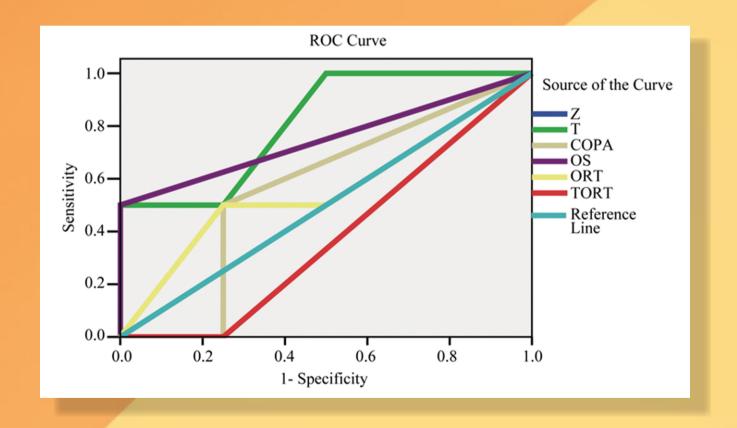
ISSN: 2161-718X Vol. 4, No. 7, August 2014



# Open Journal of Statistics

Special Issue on Robust Statistics





# **Journal Editorial Board**

ISSN 2161-718X (Print) ISSN 2161-7198 (Online) http://www.scirp.org/journal/ojs

#### Editor-in-Chief

Prof. Oihua Wang Chinese Academy of Sciences, China

#### **Editorial Board**

Prof. Ana M. Aguilera University of Granada, Spain Alexandria University, Egypt Prof. Essam K. Al-Hussaini

Prof. Erniel B. Barrios University of the Philippines, Philippines Lomonosov Moscow State University, Russia Prof. Alexander V. Bulinski

Prof. Junsoo Lee University of Alabama, USA

Prof. Tae-Hwy Lee University of California, Riverside, USA Dr. Qizhai Li Chinese Academy of Sciences, China Dr. Xuewen Lu University of Calgary, Canada

Prof. Claudio Morana University of Milano-Bicocca, Italy Prof. Thu Pham-Gia University of Moncton, Canada Prof. Gengsheng Qin Georgia State University, USA Prof. Kalyan Raman Northwestern University, USA Prof. Mohammad Z. Raqab University of Jordan, Jordan Dr. Jose Antonio Roldán-Nofuentes University of Granada, Spain

Prof. Sunil K. Sapra California State University, Los Angeles, USA

Prof. Siva Sivaganesan University of Cincinnati, USA

Dr. Zheng Su Genentech Inc., USA

Prof. Jianguo Sun University of Missouri, USA

Prof. Aida Toma Academy of Economic Studies, Romania Dr. Florin Vaida University of California, San Diego, USA

Dr. Haiyan Wang Kansas State University, USA Prof. Augustine Chi Mou Wong York University, Canada Dr. Peng Zeng Auburn University, USA

Dr. Hongmei Zhang University of South Carolina, Columbia, USA National University of Singapore, Singapore Dr. Jin-Ting Zhang

Prof. Yichuan Zhao Georgia State University, USA

Dr. Wang Zhou National University of Singapore, Singapore

#### **Guest Reviewers**

Subhadip Bandyopadhyay Anwar H. Joarder Abdelouahab Bibi Darsh Joshi Huaihou Chen Alexander de Leon Michael Davis Xinmin Li Jianjun Gan Nengxiang Ling Antony Gautier

Yu Miao

Serguei Pergamenchtchikov Raghu Nandan Sengupta Abderrahim Taamouti Nian-Sheng Tang



# **Table of Contents**

Volume 4	Number 7	August 2014
New Nonpara	metric Rank-Based Tests for Paired Data	
G. G. Shan		495
Predictions in	Quantile Regressions	
M. Furno		504
• •	Sparse Bayesian Generalized Linear Model to Gene Expression Data ion of Prostate Cancer Subtypes	
B. Madahian	, L. Y. Deng, R. Homayouni	518
	Measurement of the Duration of a Trendless Subsample mate Time Series	
R. R. McKitr	ick	527
Comparison o	f Outlier Techniques Based on Simulated Data	
A. C. Obikee	, G. U. Ebuh, H. O. Obiora-Ilouno	536

#### **Open Journal of Statistics (OJS)**

#### **Journal Information**

#### SUBSCRIPTIONS

The *Open Journal of Statistics* (Online at Scientific Research Publishing, <a href="www.SciRP.org">www.SciRP.org</a>) is published bimonthly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$69 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: <a href="mailto:sub@scirp.org">sub@scirp.org</a>

#### **SERVICES**

#### Advertisements

Advertisement Sales Department, E-mail: <a href="mailto:service@scirp.org">service@scirp.org</a>

#### Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

#### **COPYRIGHT**

#### COPYRIGHT AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:

Copyright © 2014 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY). http://creativecommons.org/licenses/by/4.0/

#### COPYRIGHT FOR INDIVIDUAL PAPERS OF THE JOURNAL:

Copyright  $\ensuremath{\mathbb{Q}}$  2014 by author(s) and Scientific Research Publishing Inc.

#### REUSE RIGHTS FOR INDIVIDUAL PAPERS:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

#### DISCLAIMER OF LIABILITY

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

#### PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: ojs@scirp.org



# Call for Papers

# **Open Journal of Statistics**

ISSN 2161-718X (Print) ISSN 2161-7198 (Online) http://www.scirp.org/journal/ojs

Open Journal of Statistics (OJS) is an international journal dedicated to the latest advancement of statistics. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of statistics.

#### Editor-in-Chief

Prof. Oihua Wang

Chinese Academy of Sciences, China

#### **Editorial Board**

Prof. Ana M. Aguilera Prof. Essam K. Al-Hussaini Prof. Erniel B. Barrios Prof. Alexander V. Bulinski Prof. Junsoo Lee Prof. Tae-Hwy Lee Dr. Oizhai Li Dr. Xuewen Lu Prof. Claudio Morana

Prof. Thu Pham-Gia Prof. Gengsheng Qin Prof. Kalvan Raman Prof. Mohammad Z. Ragab Dr. Jose Antonio Roldán-Nofuentes Prof. Sunil K. Sapra Prof. Siva Sivaganesan Dr. Zheng Su Prof. Jianguo Sun

Prof. Aida Toma Dr. Florin Vaida Dr. Haiyan Wang Prof. Augustine Chi Mou Wong Dr. Peng Zeng Dr. Hongmei Zhang Dr. Jin-Ting Zhang Prof. Yichuan Zhao Dr. Wang Zhou

#### **Subject Coverage**

This journal invites original research and review papers that address the following issues in statistics. Topics of interest include, but are not limited to:

- Actuarial science
- Applied information economics
- ◆ Asymptotic statistics
- Bayesian statistics
- Biostatistics
- Business statistics
- Causal inference
- Chemometrics
- Computational statistics
- Data mining
- Decision theory
- Demography
- Descriptive statistics
- Design of experiments

- Econometrics
- Energy statistics
- Engineering statistics
- Epidemiology
- Estimation theory
- Geographic information systems
- Graphic models and related theory
- ◆ High dimensional data analysis
- Image processing
- Multivariate analysis
- Non-parametric statistics
- Parametric statistics
- Psychological statistics
- Regression analysis

- Reliability
- Reliability engineering
- Sample survey
- ◆ Sampling theory
- Semiparametric statistics
- Social statistics
- Statistical analysis with complex data
- Statistical computing
- Statistical inference
- Statistical methods
- Survival analysis ◆ Theoretic methods
- Time series analysis

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the OJS.

### Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Email: ojs@scirp.org

#### Website and E-Mail

http://www.scirp.org/journal/ojs