

# MAT-TRIAD 2007 – three days full of matrices

Będlewo, Poland, 22-24 March 2007

<http://mtriad07.amu.edu.pl/>

**Thursday, 22.03.2007**

**8:00 – 8:45 Breakfast**

**8:45 – Opening**

**Session I**                      **Chair: SIMO PUNTANEN**

9:00 – 9:40 – *L. Elsner*: On Hessenberg matrices and their generalizations

9:45 – 10:05 – *I. Gimenez*: On singular and nonsingular H-matrices

10:05 – 10:25 – *V. Kostić*: New results on subdirect sums of *S*-strictly diagonally dominant matrices

**10:25 – 10:40 – Coffee Break**

**Session II**                      **Chair: CHARLES R. JOHNSON**

10:40 – 11:20 – *J.M. Peña*: On bounds and localization results for the eigenvalues of structured matrices

11:25 – 11:45 – *V. Cortés*: Pivoting strategies and growth factor

**11:45 – 12:00 – Coffee break**

**Session III**                      **Chair: SIEGFRIED RUMP**

12:00 – 12:20 – *M. Kovačević*: Some invariants of Schur complement derived from scaling approach

12:20 – 12:40 – *B. Ricarte*: The positive realization problem in normal transfer matrices with simple real poles

12:40 – 13:00 – *F. Pedroche*: Characterization of  $\alpha$ -matrices

**13:00                      Lunch**

**Session IV**                      **Chair: LUDWIG ELSNER**

15:00 – 15:40 – *S. Rump*: Toeplitz structured perturbations

15:45 – 16:05 – *D. von Rosen*: Singular structured matrix with integer spectrum

**16:05 – 16:20 – Coffee break**

**Session V**                      **Chair: TADEUSZ CALIŃSKI**

16:20 – 16:40 – *P. Druilhet*: A statistical interpretation of Krylov subspaces decomposition

16:40 – 17:00 – *M. Grządziel*: On determinant maximization with linear matrix inequality constraints and REML estimators of variance components

17:00 – 17:20 – *A. Michalski*: On using generalized Cramer-Rao inequality to REML estimation in linear models

**17:20 – 17:45 – Coffee Break**

**Session VI**                      **Chair: FRIEDRICH PUKELSHEIM**

17:45 – 18:25 – *S. Puntanen*: A conversation with Sujit Kumar Mitra in 1993 and some comments on his research publications

18:25 – 19:15 – *G.P.H. Styan*: A philatelic introduction to matrices and magic squares

**19:30                      Dinner**

**20:30                      Concert**

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**Friday, 23.03.2007**

**8:00 – 9:00 Breakfast**

**Session VII**                      **Chair: GÖTZ TRENKLER**

9:00 – 9:40 – *F. Pukelsheim*: The European Parliament election in the Treaty on a Constitution for Europe: An electorate of degressive valencies

9:45 – 10:05 – *P. Jiraneck*: On the limiting accuracy of segregated saddle point solvers

10:05 – 10:25 – *T. Ostrowski*: On properties of special saddle point matrices

**10:25 – 10:40 – Coffee Break**

**Session VIII**                      **Chair: ROMAN ZMYŚLONY**

10:40 – 11:30 – *D.A. Griffith*: A numerical study of planar and near-planar adjacency matrices used in geographical analysis

**11:35 – 11:50 – Coffee break**

**Session IX**                      **Chair: DIETRICH VON ROSEN**

11:50 – 12:30 – *T. Klein*: Loewner comparability of moment matrices in cubic mixture models

12:35 – 12:55 – *E. Liski*: Model averaging for linear regression

**13:00                      Lunch**

**Session X**                      **Chair: HEIKE FAßBENDER**

15:00 – 15:20 – *F. Blömeling*: MLS model reduction for second-order time-invariant dynamical systems

15:20 – 15:40 – *W. Tadej*: Continuous affine families of unitary Hadamard matrices

15:40 – 16:00 – *M. Ohlson*: Distributions of quadratic forms

**16:00 – 16:50 – Poster session:**

*R. Różański, A. Szczepańska, M. Beim, T. Kossowski*

**Session XI: Statistics and Linear Algebra in Practice**

**Chair: DANIEL A. GRIFFITH**

16:50 – 17:10 – *S. Galas* (Glaxo): Responsible for evaluating process capability and implementing statistical methods in the Site

17:10 – 17:30 – *H. Michalska* (Glaxo): Responsible for measurement systems improvement and implementing Lean Manufacturing

17:30 – 18:00 – *J. Jackowski* (Glaxo): Six Sigma. What Employers Need - Discussion

**18:00 – 18:15 – Coffee break**

18:15 – 18:40 – *A. Liski*: A propensity score approach to comparing costs between hospital districts

18:40 – 19:05 – *A. Dąbrowski*: Process monitoring based on multivariate statistical analysis

19:05 – 19:15 – Discussion

**19:30                      Conference Dinner - Banquet speaker: Simo Puntanen**

# MAT-TRIAD 2007 – three days full of matrices

Będlewo, Poland, 22-24 March 2007

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**Saturday, 24.03.2007**

**8:00 – 9:00 Breakfast**

**Session XII**                      **Chair: LJILJANA CVETKOVIĆ**

9:00 – 9:40 – *C.R. Johnson*: Possible Jordan Structures for  $A$ ,  $B$ , and  $C$ , when  $C = AB$

9:45 – 10:05 – *Z. Woźnicki*: The solution of continuous-time algebraic Riccati equations by means of the SOR-LIKE method

10:05 – 10:25 – *D. Kubalińska*: Interpolation based model reduction

**10:25 – 10:40 – Coffee Break**

**Session XIII**                      **Chair: GEORGE P.H. STYAN**

10:40 – 11:20 – *G. Trenkler*: On the distance and the angle of subspaces

11:25 – 11:45 – *O.M. Baksalary*: Further properties of a pair of orthogonal projectors

**11:45 – 12:00 – Coffee break**

**Session XIV**                      **Chair: RAFAEL BRU**

12:00 – 12:20 – *A. Smoktunowicz*: How and how not to compute the Moore-Penrose inverse

12:20 – 12:40 – *I. Wróbel*: Numerical ranges in a strip

12:40 – 13:00 – *K. Vehkalahti*: Enhancing the documentation by leaving useful traces

**13:00                      Lunch**

**Session XV**                      **Chair: JUAN M. PEÑA**

15:00 – 15:40 – *R. Bru*: On incomplete decompositions of inverses

15:45 – 16:05 – *P. Batra*: Infinite matrices - computable stability conditions for time-delay systems

16:05 – 16:25 – *A. Suchocka*: Incomplete alternating projection method for large inconsistent linear systems

**16:25 – 16:40 – Coffee Break**

**Session XVI**                      **Chair: JOÃO T. MEXIA**

16:40 – 17:20 – *R. Zmyślony*: Jordan algebra and statistical inference in linear mixed models

17:25 – 17:45 – *F. Carvalho*: Canonic inference and commutative orthogonal block structures

**17:45 – 18:00 – Coffee Break**

**Session XVII**                      **Chair: ERKKI LISKI**

18:00 – 18:40 – *J.T. Mexia / M. Fonseca*: Canonical forms for factorial and related models

18:45 – 19:05 – *R. Covas*: Lattices of commutative Jordan algebras, remarks and some applications

19:05 – 19:15 – **Closing**

**19:30                      Dinner – Prize ceremony**