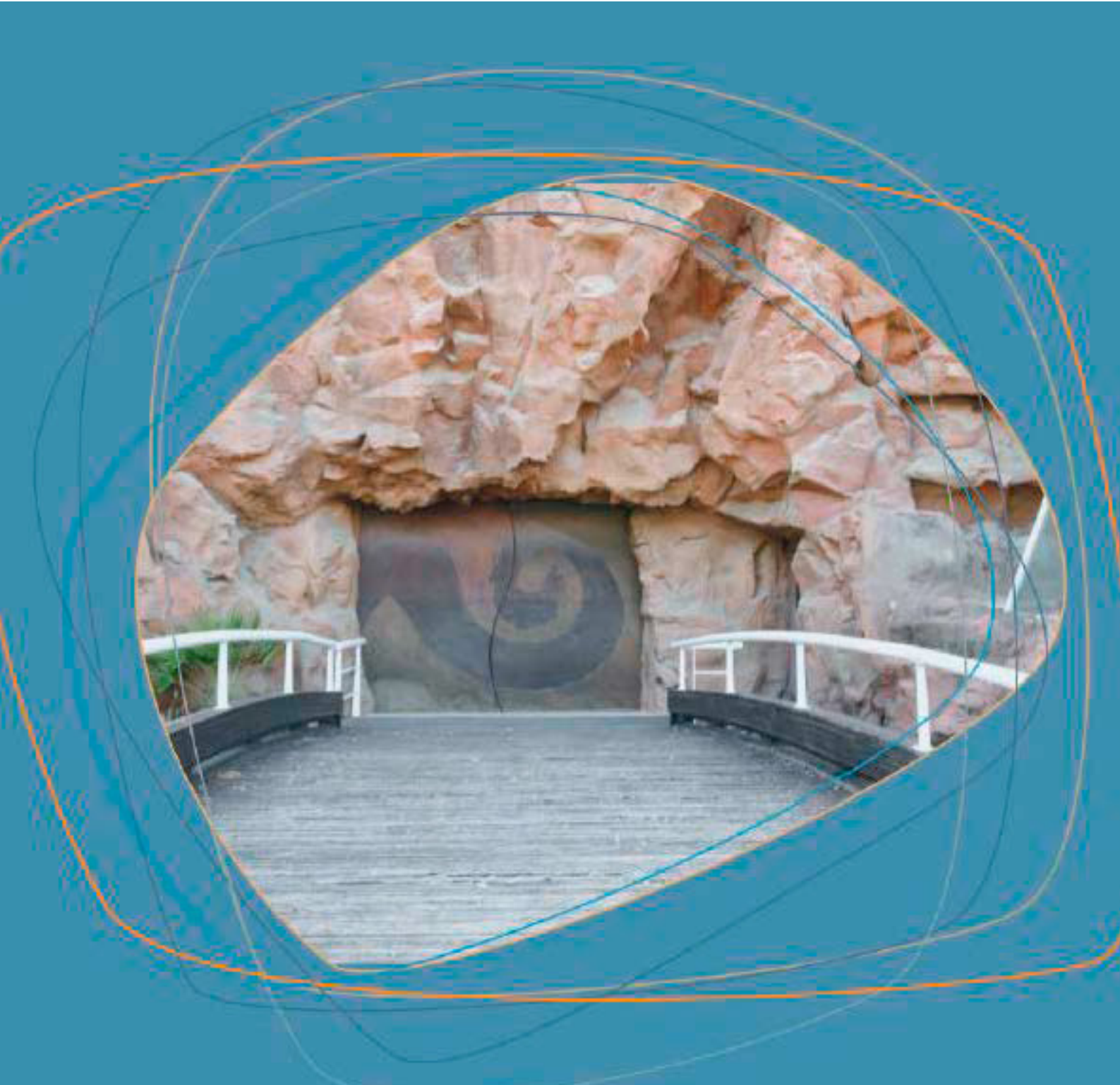

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Resúmenes de revistas
Abril - junio 2021

Junta de Andalucía
Consejería de Transformación Económica, Industria, Conocimiento y Universidades
INSTITUTO DE ESTADÍSTICA Y CARTOGRAFÍA DE ANDALUCÍA

PRESENTACIÓN

El presente boletín de resúmenes tiene una periodicidad trimestral y con él la Biblioteca del Instituto de Estadística y Cartografía de Andalucía pretende dar a conocer a los usuarios de una forma detallada el contenido de las revistas especializadas que entran en su colección. Se trata de un complemento al boletín de novedades de publicaciones seriadas ya que en él se incluyen los resúmenes de cada uno de los artículos que aparecen publicados en los diferentes números de las revistas en el idioma original de las mismas.

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Cartographic journal, The, ISSN 0008-7041
Volume 57, number 3 (august 2020)

Abstract
The following paper is an analysis of user preferences for the placement of buttons on a mobile map application. The authors focused on six public web mapping services, analysing them in terms of the graphical diversity of their buttons. What made the study innovative was the comparison of subjective user preferences regarding buttons placement with the layout of public web mapping services. The obtained results led to a conclusion that user preferences differ from the solutions applied on web mapping services. Adjusting the placement of buttons to fit those preferences would be a way of addressing the practical needs of people who use mobile maps application.

Abstract
Unlike modern maps, geometric maps lack a coordinate system and contain unsystematic geometric inaccuracies. This paper illuminates four aspects concerning the problem of uniting geographical information technology with old geometric maps. These are as follows: first, the origin of and geometric qualities in the representation of objects in geometric maps; second, the distortions originating from measurement techniques; third, the assumption that it is possible to find points that are the same over time for rectification in Geographic Information System (GIS); and, fourth, the extrapolation of unsystematic geometric distortions when using GIS techniques without any knowledge of the present unsystematic distortions in a map. The article presents the background of Swedish geometric maps and a hypothetical example is used to present the principle problems of using GIS techniques to rectify geometric maps. The conclusion of the paper is that systematic and unsystematic geometric distortions need to be identified and handled separately.

Abstract
Several factors influence the global-scale cognitive map. The use of school books, atlases and web maps all play an essential role in the development of geographical knowledge of adolescents. This research examines the impact of the educational system versus web maps on the adolescents' mental map. Through a specially designed web application, university students and secondary school pupils estimated the real proportion of countries and continents compared to Europe. Participants with a more theoretical background or wider knowledge about map projections and its distortions estimated the real proportions more accurately. This research also found that the Robinson projection, commonly used in schoolbooks and atlases, is the best-known map projection among adolescents. However, the influence of web maps

could not be proven since no Mercator effect was found. Education is of undeniable importance, and therefore, educational materials that encourage people to look more carefully and critically at maps should be further developed.

Breaking the Eyes: How Do Users Get Started with a Coordinated and Multiple View Geovisualization Tool? P. 235-248

Izabela Golebiowska, Tomasz Opach & Jan Ketil Rød

Abstract

Maps are frequently combined with data displays in the form of coordinated and multiple views (CMV). Although CMV are valuable geovisualization tools, novice users may find them complex and thus require explanation. However, no tutorial guidelines have been developed that indicate what is helpful in understanding CMV geovisualization tools. We therefore conducted a study on the learnability of a CMV tool, informed with eye-tracking data, talk-aloud and interaction logs. We have investigated how untrained users work with a CMV geovisualization tool. The study revealed that: (1) despite their initial confusion, users found the tested tool pleasant to play with while getting to grips with how dynamic brushing works, (2) when examining the tool's interface, participants mainly looked freely at explanatory elements, such as labels and the legend, but they explored interactive techniques only to a limited degree. We conclude with tips about tutorial design and layout design for CMV tools.

Quadrature Rules to Calculate Distortions of Map Projections P. 249-260

Krisztián Kerkovits

Abstract

In map projection theory, it is usual to utilize numerical quadrature rules to estimate the overall map distortion. However, it is not known which method is the most efficient to approximate this integral. In this paper, overall map distortion is calculated analytically by a computer algebra system. Various integration methods are compared to the exact results. Some calculations are also performed on irregular spherical polygons. Considering the experiments, the author suggests utilizing the first-order Gaussian quadrature as it always gave reasonable results, although it is not the best for all cases.

Emplaced Distances P. 261-272

Giovanni Spissu

Abstract

In the Sardinian artist's Maria Lai's works, *Geografie* and *Geogafie Spaziali*, she depicted the cosmic pathways of the Sardus Pater, using a cartographic representation of one of the island's most popular legends. One of these works' key features is the use of embroidery techniques learned from women of her village. She considers the Sardinian territory not only an object of representation but as an expressive medium of her work and a fertile space that generates new worlds. I argue that we can draw on Maria Lai's work to conceive a particular form of deep mapping through which to explore the territory through its imaginative dimension. For the purpose of this article, I intend to describe how, inspired by Lai's works, I built *Emplaced Distance*, a map of Cape Town through the Sardinian territory.

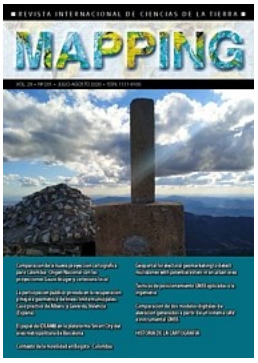
Herbert Bayer's *World Geo-Graphic Atlas* of 1953: A Modern Atlas, Then and Now P. 273-283

Francis Harvey

Abstract

Herbert Bayer (1900–1985) created the *World Geo-Graphic Atlas* (published in 1953) – an influential atlas that followed modernist design principles associated with the Bauhaus. This paper focuses on the modernist exhibition design concepts he refined in his work on this seminal atlas of the twentieth century. The *Atlas* stands out in its successful expansion of the predominant map-centric atlas framework that is augmented by modernist approaches to visualization. The central concept used in the *Atlas*, the extended field of vision from exhibit design and architecture, was central to its organization and

presentation. The *Atlas* integrates topographic maps, concise textual narration, tables, pictograms, thematic maps, geovisualization, artwork that uses modernist graphic techniques, and approaches to support flexible reader engagement. This exemplary atlas – both then and now – communicates a broad diversity of geographic knowledge of regions and countries from around the world through graphical means.



Mapping: revista internacional de Ciencias de la Tierra, ISSN 1131-9100
Volumen 29, número 201 (julio – agosto 2020)

Resumen
Para la elaboración de la cartografía de Colombia se utilizan las proyecciones Gauss-Krüger y cartesiana. El Instituto Geográfico Agustín Codazzi (IGAC) encargado de la producción de la cartografía oficial, estableció una nueva proyección con único origen geográfico denominada «Origen Nacional». El objetivo del presente trabajo es comparar la deformación de arcos geodésicos proyectados a planos Gauss-Krüger, cartesiano y al Origen Nacional. En el proceso se tomaron arcos de 10, 30, 50, y 70 kilómetros distribuidos en 34 zonas del país y se proyectaron a los planos mencionados. Como resultados a destacar: Arcos de 50 kilómetros proyectados al plano Gauss-Krüger presentan deformaciones de centímetros ubicados sobre el meridiano origen; al extremo del plano de proyección alcanzan deformaciones de 18 metros. En la proyección cartesiana la deformación es lineal y directamente proporcional a la altitud del plano de proyección. En el «Origen Nacional», las deformaciones se presentan por defecto y por exceso, es decir los vectores se hacen más cortos sobre el meridiano origen del plano de proyección y en el límite se hacen más largos unos 240 metros. Para áreas extensas el origen nacional ofrece mayor facilidad de cálculos, pero las deformaciones son mucho mayores que la proyección Gauss-Krüger

Resumen
La participación público-privada en el proceso de recuperación y mejora geométrica de las líneas límite municipales tiene la dualidad de impulsar las actividades económicas de los profesionales, así como de agilizar el proceso de regularización técnica de estas. En el caso de la línea límite municipal Alberic y Gavarda, en la provincia de Valencia (España), la participación público-privada se realizó en base al procedimiento y pliego de aplicación del Instituto Geográfico Nacional (IGN) de la recuperación de líneas límite municipales. Partiendo del asesoramiento inicial de la propuesta de soluciones, continuando con los trabajos técnicos de reconocimiento de mojones existentes, observación y replanteo de los desaparecidos, así como en la firma del acta adicional al acta de deslinde, realizada de 1903, ratificación plenaria y posterior inscripción en el Registro Central de Cartografía (RCC).

Resumen
El Área Metropolitana de Barcelona (AMB) ha venido desarrollando durante el último lustro una plataforma de smart city denominada SmartAMB con la que pretende dar respuesta a los retos de mayor eficiencia en la gestión de sus activos competenciales, siendo este un claro exponente de escenario big data en el que la variable geográfica cobra un papel preponderante. En este contexto y teniendo en cuenta la dimensión de AMB como organización, resulta de vital importancia disponer de una infraestructura de datos espaciales (IDE) que facilite la catalogación, descubrimiento y utilización de todos los conjuntos de información georreferenciados, los cuales podrán ser integrados con otras fuentes de datos para desarrollar los flujos analíticos que se correspondan para facilitar la toma de decisione

Contexto de la movilidad en Bogotá - Colombia P. 28-33

Wilson Vargas-Vargas, Carmen Femenia-Ribera, Gaspar Mora-Femenia

Resumen
Bogotá la capital de Colombia, es una de las ciudades más pobladas del país con cerca de 7,5 millones de habitantes (DANE, 2018) con una extensión de 164 Ha, de las cuales el 75% son de suelo rural, dividida administrativamente en 20 localidades (Alcaldía de Bogotá, 2004) con aproximadamente 15.400 Km por carril para el 2013 que según estadísticas del Instituto de Desarrollo Urbano IDU el 50% se encuentra en mal estado, fue la primera ciudad colombiana en contar con un sistema de autobús de tránsito rápido, y en este momento cuenta con un Sistema Integrado de Transporte SIPT que reúne a todos los medios de transporte de pasajeros. De acuerdo con el informe del programa Bogotá como vamos (2018), se han registrado cerca de 11.700 víctimas fatales en accidentes de tránsito desde el año 2000, y desde 2005 hasta el 2017 es posible ver una estabilidad en la cifra de muertes anuales por siniestros viales, la cual se ubica en un promedio de entre 500 y 570 víctimas fatales por año, en 2018 este indicador descendió a 514 muertes, una de las cifras anuales más bajas del siglo. Por esto es necesario que todos los profesionales enfoquemos las investigaciones en mejorar la movilidad de la ciudad y con ella reducir las víctimas fatales.

Geoportal for electoral geomarketing to detect microzones with potential voters in an urban area P. 34-43

Gaspar Mora-Navarro, Angel Balaguer-Beser, Carles Marti-Montolio, Carmen Femenia-Ribera

Resumen
En este trabajo se presenta una metodología para realizar geomarketing electoral que permita identificar a los potenciales votantes de cada partido político y conocer sus características. Esta información puede resultar útil para optimizar los recursos de un partido político al preparar la campaña electoral. Se realiza un estudio estadístico para analizar la relación entre los datos electorales y diversas variables sociodemográficas, de dependencia, migratorias, económicas y educativas. Se utiliza un geoportal, llamado GeoChess (https://upvusig.car.upv.es/geochess/) para crear todos los mapas temáticos, gráficos y la mayoría de estudios estadísticos. El geoportal permite visualizar los mapas y gráficos temáticos que se muestran en este estudio.

Técnicas de posicionamiento GNSS aplicadas a la ingeniería P. 44-48

Guillermina S. Santecchia , Juan Manuel Span

Resumen
La utilización de un VANT (vehículo aéreo no tripulado) para la adquisición de datos de una determinada zona geográfica permite su posterior tratamiento en distintos softwares de procesamiento y su integración en un SIG (sistemas de información geográfica), como la confección de distintos productos como ortofotos, DEM (modelos

digitales del terreno), perfiles topográficos, etc. Para obtener resultados con precisión planialtimétrica óptima será necesario contar con puntos de apoyo en el terreno referidos a algún sistema de coordenadas, además de los puntos de control para la verificación de los resultados obtenidos. El relevamiento de puntos con coordenadas tridimensionales se puede obtener con distintos métodos e instrumentales. En este trabajo utilizamos técnicas GNSS, en el que se comparan mediciones tomadas con un mismo equipo de medición GPS, utilizando el método de medición RTK (Real Time Kinematic) y el método NTRIP (Networked Transport of RTCM vía Internet Protocol). El objetivo es realizar un análisis comparativo de las coordenadas obtenidas en diez puntos fijos, con los dos métodos de medición, y suministrar información sobre sus ventajas y desventajas, para su utilidad en el procesamiento de datos obtenidos con un VANT.

Comparación de dos modelos digitales de elevación generados a partir de un sistema UAV e instrumental GNSS P. 50-56

Guillermina S. Santecchia , Juan Manuel Span

Resumen

El avance informático y tecnológico, y la aparición de los UAV (unmanned aerial vehicle) en las últimas décadas, marcaron un nuevo camino en los relevamientos topográficos y en las mediciones de coordenadas tridimensionales de puntos. La generación de modelos digitales de elevación (DEM), ortomosaicos y productos cartográficos generados a través de sistemas UAV es una herramienta alternativa en el ordenamiento del suelo o el estudio de una determinada zona. En este trabajo se generaron dos DEM, uno a través de datos obtenidos con un UAV. Para ello se realizó un vuelo autónomo, a una altura de vuelo de 60 metros, velocidad crucero de 8 m/s, traslape longitudinal del 80 % y lateral del 70 %. Con esto se obtuvieron imágenes con 2,6 cm/pix de resolución espacial. El otro modelo se confeccionó a través de datos tomados con un receptor GPS/GNSS (Global Position System - Global Navigation Satellite System) South Galaxy G1 Plus de 220 canales que permite obtener mejor precisión en las coordenadas planialtimétricas. Es un equipo de doble frecuencia (L1/L2) y recibe información de las constelaciones GPS, GLONASS, BEIDOU y GALILEO. Luego, se compararon los resultados para evaluar la precisión en los productos generados. Los resultados obtenidos en el presente trabajo detectan diferencias significativas en cuanto a la densidad de puntos que pueden obtenerse para confeccionar el DEM. Ambas tecnologías pueden ser eficientes dependiendo del objetivo del trabajo. Cuando la superficie a relevar presenta una pendiente uniforme, con ambos instrumentos se puede alcanzar similares resultados, pero cuando la superficie a relevar presenta depresiones o zonas elevadas, se alcanzan resultados distintos. El DEM que se obtiene con el UAV se adapta mejor a la topografía del terreno

Technometrics, ISSN 0040-1706
Volume 63, number 1 (february 2020)

Abstract
Online experiments and specifically A/B testing are commonly used to identify whether a proposed change to a web page is in fact an effective one. This study focuses on basic settings in which a binary outcome is obtained from each user who visits the website and the probability of a response may be affected by numerous factors. We use Bayesian probit regression to model the factor effects and combine elements from traditional two-level factorial experiments and multiarmed bandits to construct sequential designs that embed attractive features of estimation and exploitation.

Abstract
We consider the problem of estimating the set of all inputs that leads a system to some particular behavior. The system is modeled by an expensive-to-evaluate function, such as a computer experiment, and we are interested in its excursion set, that is, the set of points where the function takes values above or below some prescribed threshold. The objective function is emulated with a Gaussian process (GP) model based on an initial design of experiments enriched with evaluation results at (batch-) sequentially determined input points. The GP model provides conservative estimates for the excursion set, which control false positives while minimizing false negatives. We introduce adaptive strategies that sequentially select new evaluations of the function by reducing the uncertainty on conservative estimates. Following the stepwise uncertainty reduction approach we obtain new evaluations by minimizing adapted criteria. Tractable formulas for the conservative criteria are derived, which allow more convenient optimization. The method is benchmarked on random functions generated under the model assumptions in different scenarios of noise and batch size. We then apply it to a reliability engineering test case. Overall, the proposed strategy of minimizing false negatives in conservative estimation achieves competitive performance both in terms of model-based and model-free indicators. Supplementary materials for this article are available online.

Abstract
Model calibration uses outputs from a simulator and field data to build a predictive model for the physical system and to estimate unknown inputs. The conventional approach to model calibration assumes that the observations are continuous outcomes. In many applications this is not the case. The methodology proposed was motivated by an application in modeling photon counts at the Center for Exascale Radiation Transport. There, high performance computing is used for simulating the flow of neutrons through various materials. In this article, new Bayesian methodology for computer model calibration to handle the count structure of our observed data allows closer fidelity

to the experimental system and provides flexibility for identifying different forms of model discrepancy between the simulator and experiment. Supplementary materials for this article are available online.

Distance-Distributed Design for Gaussian Process Surrogates P. 40-52

Boya Zhang, D. Austin Cole & Robert B. Gramacy

Abstract

A common challenge in computer experiments and related fields is to efficiently explore the input space using a small number of samples, that is, the experimental design problem. Much of the recent focus in the computer experiment literature, where modeling is often via Gaussian process (GP) surrogates, has been on space-filling designs, via maximin distance, Latin hypercube, etc. However, it is easy to demonstrate empirically that such designs disappoint when the model hyperparameterization is unknown, and must be estimated from data observed at the chosen design sites. This is true even when the performance metric is prediction-based, or when the target of interest is inherently or eventually sequential in nature, such as in blackbox (Bayesian) optimization. Here we expose such inefficiencies, showing that in many cases a purely random design is superior to higher-powered alternatives. We then propose a family of new schemes by reverse engineering the qualities of the random designs which give the best estimates of GP length scales. Specifically, we study the distribution of pairwise distances between design elements, and develop a numerical scheme to optimize those distances for a given sample size and dimension. We illustrate how our distance-based designs, and their hybrids with more conventional space-filling schemes, outperform in both static (one-shot design) and sequential settings.

Gaussian Process Modeling of Heterogeneity and Discontinuities Using Voronoi Tessellations P. 53-63

Christopher A. Pope, John Paul Gosling, Stuart Barber, Jill S. Johnson, Takanobu Yamaguchi, Graham Feingold & Paul G. Blackwell

Abstract

Many methods for modeling functions over high-dimensional spaces assume global smoothness properties; such assumptions are often violated in practice. We introduce a method for modeling functions that display heterogeneity or contain discontinuities. The heterogeneity is dealt with by using a combination of Voronoi tessellation, to partition the input space, and separate Gaussian processes to model the function over different regions of the partitioned space. The proposed method is highly flexible since it allows the Voronoi cells to combine to form regions, which enables nonconvex and disconnected regions to be considered. In such problems, identifying the borders between regions is often of great importance and we propose an adaptive sampling method to gain extra information along such borders. The method is illustrated by simulated examples and an application to real data, in which we see improvements in prediction error over the commonly used stationary Gaussian process and other nonstationary variations. In our application, a computationally expensive computer model that simulates the formation of clouds is investigated, the proposed method more accurately predicts the underlying process at unobserved locations than existing emulation methods. Supplementary materials for this article are available online.

Boundary Detection Using a Bayesian Hierarchical Model for Multiscale Spatial Data P. 64-76

Kai Qu, Jonathan R. Bradley & Xufeng Niu

Abstract

Spatial boundary analysis has attained considerable attention in several disciplines including engineering, shape analysis, spatial statistics, and computer science. The inferential question of interest is often to identify rapid surface change of an unobserved latent process. Curvilinear wombling and crisp wombling (or fuzzy) are two major approaches that have emerged in Bayesian spatial statistics literature. These methods are limited to a single spatial scale even though data with multiple spatial scales are often accessible. Thus, we propose a multiscale

representation of the directional derivative Karhunen–Loéve expansion to perform directionally based boundary detection. Taking a multiscale spatial perspective allows us, for the first time, to consider the concept of curvilinear boundary fallacy (CBF) error, which is a boundary detection analog to the ecological fallacy that is often studied in spatial change of support literature. Furthermore, we propose a directionally based multiscale curvilinear boundary error criterion to quantify CBF. We refer to this metric as the criterion for boundary aggregation error (BAGE), and use it to perform boundary detection. Several theoretical results are derived to motivate BAGE. In particular, we show that no BAGE exists when the directional derivatives of eigenfunctions of a KL expansion are constant across spatial scales. We illustrate the use of our model through a simulated example and an analysis of Mediterranean wind measurements data. Supplementary materials for this article are available online.

Spatiotemporal Modeling and Real-Time Prediction of Origin-Destination Traffic Demand P. 77-89

Xiaochen Xian, Honghan Ye, Xin Wang & Kaibo Liu

Abstract

Traffic demand prediction has been a crucial problem for the planning, scheduling, and optimization in transportation management. The prediction of traffic demand counts for origin-destination (OD) pairs has been considered challenging due to the high variability and complicated spatiotemporal correlations in the data. Though several articles have considered estimating traffic flows from counts observed at specific locations, existing traffic prediction models seldom dealt with spatiotemporal demand count data of certain OD pairs, or they failed to effectively consider domain knowledge of the traffic network to enhance the prediction accuracy of traffic demand. To tackle the aforementioned challenges, we formulate and propose a multivariate Poisson log-normal model with specific parameterization tailored to the traffic demand problem, which captures the spatiotemporal correlations of the traffic demand across different routes and epochs, and automatically clusters the routes based on the demand correlations. The model is further estimated using an expectation-maximization algorithm and applied for predicting future demand counts at the subsequent epochs. The estimation and prediction procedures incorporate Markov chain Monte Carlo sampling to overcome the computational challenges. Simulations as well as a real application on a New York yellow taxi data are performed to demonstrate the applicability and effectiveness of the proposed method. Supplementary materials for this article are available online.

Bayesian Methods for Planning Accelerated Repeated Measures Degradation Tests P. 90-99

Brian P. Weaver & William Q. Meeker

Abstract

Accelerated repeated measures degradation tests are often used to assess product or component reliability when there would be few or even no failures during a traditional life test. Such tests are used to estimate the failure-time distributions of highly reliable items in applications where it is possible to take repeated measures of some appropriate degradation measure. When engineers have valid prior information about failure mechanisms, it is important that such information be used in inference and test planning. Bayesian methods provide a vehicle for doing this. This article describes methods for selecting a Bayesian repeated measures accelerated degradation test plan when the degradation and acceleration model is linear in the parameters. A Bayesian criterion based on estimation precision of the failure-time quantile at use conditions is selected for finding optimum test plans. We use a large-sample approximation for the posterior distribution to simplify the planning criterion. The general equivalence theorem is used to check for global optimality of the optimum test plan. We also discuss how to find a compromise test plan that satisfies practical constraints while still providing good statistical properties.

Nonparametric Bayesian Modeling and Estimation for Renewal Processes P. 100-115

Sai Xiao, Athanasios Kottas, Bruno Sansó & Hyotae Kim

Abstract

We propose a flexible approach to modeling for renewal processes. The model is built from a structured mixture of Erlang densities for the renewal process inter-arrival density. The Erlang mixture components have a common scale parameter, and the mixture weights are defined through an underlying distribution function modeled nonparametrically with a Dirichlet process (DP) prior. This model specification enables nonstandard shapes for the inter-arrival time density, including heavy tailed and multimodal densities. Moreover, the choice of the DP centering distribution controls clustering or declustering patterns for the point process, which can therefore be encouraged in the prior specification. Using the analytically available Laplace transforms of the relevant functions, we study the renewal function and the directly related K function, which can be used to infer about clustering or declustering patterns. From a computational point of view, the model structure is attractive as it enables efficient posterior simulation while properly accounting for the likelihood normalizing constant implied by the renewal process. A hierarchical extension of the model allows for the quantification of the impact of different levels of a factor. The modeling approach is illustrated with several synthetic datasets, earthquake occurrences data, and coal-mining disaster data.

Detection of latent heteroscedasticity and group-based regression effects in linear models via Bayesian model selection P. 116-126

Thomas A. Metzger & Christopher T. Franck

Abstract

Standard linear modeling approaches make potentially simplistic assumptions regarding the structure of categorical effects that may obfuscate more complex relationships governing data. For example, recent work focused on the two-way unreplicated layout has shown that hidden groupings among the levels of one categorical predictor frequently interact with the ungrouped factor. We extend the notion of a "latent grouping factor" to linear models in general. The proposed work allows researchers to determine whether an apparent grouping of the levels of a categorical predictor reveals a plausible hidden structure given the observed data. Specifically, we offer a Bayesian model selection-based approach to reveal latent group-based heteroscedasticity, regression effects, and/or interactions. Failure to account for such structures can produce misleading conclusions. Since the presence of latent group structures is frequently unknown *a priori* to the researcher, we use fractional Bayes factor methods and mixture g-priors to overcome lack of prior information.

A Simplified Formulation of Likelihood Ratio Confidence Intervals Using a Novel Property P. 127-135

Necip Doganaksoy

Abstract

This article describes a novel property of likelihood ratio (LR) confidence intervals which is subsequently used to formulate an alternative approach for their calculation. It is shown that LR confidence limits can be defined as the minimum and maximum values of a parameter (or a function of parameters) that satisfy a set value of the log-likelihood. The proposed formulation allows straightforward implementation in end-user computing settings and it is particularly useful for the computation of intervals on noninvertible functions of model parameters. The main goal of the article is to expose this little-known property of LR confidence limits to the practitioner and research communities. Two case studies based on applications in product quality and reliability improvement are used for illustration. The first case study deals with interval estimation of the difference between the means of two lognormal populations. The second application concerns interval estimation for misclassification probabilities attributable to measurement error. Supplementary materials for this article are available online.