

STOCHASTICS AND QUALITY CONTROL

EDITOR-IN-CHIEF

George P. Yanev, Edinburg

FOUNDING EDITOR

Elart von Collani

ASSOCIATE EDITORS

Justin R. Chimka, Fayetteville

Boyan Dimitrov, Flint

Miguel González, Badajoz

Olgierd Hryniewicz, Warszawa

Vladimir K. Kaishev, London

Magdi Moustafa, Cairo

S. P. Mukherjee, Calcutta

Ken Nishina, Nagoya

Abdur Rahim, Fredericton

Erwin Saniga, Newark

DE GRUYTER

STOCHASTICS AND QUALITY CONTROL is devoted to all fields related to reliability and quality control. It primarily publishes research articles, but survey articles on a topical area inside the scope are considered, too.

The journal pays special attention to the interdisciplinary character of the topic. Not only mathematicians, but also scientists, economists as well as scholars from other disciplines contribute papers. The methods and results published thus are of interest to various applications in real life.

Topics of Interest: Applied Stochastic Processes · Branching Processes: Theory and Applications · Reliability · Ordered Data Analysis · Statistical Methodology · Business Management · Economy and Finance

ISSN 2367-2390 · e-ISSN 2367-2404

All information regarding notes for contributors, subscriptions, Open access, back volumes and orders is available online at www.degruyter.com/eqc.

ABSTRACTED/INDEXED IN Baidu Scholar · Cabells Journalytics · CNKI Scholar (China National Knowledge Infrastructure) · CNPIEC: cnpLINKer · Dimensions · EBSCO (relevant databases) · EBSCO Discovery Service · EconBiz · EconLit · ERIH PLUS (European Reference Index for the Humanities and Social Sciences) · Genamics JournalSeek · Google Scholar · Japan Science and Technology Agency (JST) · J-Gate · JournalTOCs · KESLI-NDSL (Korean National Discovery for Science Leaders) · Mathematical Reviews (MathSciNet) · MyScienceWork · Naver Academic · Naviga (Softweco) · Primo Central (ExLibris) · ProQuest (relevant databases) · Publons · QOAM (Quality Open Access Market) · ReadCube · RePEc (Research Papers in Economics): IDEAS, EconPapers · Scilit · SCImago (SJR) · SCOPUS · Semantic Scholar · Sherpa/RoMEO · Summon (ProQuest) · TDNet · TEMA Technik und Management · Ulrich's Periodicals Directory/ulrichsweb · WanFang Data · WorldCat (OCLC) · X-MOL · Yewno Discover · zbMATH Open.

RESPONSIBLE EDITOR George P. Yanev, School of Mathematical and Statistical Sciences, The University of Texas Rio Grande Valley, 1201 West University Drive, Edinburg, Texas 78539-2999, USA
e-mail: george.yanev@utrgv.edu

PUBLISHER Walter de Gruyter GmbH, Berlin/Boston, Genthiner Straße 13, 10785 Berlin, Germany

JOURNAL COORDINATOR Natalia Bialka, e-mail: natalia.bialka@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS e-mail: anzeigen@degruyter.com

© 2023 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING WisSat Publishing + Consulting GmbH, Fürstenwalde

PRINTING Franz X. Stücker Druck und Verlag e.K., Ettenheim



Contents

Ali Khaleel Dhaiban

A Higher-Order Markov Model for a Hybrid Inventory System with Probabilistic Remanufacturing Demand — 47

Rallou A. Chatzimichail, Aristides T. Hatjimihail

Quality Control Using Convolutional Neural Networks Applied to Samples of Very Small Size — 63

José Jorge Muñoz, Manuel J. Campuzano, Verónica Deibe-Blanco

Design and Optimization of c -Control Chart Using a Triple Sampling Scheme — 79

Kuntal Bera, M. Z. Anis

Measuring One-Sided Process Capability Index for Autocorrelated Data in the Presence of Random Measurement Errors — 95

S. Vijayalakshmi, Nicy Sebastian, T. A. Sajesh

Enhancing Multivariate Control Charts for Individual Observations Using ROC Estimates — 109

Josh Hiller

Time to Absorption in Markov Chains as a Mixture Distribution of Hypo-Exponential Distributions — 119

