

The 25th International Workshop on Matrices and Statistics (IWMS-2016) Funchal, Madeira, Portugal, June 6–9, 2016

Report by Francisco Carvalho, Simo Puntanen, and George P. H. Styan

The 25th International Workshop on Matrices and Statistics (IWMS-2016) was held in the city of Funchal on the beautiful Madeira Island, the Pearl of the Atlantic, on 6–9 June 2016.

The purpose of this workshop was to bring together researchers sharing an interest in a variety of aspects of statistics and its applications as well as matrix analysis and its applications to statistics, and to offer them an opportunity to discuss current developments in these subjects. The workshop would bridge the gap among statisticians, computer scientists and mathematicians in understanding each other's tools.

The Local Organizing Committee was chaired by Francisco Carvalho (Tomar, Portugal), with help from Katarzyna Filipiak (Poznań, Poland), Ana Maria Abreu (Madeira, Portugal), and Daniel Klein (Košice, Slovakia).

The International Organizing Committee for the Madeira Workshop comprised Simo Puntanen (Tampere, Finland) – Chair, George P. H. Styan (Montréal, Québec, Canada) – Honorary Chair, Júlia Volaufová (New Orleans, Louisiana, USA) – Vice-Chair, S. Ejaz Ahmed (St. Catharines, Ontario, Canada), Katarzyna Filipiak (Poznań, Poland), Jeffrey J. Hunter (Auckland, New Zealand), Augustyn Markiewicz (Poznań, Poland), Dietrich von Rosen (Uppsala, Sweden), and Hans Joachim Werner (Bonn, Germany).

IWMS-2016 was organized by Instituto Politécnico de Tomar and Universidade da Madeira, and was supported by: CMA - Centro de Matemática e Aplicações (FCT, UNL), CIMA - Centro de Investigação em Matemática e Aplicações (UE), PSE - Produtos e Serviços de Estatística, INE - Instituto Nacional de Estatística, FLAD - Fundação Luso-Americana para o Desenvolvimento, Delta Cafés, and the Associação de Promoção da Madeira.

The invited speakers were Alan Agresti (Gainesville, Florida, USA): “Some perspectives about generalized linear modelling”, Rosemary A. Bailey (St. Andrews, Scotland, UK): “Association schemes in designed experiments”, Radosław Kala (Poznań, Poland): “A new look at combining information from stratum submodels”, Alexander Kovačec (Coimbra, Portugal): “The 123 Theorem of probability theory and copositive matrices”, and Jianxin Pan (Manchester, England, UK): “Joint mean-covariance modelling and its R package: jmcm”.



Jeffrey J. Hunter



Britannia with Stephen Hawking leaving Funchal

A *Special Session to Celebrate Jeffrey J. Hunter's 75th Birthday* was organized and chaired by Peter G. Taylor (Melbourne, Australia), with additional speakers: Stephen Kirkland (Winnipeg, Manitoba, Canada), Tuğrul Dayar (Ankara, Turkey), and Guy Latouche (Brussels, Belgium). Jeff himself gave a presentation entitled “A fifty-year journey with colleagues, generalized matrix inverses and applied probability”.

One day after the Workshop, George and Simo (accompanied by Evelyn and Soile) were relaxing in the Design Centre Nini Andrade Silva Restaurant in Funchal and enjoying the harbour view. While admiring the fabulous family-friendly cruise ship *Britannia* of P & O Cruises leaving the harbour majestically, they were told by a couple of ship-spotters that one of the passengers on the ship was Stephen Hawking. How about that! He had been in Funchal on a previous day when we were completing our Workshop. We wish he could have attended our Workshop!

Hans Joachim Werner organized a *Memorial Session for Ingram Olkin (1922–2016)*, with additional speakers: Jeffrey J. Hunter, Simo Puntanen, and George P. H. Styan. The Session ended with an interesting video by Michael Greenacre (Barcelona, Spain).

The Madeira Magic Minisymposium on “Magic Squares, Prime Numbers and Postage Stamps” (organized by Ka Lok Chu and George P. H. Styan) was held in Blandy's Wine Lodge, Avenida Arriaga 28, in Funchal, 6 June 2016, and

featured:

- [1] Se-tenant philatelic Machin-definitive blocks with selected total face-values, with special emphasis on the Royal Mail “Stamps for Cooks” Prestige Booklet *by* Nathan Hin Shun Chu, Ka Lok Chu, and George P. H. Styan.
- [2] Some comments on two sensational pandiagonal magic squares and on two philatelic magic-carpet dinner-placemats, *by* George P. H. Styan, Walter Trump, and Ka Lok Chu.
- [3] Some comments on Sophie Germain prime numbers, *by* George P. H. Styan, and Ka Lok Chu.
- [4] Some comments on Margaret Kepner’s 2010 “Magic Square 25 Study” *by* Reijo Sund, Ka Lok Chu, and George P. H. Styan.

Several other Invited Special Sessions and Mini-symposia were arranged: (1) Estimation and Testing in Linear Models (organized by Roman Zmysłony), (2) Methods for Modelling Correlated and Complex Data (organized by Jianxin Pan), (3) Multivariate Linear Models (organized by Katarzyna Filipiak), and (4) Probability and Matrix Inequalities (organized by Alexander Kovačec).

The IWMS-2016 *Book of Abstracts* ([http://www.iwms.ipt.pt/download/book%2009Jun2016%20\(v04\).pdf](http://www.iwms.ipt.pt/download/book%2009Jun2016%20(v04).pdf)), edited by Daniel Klein and Francisco Carvalho, includes not only the abstracts of the talks and the program, but also

“Ingram Olkin (1924–2016)—Some personal memories” by Simo Puntanen and George P. H. Styan, available at <http://people.uta.fi/~simo.puntanen/Obituary-of-Olkin-by-Puntanen-and-Styan-Madeira.pdf>, and

“Many happy returns, Jeffrey Joseph Hunter! Personal Glimpses for your 75th Birthday” by Simo Puntanen, available at <http://people.uta.fi/~simo.puntanen/Many-Happy>Returns-Jeffrey-Hunter-75.pdf>.

The final program is available at <http://www.iwms.ipt.pt/download/program%2007Jun2016.pdf>, and further details can be found at the IWMS-2016 website: <http://www.iwms.ipt.pt/?page=home>. Selected refereed papers presented in the Workshop will be published in an e-book *Proceedings* to be published by Springer.

For previous IWMS workshops, visit our IWMS website (<http://www.sis.uta.fi/tilasto/iwms>), from where, for example, “A short history of the International Workshop on Matrices and Statistics” (<http://www.sis.uta.fi/tilasto/iwms/IWMS-history.pdf>) can be downloaded. The 26th International Workshop on Matrices and Statistics will be held in 2018, the venue to be announced.



IWMS 2016 Group Photo