

# 24th International Workshop on Matrices and Statistics, IWMS-2015 25–28 May 2015, Haikou City, Hainan Island, China Hainan Normal University



Photo 1: Professor Kai-Tai Fang.

The purpose of this ILAS-endorsed Workshop is to stimulate research and, in an informal setting, to foster the interaction of researchers in the interface between statistics and matrix theory. The Workshop will provide a forum through which statisticians may be better informed of the latest developments and newest techniques in linear algebra and matrix theory and may exchange ideas with researchers from a wide variety of countries

The Workshop will comprise

- (a) Plenary Talks (40 min, 8 speakers),
- (b) Invited Minisymposia (30 min/talk, 11 MS, 56 speakers),
- (c) Contributed Talks (20 min, 25 speakers) and
- (d) Special Sessions (30 min/talk, 8 speakers) honoring the 75th Birthday of Professor Kai-Tai Fang (BNU-HKBU United International College, Zhuhai, China) and the 70th Birthday of Simo Puntanen (U of Tampere, Finland).

#### Contacts

IOC Chair: Jeffrey J. Hunter, jeffrey.hunter@aut.ac.nz Local OC Chair: Chuanzhong Chen, ccz0082@aliyun.com, see also website.

**Websites:** IWMS-2015, Venue/Hainan Normal University, Haikou City, Hainan Island, IWMS.

#### ↑ The Workshop Sessions: from Monday 8:30 till Thursday 12:30.

# PLENARY SPEAKERS [tentative day time venue]

- Ravindra B. Bapat (Indian Statistical Institute, New Delhi, India) Moore—Penrose inverse of a Euclidean distance matrix
- Chris Gotwalt, SAS Lecturer (SAS Institute Inc, Cary, NC, USA)
   Firth estimation in the mixed model: a new derivation of REML and improved estimates and inferences using logistic models with random effects
- Karl Gustafson, ILAS Lecturer (U of Colorado, Boulder, CO, USA) Antieigenvalue analysis, new applications: Continuum Mechanics, Economics, Number Theory
- Yoshio Takane (U of Victoria, BC, Canada) Professor Haruo Yanai and multivariate analysis
- Zhi Geng (Peking U, China)
  Causal effects and causal networks

[tentative day time venue]

[Mon 09:00-09:40 A]

[Mon 14:30–15:10 A]

[Tue 08:50-09:30 A]

[Tue 09:30-10:10 A]

[Tue 14:30-15:10 A]

 $\bullet$  Lynn Roy LaMotte (Louisiana State U, New Orleans, LA, USA)

[Wed 08:30-09:10 A]

Multivariate inverse prediction with mixed models

• Mu-Fa Chen (Beijing Normal U, China)

Unified speed estimation of various stabilities

• Peter Semrl (U of Ljubljana, Slovenia)

Adjacency and coherency preservers

[Wed 14:30-15:10 A]

[Thu 08:30-09:10 A]

## Monday, 25 May 2015

## **Opening Session**

[Mon 08:30-09:00 A]

 $08:30\hbox{--}09:00\ {\rm Opening\ remarks}$ 

Followed by Group Photo

PS1. Ravindra B. Bapat (Indian Statistical Institute, New Delhi, India)
Moore-Penrose inverse of a Euclidean distance matrix

[Mon 09:00-09:40 A]

• Chair: Jeffrey J. Hunter

#### SS1. Invited Special Session Honoring Kai-Tai Fang's 75th Birthday

[Mon 09:40-12:30 A]

• Organizer and Chair: Jianxin Pan

09:40-10:10 Jianxin PAN (U of Manchester, UK)

Career synopsis of Professor Kai-Tai Fang

10:10-10:30 Tea Break

10:30-11:00 Runze LI (Penn State U, University Park, PA, USA)

Joint likelihood estimation for joint modeling survival and multiple longitudinal processes

11:00–11:30 Min-Qian Liu (Nankai U, Tianjin City, China)

Professor Kai-Tai Fang's contributions to Uniform Designs

11:30-12:00 Dietrich von Rosen (Swedish U of Agriculture, Uppsala, and Linköping U, Sweden)

Partial least squares and multivariate linear models

12:00-12:30 Jianxin Pan (U of Manchester, UK)

Regularization of covariance structures

## 12:30-14:30 Lunch

PS2. Chris Gotwalt, SAS Lecturer (SAS Institute Inc, Cary, NC, USA)
Firth estimation in the mixed model: a new derivation of REML and

[Mon 14:30–15:10 A]

improved estimates and inferences using logistic models with random effects

• Chair: Jeffrey J. Hunter

#### MS5. Statistical Modeling and Computation

[Mon 15:10-18:30 A]

• Organizer: Tsung-I Lin, Chairs: Tsung-I Lin 15:10–16:10; Wan-Lun Wang 16:30–18:30 15:10–15:40 Wan-Lun Wang (Feng Chia U, Taichung, Taiwan)

Mixtures of common factor analyzers for high-dimensional data with missing values

15:40–16:10 Jyrki MÖTTÖNEN (U of Helsinki, Finland)

Robust adaptive multivariate LAD-lasso

#### 16:10-16:30 Tea Break

16:30-17:00 Liucang Wu (Kunming U of Science and Technology, Kunming, China)

A skew-normal mixture of joint location, scale and skewness models

17:00–17:30 Jianhua Zhao (Yunnan U of Finance and Economics, Kunming, China)

Efficient model selection for mixtures of probabilistic PCA via hierarchical BIC

17:30–18:00 Zhengyuan Zhu (Iowa State U, Ames, IA, USA)

Modeling nonstationary processes on sphere using kernel convolution

18:00–18:30 Tsung-I Lin (National Chung Hsing U, Taichung, Taiwan)

Mixture of skew-normal factor analysis models

## MS2. Statistical Simulation

[Mon 16:30-18:30 B]

• Organizer and Chair: Kai-Tai Fang

16:30-17:00 Ping HE (BNU-HKBU United International College, Zhuhai, China)

Principle points and its application in simulation for univariate asymmetric distribution

17:00-17:30 Jiajian JIANG (BNU-HKBU United International College, Zhuhai, China)

An extraordinary property of the arcsine distribution

17:30–18:00 Min Zhou (Hong Kong Baptist U, Hong Kong)

Representative points of univariate distribution in statistical simulation

18:00–18:30 Yong-Dao Zhou (Sichuan U, Chengdu, China)

Randomized likelihood sampling

## Tuesday, 26 May 2015

PS3. Karl Gustafson, ILAS Lecturer (U of Colorado, Boulder, CO, USA)

[Tue 08:50-09:30 A]

Antieigenvalue analysis, new applications: Continuum Mechanics,

Economics, Number Theory

PS4. Yoshio Takane (U of Victoria, BC, Canada)

[Tue 09:30–10:10 A]

Professor Haruo Yanai and multivariate analysis

• Chair: Hans Joachim Werner

#### SS2. Invited Special Session Honoring Simo Puntanen's 70th Birthday

[Tue 10:30-12:30 A]

• Organizer and Chair: Julia Volaufova

10:30-11:00 Simo Puntanen (U of Tampere, Finland)

Where have all those 70 years gone?

11:00–11:30 Stephen J. HASLETT (Massey U, Palmerston North, New Zealand)

Positive semidefiniteness of estimated covariance matrices in linear models for sample survey data

11:30–12:00 Kimmo Vehkalahti (U of Helsinki, Finland)

From Helsinki to Haikou via Istanbul and Nokia

12:00–12:30 Ka Lok Chu (Dawson College, Westmount, QC, Canada)

An indexed illustrated bibliography for Simo Puntanen in celebration of his 70th birthday

#### 12:30-14:30 Lunch

PS5. Zhi Geng (Peking U, China)

[Tue 14:30-15:10 A]

Causal effects and causal networks

• Chair: Mu-Fa Chen

#### MS1. Model Selection and Post Estimation

[Tue 15:10–18:30 A]

• Organizer and Chair: S. Ejaz Ahmed

15:10–15:40 S. Ejaz Ahmed (Brock U, St. Catharines, ON, Canada)

Model selection and post estimation: making sense or folly?

15:40–16:10 Michael J. Daniels (U of Texas at Austin, TX, USA)

Semiparametric approach to simultaneous covariance estimation for bivariate sparse longitudinal data  $\,$ 

#### 16:10-16:30 Tea Break

16:30–17:00 Xiaoli GAO (U of North Carolina, Greensboro, NC, USA)

Penalized adaptive weighted least square regression

17:00–17:30 Xuewen Lu (U of Calgary, AB, Canada)

Partially linear single-index proportional hazards model with current status data

17:30–18:00 Peter X. K. Song (U of Michigan, Ann Arbor, MI, USA)

Sparse multivariate factor analysis regression model

18:00–18:30 Yuan Wu (Duke U, Durham, NC, USA)

The analysis of spontaneous abortion with left truncation, partly interval censoring and cure rate

#### MS7. Design and Analysis of Experiments

[Tue 15:10-17:00 B]

• Organizer: Augustyn Markiewicz, Chair: Lynn Roy LaMotte

15:10–15:40 Chengcheng HAO (Shanghai Jiao Tong U, China)

Infuence diagnostics diagnostics in linear system control with open-loop experimental data

15:40–16:10 Timothy E. O'BRIEN (Loyola U Chicago, IL, USA)

Efficient experimental design strategies in toxicology and bioassay

#### 16:10–16:30 Tea Break

 $16:\!30\text{--}17:\!00\,$  Min Wang (Michigan Technological U, Houghton, MI, USA)

Bayes factors for hypothesis testing in ANOVA designs

#### MS3. Magic Matrices

[Tue 16:30-18:30 C]

• Organizers: Kai-Tai Fang & George P. H. Styan, Chair: Ka Lok Chu

16:30-17:00 Kai-Tai FANG (BNU-HKBU United International College, Zhuhai, China)

Classification of magic squares of order 4

17:00–17:30 Ziqi Lin (BNU-HKBU United International College, Zhuhai, China)

Some results on classification of magic squares of order 5

17:30–18:00 Ka Lok Chu (Dawson College, Westmount, QC, Canada)

An illustrated philatelic introduction to doubly-classic  $6\times 6$  bordered magic matrices and to  $4\times 4$  Plato-like magic talismans

18:00–18:30 Ka Lok Chu (Dawson College, Westmount, QC, Canada)

Magic squares and postage stamps

## Wednesday, 27 May 2015

PS6. Lynn Roy LAMOTTE (Louisiana State U, New Orleans, LA, USA)
Multivariate inverse prediction with mixed models

[Wed 08:30-09:10 A]

• Chair: Chris Gotwalt

## MS8. Linear and Mixed Models

[Wed 09:10-12:30 A]

• Organizers: Simo Puntanen (Chair 09:10-10:10) & Julia Volaufova (Chair 10:30-12:30)

09:10-09:40 Julia Volaufova (Louisiana State U, New Orleans, LA, USA)

More on criteria for variable selection in fixed effects linear models

09:40–10:10 Shuangzhe Liu (U of Canberra, Australia)

Sensitivity analysis in linear models

### 10:10-10:30 Tea Break

10:30–11:00 Yongge TIAN (Central U of Finance and Economics, Beijing, China)

A unified approach in BLUPs under linear mixed-effects model

11:00–11:30 Martin Singull (Linköping U, Sweden)

Testing sphericity and intraclass covariance structures under a growth curve model in high dimension

11:30–12:00 Kyle Snow (The Ohio State U, and Topcon Positioning Systems, Inc., Columbus, OH, USA) On bias reduction for the total least-squares estimate of a conic section within an EIV-model

12:00–12:30 Eva Fišerová (Palacký U, Olomouc, Czech Republic)

Conics fitting by least squares

#### MS6. Matrices with Economic and Financial Applications—Session 1

[Wed 10:30-12:30 B]

• Organizer and Chair: Shuangzhe Liu

10:30-11:00 Kazuhiko Kakamu (Kobe U, Japan)

Direct and indirect effects on road productivity in Japan

11:00–11:30 Shiqing LING (Hong Kong U of Science and Technology, Hong Kong)

Adaptive Lasso-based model selection of autoregressive models

11:30–12:00 Zhigang YAO (National U of Singapore)

Partial correlation screening for estimating large precision matrices, with applications to classification

12:00–12:30 Fukang Zhu (Jilin U, Changchun, China)

Influence diagnostics in log-linear integer-valued GARCH models

#### CS1. Contributory Session 1

• Chair: Peter Semrl

09:10-09:30 Bernd F. HEIDERGOTT (Vrije U, Amsterdam, The Netherlands)

Efficient algorithm for computing the ergodic projector of Markov multi-chains

09:30-09:50 Yulei PANG (Southern Connecticut State U, New Haven, CT, USA)

Linear switching systems as a model of the cards shuffle

09:50–10:10 Xiaoming Liu (The U of Western Ontario, London, ON, Canada)

Markov aging, physiological age and phase-type law of mortality

#### CS2. Contributory Session 2

[Wed 10:30-12:30 C]

[Wed 09:10-10:10 C]

• Chair: Zhi Geng

10:30-10:50 Ni Li (Hainan Normal U, Haikou, China)

The statistical analysis of recurrent event process with adjusting for confounding effects of dependent observation process

10:50-11:10 Guangbao Guo (Shandong U, Jinan, China)

Parallel statistical computing for dynamic generalized linear models

11:10–11:30 Kangrui WANG (U of Leicester, UK)

Bayesian covariance modelling of big tensor-variate data sets & inverse

non-parametric learning of the unknown model parameter vector

11:30–11:50 Jianhua Hu (Shanghai U of Finance and Economics, Shanghai, China)

On the James-Stein estimator for the multivariate linear regression model

11:50–12:10 Silvie Belaskova (Tomas Bata U in Zlin & Palacky U in Olomouc, Czech Republic)

Evaluation of asymptotic regression parameters tests for the proportional hazards model with delayed entries

12:10-12:30 Guanyu Hu (Florida State U, Tallahassee, FL, USA)

Comparison of facial recognition methods based on extension methods of Principal Component Analysis

#### 12:30-14:30 Lunch

# ■ PS7. Mu-Fa Chen (Beijing Normal U, China) Unified speed estimation of various stabilities

[Wed 14:30–15:10 A]

• Chair: Jeffrey J. Hunter

#### MS4. Matrices in Applied Probability

[Wed 15:10-18:00 A]

• Organizer and Chair: Jeffrey J. Hunter

15:10-15:40 Yongjiang Guo (Beijing U of Posts and Telecommunications, China)

Functional law of iterated logarithm for single server queue

15:40–16:10 Iddo Ben-Ari (U of Connecticut, Storrs, CT, USA)

Efficient coupling for a random-walk like process

#### 16:10–16:30 Tea Break

16:30-17:00 Quan-Lin LI (Yanshan U, Qinhuangdao, China)

Nonlinear Markov processes in big networks

17:00–17:30 Bernd F. Heidergott (Vrije U, Amsterdam, The Netherlands)

A critical account of perturbation analysis of Markov chains

17:30–18:00 Jeffrey J. Hunter (Auckland U of Technology, New Zealand)

The accurate computation of the key properties of Markov chains and Markov renewal processes

#### MS9. Matrices Useful for Modelling Multi-level Models

[Wed 15:10-18:00 B]

• Organizer and Chair: Dietrich von Rosen

15:10–15:40 Tõnu Kollo (U of Tartu, Estonia)

Testing structure of the dispersion matrix

15:40–16:10 Tapio Nummi (U of Tampere, Finland)

A semiparametric model for trajectory analysis with an application to height of Finnish children 16:10-16:30 Tea Break

16:30-17:00 Anuradha Roy (U of Texas at San Antonio, TX, USA)

Score test for a separable covariance structure with the frst component as AR(1)

correlation matrix and its performance comparison with the likelihood ratio test

17:00–17:30 Imbi Traat (U of Tartu, Estonia)

To balance or not to balance

17:30–18:00 Tatjana von Rosen (U of Stockholm, Sweden)

Block circular matrices in multivariate normal models

## CS3. Contributory Session 3

[Wed 15:10-16:10 C]

• Chair: Yoshio Takane

15:10–15:30 Volha Kushel (Shanghai Jiao Tong U, Shanghai, China)

On matrix D-stability and related properties

15:30–15:50 Jibo Wu (Chongqing U of Arts and Science, China)

Comparison of unbiased estimators using Pitman's measure of closeness

15:50–16:10 Awopeju K. Abidemi (Nnamdi Azikiwe U, Awka, Nigeria)

Power of W/S test of normality against non-normal distribution

## CS4. Contributory Session 4

[Wed 16:30-17:50 C]

• Chair: Karl Gustafson

16:30–16:50 Badredine Issaadi (U M'hamed Bougara of Boumerdes, Algeria)

Strong stability bounds for queues

16:50–17:10 Angela Chukwu (U of Ibadan, Nigeria)

The log-generalized Beta-Weibull regression model with application to lifetime data

17:10–17:30 Awopeju K. ABIDEMI (Nnamdi Azikiwe U, Awka, Nigeria)

Comparative analysis of West Africa economy

17:30–17:50 Anthony Akpanta (Abia State U, Uturu, Nigeria)

Multivariate analysis of the level of use of modern methods of family planning

between Northern and Southern part of Nigeria

## Thursday, 28 May 2015

PS8. Peter Semrl (U of Ljubljana, Slovenia)
Adjacency and coherency preservers

[Thu 08:30-09:10 A]

• Chair: Ravindra B. Bapat

#### MS10. Teaching Matrices within Statistics

[Thu 09:10-12:30 A]

• Organizer and Chair: Kimmo Vehkalahti

09:10–09:40 Kimmo Vehkalahti (U of Helsinki, Finland)

Teaching matrices within statistics

09:40–10:10 Reijo Sund (U of Helsinki, Finland)

Applications of matrix decompositions in Survo R

10:10-10:30 Tea Break

10:30–11:00 Maria Valaste (U of Helsinki, Finland)

Adjustment for covariate measurement errors in complex surveys

11:00–11:30 Jari Lipsanen (U of Helsinki, Finland)

Comparison and diagnostics of various latent variable models in social sciences

11:30–12:00 Markus Mattsson (U of Helsinki, Finland)

Network analysis of questionnaire data

12:00–12:30 Mika MATTILA (Tampere U of Technology, Finland)

Studying the different properties of MIN and MAX matrices: a student-friendly approach

#### MS6. Matrices with Economic and Financial Applications—Session 2

[Thu 09:10-10:10 B]

• Organizer and Chair: Shuangzhe Liu

09:10–09:40 Nobuaki Hoshino (Kanazawa U, Japan)

Applying the quasi-multinomial distribution

09:40-10:10 Ong Seng Huat (U of Malaya, Kuala Lumpur, Malaysia)

A family of mixed INAR(1) time series model with applications

#### MS11. G-Inverses, Linear Models and Multivariate Analysis

[Thu 10:30-12:30 B]

• Organizer and Chair: Hans Joachim Werner

10:30–11:00 Hans Joachim Werner (U of Bonn, Germany)

On an IPM-type method for determining predictions and estimated prediction error dispersions

11:00–11:30 Esra Akdeniz-Duran (Istanbul Medeniyet U, Turkey)

Generalized difference-based weighted mixed almost unbiased Liu estimator in partially linear models

11:30-12:00 Xiaomi Hu (Wichita State U, Wichita, KS, USA)

Generalized inverses and matrix space

12:00–12:30 Eric Im (U of Hawai'i at Hilo, HI, USA)

Leontief's input-output representation of least squares estimators of simple and multiple regression coefficients

## CS5. Contributory Session: Stochastic Analysis and Related Areas

[Thu 09:10-12:30 C]

• Chair: Chuanzhong Chen

09:10-09:30 Weiyan Yu (Hainan Normal U, Haikou, China)

Nonlinear maps preserving Lie products on triangular algebras

09:30–09:50 Li Ma (Hainan Normal U, Haikou, China)

Some new results on Fukushima's decomposition and stochastic calculus

09:50-10:10 Xinfang Han (Hainan Normal U, Haikou, China)

On h-transformation of positivity preserving semigroups and their associated Markov processes

10:10-10:30 Tea Break

10:30–10:50 Songbai Guo (Hainan Normal U, Haikou, China)

On the monotonicity and boundedness of the remainder of Stirling's formula

10:50–11:10 Xingqiang XIU (Hainan Normal U, Haikou, China)

Groebner basis techniques for finiteness checking of finitely presented groups

11:10–11:30 Jingshi Xu (Hainan Normal U, Haikou, China)

Decompositions of Herz-Morrey-Hardy spaces with variable exponents and their application

11:30–11:50 Shiyou Lin (Hainan Normal U, Haikou, China)

Gevrey regularity for the non-cutoff nonlinear homogeneous Boltzmann equation with strong singularity

11:50–12:10 Saisai Yang (Hainan Normal U, Haikou, China)

Girsanov transformations for non-symmetric Markov processes

12:10-12:30 Xiaofen Huang (Hainan Normal U, Haikou, China)

The fully entangled fraction of quantum states

12:30-14:30 Lunch

**Lunches:** 12:30–14:30, **Tea Breaks:** 10:10–10:30, 16:10–16:30.

Registration place on Sunday, 24 May: Mingguang International Grand Hotel.

#### **Organising Committees**

- The Local Organizing Committee Chair: Chuanzhong Chen (Hainan Normal U, Haikou, China). Vice-Chair: Li Wang (Hainan Normal U, Haikou, China).
- The Scientific Organizing Committee comprises Jeffrey J. Hunter (Chair), Chuanzhong Chen, S. Ejaz Ahmed, Kai-Tai Fang, Shuangzhe Liu, Yonghui Liu, Tsung-I Lin, Augustyn Markiewicz, Jianxin Pan, Simo Puntanen (Vice-Chair), George P. H. Styan, Kimmo Vehkalahti, Julia Volaufova, Dietrich von Rosen and Hans Joachim Werner.
- International Organizing Committee: Jeffrey J. Hunter (Chair), S. Ejaz Ahmed, Augustyn Markiewicz, Simo Puntanen (Vice-Chair), George P. H. Styan (Honorary Chair), Götz Trenkler, Julia Volaufova, Dietrich von Rosen and Hans Joachim Werner.

Contacts: IOC Chair: Jeffrey J. Hunter, jeffrey.hunter@aut.ac.nz Local OC Chair: Chuanzhong Chen, ccz0082@aliyun.com. see also website.

For more info: IWMS-2015 website, IWMS general website.

Workshop venue: Hainan Normal University, #99 Longkunnan Road, Haikou 571158, about one km from the Mingguang International Grand Hotel.

Websites: Haikou City, Transportation, More Transportation, Hainan Island, Hainan: Chill-out China.

Visa applications: If you need an invitation letter or hotel confirmation etc please contact Local OC Chair: Chuanzhong Chen, ccz0082@aliyun.com

**Accommodation:** http://iwms2015.csp.escience.cn/dct/page/65559 http://iwms2015.csp.escience.cn/dct/page/70014

- (1) Mingguang International Grand Hotel (five-star hotel), http://www.mingguanghotel.com.cn
- (2) Huasheng Hotel.

The Local Organizing Committee will be booking the Hotel for all the participants in IWMS-2015. You do not need to book the hotel yourself. For questions contact Li Wang wlyoume@163.com.

**Two-day excursion:** http://iwms2015.csp.escience.cn/dct/page/65585 http://iwms2015.csp.escience.cn/dct/page/70018

Two-day excursion to Sanya starts at 8:00 on Friday morning, 29 May, from Mingguang International Grand Hotel. The scheduled tourism destination is well known for its excellent tropical beach. Lunch in Qionghai and overnight stay in Nanshan Leisure Villas. The excursion ends on Saturday after the lunch in Nanshan Leisure Villas and participants may leave by taking flight at Sanya Airport, or return to Haikou by the arranged bus and then take a flight at Haikou Airport. [Preliminary booking for the excursion has been necessary.]

## • IWMS-2015 Souvenir Booklet: submission deadline 24 April 2015

The International Organizing Committee intends to publish a Pre-Workshop Proceedings, either on printed or electronic form, for distribution at the Workshop. This is in addition to the Abstract Booklet.

Participants of the Workshop are invited to submit a paper or an extended abstract on their intended presentation, of between 4 to 10 pages in length. There is no compulsion to make a submission for the *Souvenir Booklet*. The papers in the *Souvenir Booklet* will be reproduced exactly as received from the authors. The presentations are presumed to be essentially that which will be given in the Workshop. Although the papers will scrutinized prior to publication, the papers will not be formally refereed and no claim is made by the editors or the publisher as to the originality or accuracy of the contents.

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A recommended citation of articles in this publication is of the form:

Hunter, J. J. (2015). The accurate computation of the key properties of Markov chains and Markov renewal processes. In: Souvenir Booklet of the 24th International Workshop on Matrices and Statistics, (25–28 May 2015), Haikou City, Hainan, China. Pages xx-yy. Ed. Jeffrey J. Hunter.

Authors are requested to send their submissions, by 24 April 2015 to the Editor, Chair of the IOC, Jeffrey J. Hunter, jeffrey.hunter@aut.ac.nz. The LATEX templates are available by request from Yong-Dao Zhou, ydzhou@scu.edu.cn. For any questions about the templates, please contact Yong-Dao Zhou.

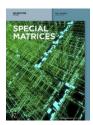
#### • Special Issue in Special Matrices: submission deadline 1 August 2015

The journal *Special Matrices* will publish a Special Issue dedicated to the IWMS-2015. The Editor of the Journal is Carlos Martins da Fonseca and he is assisted with an Editorial Advisory Board. (Print the Flyer.)

The papers will go through a regular refereeing process. The processing of the papers for this special issue will be handled by the Guest Editorial Committee consisting Jeffrey J. Hunter, Simo Puntanen and Dietrich van Rosen.

Before submission authors should carefully read the instructions, which are located at Instructions for Authors. All submissions must be made electronically at http://www.editorialmanager.com/spma and will undergo the standard single-blind peer review system. When entering your submission choose the option *Topical Issue on "Proceedings of the 24th International Workshop on Matrices and Statistics"*.

Flyers: Special Matrices. Special Issue for IWMS-2015 in Special Matrices.



The support of International Linear Algebra Society (ILAS) and the SAS Institute Inc. is gratefully acknowledged.







#### Miscellaneous information

- Shayle R. Searle: Pioneer in Linear Modelling. Article by Jeffrey J. Hunter (2015), in *Australian & New Zealand Journal of Statistics*, based on the Memorial Session in IWMS-2013, Toronto.
- A short history of the International Workshop on Matrices and Statistics (IWMS)
- Videos from the conferences in statistics in Tampere in 1987 and 1990/IWMS-1, prepared by Jarmo Niemelä and Reijo Sund.