

CURRICULUM VITAE

MARILENA MITROULI

PERSONAL INFORMATION

Date, Place of Birth: 15-9-61, Athens, Greece

Citizenship: Greek.

Present Position: Assistant Professor

Office Address: Department of Mathematics, University of Athens,
Panepistimiopolis, 15784 ,Athens, Greece

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EDUCATION

B.Sc. in Mathematics, Department of Mathematics, University of Athens, Greece, 1983.

M. Sc. in Computer Science and Operational Research, University of Athens, 1985.

Ph. D. in Numerical Issues and Computational problems in Algebraic Control Theory, Department of Electrical Electronic and Information Engineering, City University, London, 1991, (Supervisor: Professor Nicos Karcianas).

EXPERIENCE

October 1985 - October 1991: Postgraduate Scholar, Department of Mathematics, University of Athens.

February 1992 - February 1995: Research Associate, Department of Mathematics, University of Athens.

1985-

1991: Postgraduate Scholar, Department of Mathematics, University of Athens.

1992-

1995: Research Associate, Department of Mathematics, University of Athens.

ACADEMIC POSITIONS

1995-2001: Lecturer, Department of Mathematics, University of Athens, Athens, Greece.

2001- : Assistant Professor, Department of Mathematics, University of Athens, Athens, Greece.

RESEARCH INTERESTS

Numerical Analysis, Numerical Linear Algebra, Study of the growth problem in Hadamard and weighing matrices, Determinants of orthogonal matrices, Rank ,nullity and null space of special matrices (Sylvester matrices, Generalised Sylvester matrices, Block Toeplitz matrices), Matrix Theory, Canonical forms of matrices(Smith normal form, Jordan form), Matrix pencils, Numerical methods for the computation of the Greatest Common Divisor (GCD) and Least Common Multiple (LCM) of polynomials.

UNIVERSITY TEACHING EXPERIENCE

1985-1994: Lectures to undergraduate students in the following subjects: Numerical Analysis, Informatics, Computer Graphics, Numerical Linear Algebra, Operator Theory, Department of Mathematics, University of Athens, Athens, Greece.

Lecturer in the following undergraduate courses:

Numerical Analysis (1996-2001)
Numerical Linear Algebra (1996-2001)
Computer Graphics (1996-2001)
Matrix theory with applications (1996-2001)

Lecturer in the following postgraduate courses:

Numerical Analysis (1996-2001)

Assistant Professor in the following undergraduate courses:

Numerical Analysis (2001-2002)
Numerical Linear Algebra (2001-2008)
Computer Graphics (2001-2008)
Matrix theory with applications (2001-2008)
Informatics (2007-2008)

Assistant Professor in the following postgraduate courses:

Numerical Linear Algebra (1997-2000)
Computational Mathematics (2001-2005)
Applied Linear Algebra (2001-2008)
Linear and Nonlinear Control Theory (2006)

STUDENTS SUPERVISION

PhD Students

C. Kravvaritis, *A computational methodology of determinants of weighing matrices with applications to the growth problem*, July 2008. (C. Kravvaritis awarded the Humbolt fellowship for Numerical Analysis.)

D. Triantafyllou, *Numerical Algorithms computing rank and null space of Sylvester, Toeplitz matrices and applications*, January 2009.

MSc Students

S. Pasoulas, *Numerical methods for the nonsymmetric eigenvalue problem*, 1993.

S. Georgiou, *Orthogonal designs with applications*, 1999.

Sp. Georgiou, *Study of the growth factor and the pivot structure of weighing matrices*, 2002.

D. Triantafyllou, *Statistical study of the stability of the Gaussian elimination method*, 2003.

C. Kravvaritis, *Weighing matrices and their contribution to the growth problem*, 2004.

A. Zaganas, *Optical cryptography with applications*, 2004.

- D. Christou, *Numerical determination of the GCD of polynomials with the ERES method through a hybrid nature*, 2004.
- P. Kontzinou, *The Weierstrass canonical form of matrix pencils*, 2006.
- M. Kourniotis, *Parallel processing of QR factorisation with applications*, 2008.
- D. Papagiannoulis, *QR-factorization and applications to matrices of special forms*, 2010.

REFEREE

1. Journal of Computational and Applied Mathematics
2. IEEE Transactions on Automatic Control
3. Kybernetika

RESEARCH GRANTS

- *EPIC*: Collaboration with City University, London, (1990).
- *Group Theory and Distribution Theory in Combinatorial Designs with Applications in Control Theory and Statistics*: No. 70/4/2235, Research Secretariat, University of Athens, (1995-1996).
- *ESPRIT project SESDIP*: Collaboration with City University, London (1995-1996).
- *Mathematical Software in Matrix Analysis with Applications in Control Theory and Statistics*: No. 70/4/2548, Research Secretariat, University of Athens, (1996-1997).
- *Probabilistic Bounds in Error Analysis*: No. 70/4/3416, Research Secretariat, University of Athens, (1997-1998).
- *Optimization Methods and Applications in Control Theory and Statistics*: No. 70/4/3414, Research Secretariat, University of Athens, (1997-1998).
- *Mathematical Models in Control Theory and Industrial Systems*: No. 95ED1226, Greek General Secretariat of Research and Technology, (1997-1998).
- *Mathematical Models and issues of Control Theory in industry systems*: No. A/A:771, Greek General Secretariat of Research and Technology, (1997-1998).

- *Mathematical Models and Optimization Methods in Discrete Systems and Information Theory*: No. 70/4/3414, Research Secretariat, University of Athens, (1998-1999).
- *Numerical Linear Algebra Issues and Applications in Control Theory and Cryptography*: No. 70/4/3416, Research Secretariat, University of Athens, (1998-1999).
- *Mathematical Models and Applications in Information Theory*: No. 70/4/3414, Research Secretariat, University of Athens, (1999-2000).
- *Numerical Linear Algebra Issues: Algorithms and Applications*: No. 70/4/3416, Research Secretariat, University of Athens, (1999-2000).
- *Combinatorial Designs, Sequences with Zero Autocorrelation, Polynomial Matrices, and Cryptography*: No. 70/4/5760, Research Secretariat, University of Athens, (2001-2002).
- *Discrete Mathematics: Combinatorial Designs, Sequences with Zero Autocorrelation, Error-Correcting Codes and Cryptography*: No. 70/4/5760, Research Secretariat, University of Athens, (2003-2004).
- *Methods analysing, composing and computing orthogonal systems of boolean functions in security information systems*: ENTER, No. 03ER 43, Greek General Secretariat of Research and Technology, (2003-2004).
- *Efficient Algorithms, Error-Correcting Codes and Cryptography*: No. 70/4/3416, Research Secretariat, University of Athens, (2005-2006).
- *Discrete Mathematics*: No. 70/4/5760, Research Secretariat, University of Athens, (2007-2008).
- *Efficient Algorithms for High Performance Cryptographic Systems and Data Coding with Applications in Information Security*: No. 03ED740, Greek General Secretariat of Research and Technology, (2004-2008).

CONFERENCES

1. First European Control Conference, Grenoble, France, *Grenoble, France* - July 1991.
2. 11th IASTED International Conference, Modelling, Identification and Control, *Innsbruck, Austria* - February 1992.

3. IMA International Conference on Control: Modelling, Computation, Information, *Manchester, England* - September 1992.
4. First Hellenic Conference on Mathematics and Informatics, *Athens, Greece* - September 1992.
5. 12th IASTED International Conference, Modelling, Identification and Control, *Innsbruck, Austria* - February 1993.
6. Summer Workshop on Computer Aided University Mathematics Instruction, *Athens, Greece* - August 1993.
7. 13th IASTED International Conference, Modelling, Identification and Control, *Innsbruck, Austria* - February 1994.
8. Second Hellenic Conference on Mathematics and Informatics, *Athens, Greece* - September 1994.
9. Spring School on Digital Media Communications: From Computer Graphics to Virtual Reality, *Athens, Greece* - March 1994.
10. Circuits, Systems and Computers Conference, *Athens, Greece* - July 1996.
11. Third Hellenic European Conference on Mathematics and Informatics, *Athens, Greece* - September 1996.
12. Twenty-third Australasian Conference on Combinatorial Mathematics and Combinatorial Computing, The University of Queensland, *Brisbane, Australia* - July 1998.
13. Fourth Hellenic-European Conference on Mathematics and Informatics, *Athens, Greece* - September 1998.
14. IFAC Symposium on System Structure and Control (SSSC), *Prague, Czech Rep.* - June 2001.
15. Fifth Hellenic European Conference on Mathematics and Informatics, *Athens, Greece* - September 2001.
16. The 15th National Statistical Conference, *Ioannina, Greece* - May 2002.
17. The 8th International Conference on Applications of Computer Algebra, *Volos, Greece* - June 2002.

18. 11th Mediterranean Conference on Control and Automation (MED'03), *Rhodes, Greece* - June 2003.
19. Recent Advances in Statistical Designs and Related Combinatorics, *Athens, Greece* - July 2003.
20. European Control Conference, *Cambridge, England* - September 2003.
21. Sixth Hellenic European Conference on Mathematics and Informatics, *Athens, Greece* - September 2003.
22. Third Conference on Numerical Analysis and Applications, *Rousse, Bulgaria* - July 2004.
23. 13th Mediterranean Conference on Control and Automation, *Limassol, Cyprus* - June 2005.
24. The 8th International Workshop, Computer Algebra in Scientific Computing, CASC 2005, *Kalamata, Greece* - September 2005.
25. International Conference on computational science, *Reading, U.K.* - May 2006.
26. Third international conference of applied mathematics, *Plovdiv, Bulgaria* - August 2006.
27. International Conference on Modern Mathematical Methods in Science and Technology (M3ST06), *Paros, Greece* - September 2006.
28. European Control Conference (ECC07), *Kos, Greece* - July 2007.
29. Computational Methods with Applications, *Harrachov, Czech Republic* - August 2007.
30. Conference in Numerical Analysis, Recent Approaches to Numerical Analysis: Theory, Methods and Applications (NumAn 2007), *Kalamata, Greece* - September 2007.
31. Householder Symposium XVII, *Zenthen, Germany* - June 2008.
32. Fourth Conference on Numerical Analysis and Applications, *Lozenetz, Bulgaria* - June 2008.
33. Conference in Numerical Analysis, Recent Approaches to Numerical Analysis: Theory, Methods and Applications (NumAn 2008), *Kalamata, Greece* - September 2008.

34. 16th Conference of the International Linear Algebra Society (ILAS 10), *Pisa, Italy* - June 21-25 2010.
35. Conference in Numerical Analysis, Recent Approaches to Numerical Analysis: Theory, Methods and Applications (NumAn 2010), *Chania, Greece* - September 2010.

BOOKS

- *Numerical Linear Algebra*, University of Athens, 20001 (in Greek).
- *Laboratory of Scientific computing*, University of Athens, 2001 (in Greek).

PUBLICATIONS

PhD Thesis

1. M. Mitrouli, Numerical Issues and Computational Problems in Algebraic Control Theory, *The City University, London*, (1991).

Papers in Refereed Journals

2. G. Kalogeropoulos and M. Mitrouli, On the computation of the Weierstrass canonical form of a regular matrix pencil, *Control and Computers*, Vol. 20 (1992), No. 3, pp. 61-68.
3. M. Mitrouli and N. Karcianas, Computation of the G.C.D. of polynomials using Gaussian transformations and shifting, *International Journal of Control*, Vol. 58 (1993), No. 1, pp. 211 - 228.
4. G. Kalogeropoulos and M. Mitrouli, On the computation of row and column minimal indices of a singular matrix pencil, *J. Instit. Math. Comput. Science*, Vol. 7 (1994), No. 1, pp. 59-72.
5. N. Karcianas and M. Mitrouli, A matrix pencil based numerical method for the computation of the GCD of polynomials, *IEEE Transactions on Automatic Control*, Vol. 39 (1994), No. 5, pp. 977 - 981.

6. M. Mitrouli and G. Kalogeropoulos, A compound matrix algorithm for the computation of the Smith form of a polynomial matrix, *Numerical Algorithms*, Vol. 7 (1994), pp. 145-159.
7. G. Kalogeropoulos and M. Mitrouli, On the computation of the Weiersrass canonical form of a regular pencil: Part II, *Control and Computers*, Vol. 22 (1994), No 1, pp.18-22.
8. M. Mitrouli and C. Koukouvinos, Statistical error bounds for basic floating point operations, *J. Instit. Math. Comput. Science*, Vol. 8 (1995), No. 2, pp. 71-79.
9. C. Koukouvinos, M. Mitrouli and J. Seberry, On the Smith normal form of D-optimal designs, *Linear Algebra and its Appl.*, Vol. 247 (1996), pp. 277-295.
10. M. Mitrouli, N. Karcianas and C. Koukouvinos, Further numerical aspects of the ERES algorithm for the computation of the greatest common divisor of polynomials and comparison with other existing methodologies, *Utilitas Mathematica*, Vol. 50 (1996), pp. 65-84.
11. M. Mitrouli, N. Karcianas and C. Koukouvinos, Numerical performance of the matrix pencil algorithm computing the greatest common divisor of polynomials and comparison with other matrix based methodologies, *J. Comp. Appl. Math.*, Vol. 76 (1996), pp. 89-112.
12. M. Mitrouli, G. Kalogeropoulos and C. Koukouvinos, On the computation of the elementary divisors and the Smith normal form of homogeneous matrix pencils, *Utilitas Mathematica*, Vol. 49 (1996), pp. 161-172.
13. C. Koukouvinos, M. Mitrouli, J. Seberry and P. Karabelas, On sufficient conditions for some orthogonal designs and sequences with zero autocorrelation function, *Australas. J. Combin.*, Vol. 13 (1996), pp. 197-216.
14. M. Mitrouli, N. Karcianas and C. Koukouvinos, Canonical forms of some special matrices useful in Statistics, *Korean J. Comp. and Appl. Math.*, Vol. 4 (1997), pp. 63-82.
15. G. Kalogeropoulos and M. Mitrouli, Generalised linear discrete-time systems and matrix pencils algebraic duality, *J. Instit. Math. Comput. Science*, Vol. 10 (1997), No. 2, pp. 81-90.
16. C. Koukouvinos, M. Mitrouli and J. Seberry, On the Smith normal form of weighing matrices, *Bull. Inst. Combin. Appl.*, Vol. 19 (1997), pp. 57-69.

17. M. Mitrouli and C. Koukouvinos, The behaviour of probabilistic error bounds in floating point algebraic processes, *Korean J. Comp. and Appl. Math.*, Vol. 4 (1997), No. 1, pp. 211-222.
18. M. Mitrouli, N. Karcianas and C. Koukouvinos, Numerical aspects for nongeneric computations in control problems and related applications, *Congressus Numerantium*, Vol. 126 (1997), pp. 5-19.
19. M. Mitrouli and C. Koukouvinos, On the computation of the Smith normal form of compound matrices, *Numerical Algorithms*, Vol. 16 (1997), pp.95-105.
20. M. Mitrouli and G. Kalogeropoulos, A matrix pencil approach computing the elementary divisors of a matrix, *Korean J. Comp. and Appl. Math.*, Vol 5 (1998), No. 3, pp.627-644.
21. C. Koukouvinos, M. Mitrouli, and J. Seberry, Necessary and sufficient conditions for some two variable orthogonal designs in order 44, *J. Combin. Math. Combin. Comput.*, Vol. 28 (1998), pp.267-287.
22. C. Koukouvinos, M. Mitrouli, and J. Seberry, Numerical algorithms for the computation of the Smith normal form of integral matrices, *Congressus Numerantium*, Vol. 133 (1998), pp.127-162.
23. M. Mitrouli, Numerical linear algebra techniques in control problems, *Int. J. Appl. Math.*, Vol. 1 (1999), No. 1, pp.91-102.
24. P. Yalamov and M. Mitrouli, A fast algorithm for index of annihilation computations, *J. Comp. Appl. Math.*, Vol. 108 (1999), pp. 99-111.
25. C. Koukouvinos, M. Mitrouli, and J. Seberry, Growth in Gaussian elimination for weighing matrices, $W(n, n-1)$, *Linear Algebra and its Appl.*, Vol. 36 (2000), pp.189-202.
26. C. Koukouvinos, M. Mitrouli, and J. Seberry, Bounds on the maximum determinant for $(1, -1)$ matrices, *Bull. Inst. Combin. Appl.*, Vol. 29 (2000), pp. 39-48.
27. N. Karcianas and M. Mitrouli, Numerical computation of the least common multiple of a set of polynomials, *Reliable Computing*, Vol. 6, Issue 4, (2000) pp. 439-457.
28. S. Georgiou, C. Koukouvinos, M. Mitrouli, and J. Seberry, Necessary and sufficient conditions for two variable orthogonal designs in order 44: Addendum, *J. Combin. Math. Combin. Comput.*, Vol. 34 (2000), pp. 59-64.

29. S. Georgiou, C. Koukouvinos, M. Mitrouli, and J. Seberry, A new algorithm for computer searches for orthogonal designs, *J. Combin. Math. Combin. Comput.*, Vol. 39 (2001), pp. 49-63.
30. S. Georgiou, C. Koukouvinos, M. Mitrouli, and J. Seberry, Necessary and sufficient conditions for three and four variable orthogonal designs in order 36, *J. Statist. Plann. Inference*, Vol. 106 (2002), pp. 329-352.
31. C. Koukouvinos, M. Mitrouli, and J. Seberry, Values of minors of $(1, -1)$ incidence matrices of *SBIBDs* and their application to the growth problem, *Designs, Codes and Cryptography*, Vol. 23 (2001), pp. 267-281.
32. C. Koukouvinos, M. Mitrouli, and J. Seberry, An algorithm to find formulae and values of minors of Hadamard matrices, *Linear Algebra and its Appl.*, Vol. 330 (2001), pp. 129-147.
33. C. Koukouvinos, M. Mitrouli, and J. Seberry, Values of minors of an infinite family of D -optimal designs and their application to the growth problem, *SIAM Jour. Matrix Anal. and its Appl.*, Vol. 23 (2001), pp. 1-14.
34. C. Koukouvinos, . Lappas, M. Mitrouli, and J. Seberry, On the complete pivoting conjecture for Hadamard matrices of small orders, *Journal of Research and Practice in Information Technology*, Vol. 33, (2001), pp. 298-302.
35. C. Koukouvinos, M. Mitrouli, and J. Seberry, An infinite family of Hadamard matrices with fourth last pivot $\frac{n}{2}$, *Linear and Multilinear Algebra*, Vol. 50 (2002), 167-173.
36. M. Mitrouli, Numerical-Symbolical software computing the least common multiple of several polynomials, *Int. J. of Comp. Research*, Vol. 11, No 2 (2002), pp.221-229.
37. N. Karcianas and M. Mitrouli, Minimal bases of matrix pencils and coprime matrix fraction descriptions, *IMA Journal of Control and Information*, Vol. 19 (2002), pp.245-278.
38. N. Karcianas and M. Mitrouli, Normal factorisation of polynomials and computational issues, *Computers and Mathematics with Applications*, Vol. 45 (2003), pp. 229-245.
39. C. Koukouvinos, M. Mitrouli, and J. Seberry, Values of minors of an infinite family of D -optimal designs and their application to the growth problem: II, *SIAM Jour. Matrix Anal. and its Appl.*, Vol. 24 (2003), pp. 715-727.

40. C. Koukouvinos, E. Lappas, M. Mitrouli, and J. Seberry, An algorithm to find formulae and values of minors of Hadamard matrices: II, *Linear Algebra and its Appl.*, Vol. 371 (2003), 111-124.
41. J. Seberry, T. Xia, C. Koukouvinos, and M. Mitrouli, The maximal determinant and subdeterminants of ± 1 matrices, *Linear Algebra and its Appl.*, Vol. 373 (2003), 297-310.
42. N. Bardis, A. Polymenopoulos, A. Markovski and M. Mitrouli, Methods for design of balanced boolean functions satisfying struck avalanche criterion (SAC), *International Jour. of Computer Research*, Vol. 12, No. 3 (2003), 425-436.
43. C. Koukouvinos, E. Lappas, and M. Mitrouli, On the unique pivot structure for a Hadamard matrix of order 12, *International Jour. of Applied Math.*, Vol. 14, No. 1 (2003), 19-39.
44. M. Mitrouli, D. Triantafyllou and C. Koukouvinos, Average-case stability of the Gaussian elimination for Hadamard matrices, *International Journal of Computer Research*, Vol. 12, No 4, (2003), 529-537.
45. N. Karcianas and M. Mitrouli, System theoretic based characterisation and computation of the least common multiple of a set of polynomials, *Linear Algebra and its Appl.*, Vol. 381 (2004), 1-23.
46. C. Koukouvinos, E. Lappas, and M. Mitrouli, On the computation of maximum minors of Hadamard matrices, *Mathematics and Computers in Simulation*, 67 (2004), 33-44.
47. C. Kravvaritis, M. Mitrouli, and J. Seberry, On the growth problem for skew and symmetric conference matrices, *Linear Algebra and its Appl.*, Vol. 403 (2005), 183-206.
48. C. Koukouvinos, M. Mitrouli, and J. Seberry, Values of minors of some infinite families of matrices constructed from supplementary difference sets and their application to the growth problem, *Linear Algebra and its Appl.*, Vol. 406 (2005), 218-234.
49. D. Christou and M. Mitrouli, Estimation of the Greatest Common Divisor of many polynomials using hybrid computations performed by the ERES method, *Appl. Num. Anal. and Comp. Math.*, Vol. 2, No 3, (2005), 293-305.
50. N. Karcianas, S. Fatouros, M. Mitrouli, and G. Halikias, Approximate greatest common divisor of many polynomials, generalised resultants and strength of approximation, *Computers & Mathematics with appl.*, Vol. 51 (2006), 1817-1830.

51. N. Karcianas, M. Mitrouli, and D. Triantafyllou, Matrix pencil methodologies for computing the greatest common divisor of polynomials: hybrid algorithms and their performance, *Inter. Jour. of Control*, Vol. 79 , No 11 (2006), 1447-1461.
52. C. Kravvaritis, and M. Mitrouli, Determinant evaluations for weighing matrices ,*Int. J. Pure Appl. Math.*, Vol. 34 (2007), 163-176.
53. C. Kravvaritis, M. Mitrouli and J. Seberry, On the pivot structure for the weighing matrix $W(12,11)$, *Linear and Multilinear Algebra*, Vol. 55, No 5, (2007), 471-490.
54. C. Kravvaritis, and M. Mitrouli, Evaluation of minors associated to weighing matrices, *Linear Algebra and its Appl.*, Vol. 426 (2007), 774-809.
55. C. Kravvaritis, and M. Mitrouli, Computations for minors of Hadamard matrices, *Bull. Greek Math. Soc.*, Vol. 54, (2007), 221-237.
56. C. Kravvaritis and M. Mitrouli, A technique for computing minors of orthogonal $(0, 1, -1)$ matrices and applications to the growth problem, *Electronic Transactions on Numerical Analysis (ETNA)*, Vol. 31, (2008), pp. 49-67.
57. C. Kravvaritis and M. Mitrouli, Compound matrices: properties, numerical issues and analytical computations, *Numerical algorithms*, Vol. 50 (2009), pp. 155-177.
58. C. Kravvaritis and M. Mitrouli, The growth factor of a Hadamard matrix of order 16 is 16, *Numerical Linear Algebra with Applications*, Vol. 16 (2009), pp. 715-743.
59. D. Triantafyllou and M. Mitrouli, On the computation of the rank of block bidiagonal Toeplitz matrices, *J. Comput. Appl. Math.*, Vol. 227 (2009), pp. 126-135.
60. D. Christou, N. Karcianas and M. Mitrouli, The ERES method for computing the approximate GCD of several polynomials, *Applied Numerical Math.*, Vol. 60 (2010), pp. 94-114.
61. D. Triantafyllou and M. Mitrouli, On rank and null space computation of the generalized Sylvester matrix, *Numer. Algor.*, Vol. 54 (2010), pp. 297-324.
62. Jennifer Seberry and M. Mitrouli, Some remarks on Hadamard matrices, *Cryptogr. Commun.*, (2010), *Cryptogr. Commun.*, Vol. 2, (2010), pp.293-306.
63. M. Mitrouli, A sign test for detecting the equivalence of Sylvester Hadamard matrices, *Numer. Algor.*, (2010), DOI 10.1007/s12095-010-0036-9.

Papers in Refereed Conference Proceedings and Books

64. M. Mitrouli, N. Karcianas and C. Giannakopoulos, The computational framework of the Determinantal Assignment Problem, *Proceedings of the First European Control Conference*, Vol. 1, Hermes, Paris, (1991) pp. 98-113.
65. M. Mitrouli and N. Karcianas, Computational aspects of almost zeros and related properties, *Proceedings of the Third European Control Conference*, Vol. 3, Rome (1995) pp. 2094-2099.
66. M. Mitrouli and C. Koukouvinos, On the growth problem for D -optimal designs, *Proceedings of the First Workshop on Numerical Analysis and Applications*, Lecture Notes in Computer Science, Springer Verlag, (1996) pp. 341-348.
67. M. Mitrouli, J. Leventides, N. Karcianas and E. Milonidis, Computation of solutions of the determinantal assignment problem using optimization methods, *IEEE Proceedings of Large Scale Systems: Theory and Applications*, Rio Patras (1998), Greece.
68. N. Karcianas and M. Mitrouli, Approximate algebraic computations of algebraic invariants, *Symbolic methods in control systems analysis and design, IEE Control Engin. Series.*, Vol. 56, (1999) pp 135-168.
69. M. Mitrouli and P. Yalamov, Matrices with sparsity structure in Control problems, *Large- Scale Scientific Computations*, Notes on Numerical Fluid Mechanics, Vieweg, Vol. 73, (2000) pp. 162-168.
70. N. Karcianas and M. Mitrouli, Normal factorisation of polynomials and its symbolic computation, *IEE Control 2000 Conference*, Cambridge 4-7 September 2000.
71. M. Mitrouli, On the complete pivoting conjecture for Hadamard matrices of order 16, *Second Conference on Numerical Analysis and Applications*, Lecture Notes in Computer Science, Springer Verlag, (2001) pp. 602-607.
72. N. Karcianas, M. Mitrouli, S. Fatouros, Computation of normal factorisation of polynomials using resultant sets, (*Proceedings of the IFAC Symposium on System Structure and Control (SSSC)*, Pragues, 2001).
73. N. Karcianas, M. Mitrouli, S. Fatouros, A resultant based computation of the greatest common divisor of two polynomials, *Proceedings of the 11th Mediterranean Conference on Control and Automation MED'03, Rhodes, Greece, June 2003*.
74. S. Fatouros, N. Karcianas, and M. Mitrouli, Approximate solutions to root clustering problem, *Proceedings of the 11th Mediterranean Conference on Control and Automation MED'03, Rhodes, Greece, June 2003*.

75. N. Karcantias, S. Fatouros, M. Mitrouli and G. Halikias, Approximate greatest common divisor of many polynomials and generalised resultants, *Proceedings of the European Control Conference 2003, September 1-4, Cambridge, U.K.*).
76. D. Triantafyllou and M. Mitrouli, Two resultant based methods computing the greatest common divisor of polynomials, *Third International Conference on Numerical Analysis and its Applications, Lecture Notes in Computer Science 3401, pp. 519-526, 2004, Springer Verlag.*
77. C. Kravvaritis, E. Lappas and M. Mitrouli, An algorithm to find values of minors of skew Hadamard and conference matrices, *Third International Conference on Numerical Analysis and its Applications, Lecture Notes in Computer Science 3401, pp. 373-382, 2004, Springer Verlag.*
78. D. Triantafyllou, M. Mitrouli and N. Karcantias, Resultant based methods computing the greatest common divisor of several polynomials, *Proceedings of the 13th Mediterranean Conference on Control and Automation, Limassol, Cyprus, June 27-29, pp. 387-392, 2005 IEEE.*
79. C. Kravvaritis, M. Mitrouli and J. Seberry, Counting techniques specifying the existence of submatrices in weighing matrices, *CASC 2005, Lecture Notes in Computer Science 3718, pp. 294-305, 2005, Springer Verlag.*
80. N. Karcantias, M. Mitrouli and D. Triantafyllou, A hybrid approach for normal factorization of polynomials, *International Conference on computational science, Lecture Notes in Computer Science 3992, pp. 399-406, 2006, Springer Verlag.*
81. D. Christou, N. Karcantias, M. Mitrouli and D. Triantafyllou, Numerical and symbolical methods computing the Greatest Common Divisor of several polynomials, *Numerical Linear Algebra in Signals, Systems and Control, Edts: Van Dooren, Bhattacharyya, Chan, Olshevsky and Routray, Springer-Verlag, (to appear).*
82. G. Kalogeropoulos, M. Mitrouli A. Pantelous and D. Triantafyllou, The Weierstrass canonical form of a regular matrix pencil: Numerical issues and computational techniques, *Fourth Conference on Numerical Analysis and Applications, Lecture Notes in Computer Science, Springer-Verlag (to appear).*

Papers in Other Conference Proceedings

83. M. Mitrouli and N. Karcantias, A comparison of matrix-based numerical methods for the computation of the Greatest Common Divisor of several polynomials, *Pro-*

ceedings of the IMA International Conference on Control, Manchester, England, 1992.

84. G. Kalogeropoulos and M. Mitrouli, On computing matrices P , Q , transforming a regular matrix pencil to its Weierstrass canonical form, *Proceedings of the 12th IASTED International Conference on Modelling, Identification and Control*, Innsbruck, Austria, 1993, ACTA PRESS, pp. 1993.
85. M. Mitrouli and N. Karcianas, Exterior algebra computations with MATLAB, *Electronic Proceedings of the First MATLAB Conference*, Boston, U.S.A., October 1993.
86. M. Mitrouli and G. Kalogeropoulos, A MATLAB function computing the Jordan canonical form of a matrix, *Electronic Proceedings of the First MATLAB Conference*, Boston, U.S.A., October 1993.
87. G. Kalogeropoulos and M. Mitrouli, The Kronecker canonical form of a singular matrix pencil: Theoretical and numerical issues, *Proceedings of the 13th IASTED International Conference on Modelling, Identification and Control*, Grindelwald, Switzerland, Acta Press, pp. 195-197, 1994.
88. C. Koukouvinos and M. Mitrouli, On the computation of the Smith normal form of D-optimal designs, *Proceedings of the 2nd Hellenic - European Conference on Mathematics and Informatics*, Hellenic Math. Society, Vol. 1, pp. 331-339, 1994.
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