

## [045]Bulletin of informatics and cybernetics

<https://hdl.handle.net/2324/1563525>

---

出版情報 : Bulletin of informatics and cybernetics. 45, 2013-12. Research Association of Statistical Sciences

バージョン :

権利関係 :

# BULLETIN *of* INFORMATICS AND CYBERNETICS

RESEARCH ASSOCIATION OF  
STATISTICAL SCIENCES

## *Contents*

|                                                                                                                                                                   | PAGE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>A Game-Theoretical Meaning of Unstable Stationary Points in the Replicator Dynamics of Asymmetric Two-Person Games</b> .....                                   | 1    |
| Jun-ichi TAKEISHITA                                                                                                                                               |      |
| <b>Improvement of Normal Approximation for Kernel Density Estimator</b> .....                                                                                     | 11   |
| Shota UMEMO and Yoshihiko MAESONO                                                                                                                                 |      |
| <b>Choosing the Number of Repetitions in the Multiple Plug-in Optimization Method for the Ridge Parameters in Multivariate Generalized Ridge Regression</b> ..... | 25   |
| Isamu NAGAI, Keisuke FUKUI and Hirokazu YANAGIHARA                                                                                                                |      |
| <b>A Mid-point Theorem for the <math>\cup</math> Type Shape of Functions</b> .....                                                                                | 37   |
| Arni S.R. Srinivasa RAO                                                                                                                                           |      |
| <b>An Alternative to the Satterswaite-Welch Degrees of Freedom and Its Computer Intensive Confidence Intervals</b> .....                                          | 45   |
| Takuto YAMASHITA and Takashi YANAGAWA                                                                                                                             |      |
| <b>The Erdős-Turán Law for Mixtures of Dirichlet Processes</b> .....                                                                                              | 59   |
| Hajime YAMATO                                                                                                                                                     |      |
| <b>Multi-Class Discriminant Function Based on Canonical Correlation in High Dimension Low Sample Size</b> .....                                                   | 67   |
| Mitsuru TAMATANI, Kanta NAITO and Inge KOCH                                                                                                                       |      |
| <b>Local Weak Consistency of Markov Chain Monte Carlo Methods with Application to Mixture Model</b> .....                                                         | 103  |
| Kengo KAMATANI                                                                                                                                                    |      |



# BULLETIN OF INFORMATICS AND CYBERNETICS

EDITOR-IN-CHIEF

YOSHIHIKO MAESONO

## EDITORIAL BOARD

|                   |                   |                  |
|-------------------|-------------------|------------------|
| Kazuo ANRAKU      | Setsuo ARIKAWA    | Sachio HIROKAWA  |
| Hideo HIROSE      | Seiichi IWAMOTO   | Yasuo KAWAHARA   |
| Hidefumi KAWASAKI | Genshiro KITAGAWA | Sadanori KONISHI |
| Masami KURANO     | Satoru MIYANO     | Mitsuhiro NAKAO  |
| Ryuei NISHII      | Toshio SAKATA     | Shingo SHIRAHATA |
| Masayuki TAKEDA   | Masayuki UCHIDA   | Michiko WATANABE |
| Takashi YANAGAWA  | Masami YASUDA     |                  |

## EDITORIAL ASSISTANTS

Shuichi INOKUCHI, Hiroki MASUDA

|                          |                  |                  |
|--------------------------|------------------|------------------|
| Founder and Past Editor: | Tosio KITAGAWA   |                  |
| Past Editors:            | Setsuo ARIKAWA   | Takashi YANAGAWA |
|                          | Sadanori KONISHI |                  |

---

## RESEARCH ASSOCIATION OF STATISTICAL SCIENCES

Faculty of Mathematics  
Kyushu University  
744 Motooka, Nishi-Ku  
Fukuoka 819-0395  
Japan  
email : bic@math.kyushu-u.ac.jp

## RESEARCH ASSOCIATION OF STATISTICAL SCIENCES

Research Association of Statistical Sciences has been established in February 1941 by Professor Tosio Kitagawa (1909.10.3–1993.3.13), collaborated with about one hundred mathematical and statistical scientists in Japan. Its general objects were to promote and to extend mathematical and statistical methods for studying phenomena in social and natural sciences. The Association launched the *Bulletin of Mathematical Statistics*, the first international journal of statistics published in Japan, in 1941, and has published 19 volumes of the *Bulletin* during the period of 1941 and 1981. Main topics discussed in the earlier papers were sample survey, sampling inspection, design of experiments and statistical quality control, and those topics were extended to modern statistical inference, control theory, mathematical programming, cybernetics, data analysis, and informatics in later period. The importance was emerged of strengthening its activities in Information Science and Computer Science, and the Association changed the name of the *Bulletin* to the *Bulletin of Informatics and Cybernetics* in 1982(Vol. 20, No. 1 ~ 2). Now the *Bulletin* published papers covering the wide range of topics in Information Science, Statistical Science, and Computer Science. Original papers, and authoritative expository or review articles, will be accepted for publication in the *Bulletin of Informatics and Cybernetics* if judged consistent with the general objects via refereeing process.

## INFORMATION FOR CONTRIBUTORS

1. Manuscripts (pdf file) should be sent to the Editor-in-Chief  
Yoshihiko Maesono  
Faculty of Mathematics  
Kyushu University  
744 Motooka, Nishi-Ku  
Fukuoka 819-0395  
Japan.  
E-mail: [maesono@math.kyushu-u.ac.jp](mailto:maesono@math.kyushu-u.ac.jp)
2. All papers are refereed.
3. Manuscripts should be submitted in English. It is understood that their contents are unpublished and are not being submitted for publication elsewhere.
4. When accepted for the publication the final manuscripts should be written in L<sup>A</sup>T<sub>E</sub>X using BIC style class file, which can be obtained from internet. Files are available from <http://bic.math.kyushu-u.ac.jp/>
5. Figures and tables should be printable together with the L<sup>A</sup>T<sub>E</sub>X text as a L<sup>A</sup>T<sub>E</sub>X output.
6. Authors should always keep a fully up-to-date version of the L<sup>A</sup>T<sub>E</sub>X text.
7. Page proofs will be sent to authors. No new material may be inserted in the text at the time of proofreading, except where advance permission has been obtained for the Editor.
8. The author is requested to pay for 100 copies of the reprint as page charges.