



**RESEARCH GROUP OF  
OPERATIONS RESEARCH AND DECISION SYSTEMS**

**PUBLICATIONS**

**Papers**

**2008**

1. Bozóki, S. and Rapcsák, T., On Saaty's and Koczkodaj's inconsistencies of pairwise comparison matrices, *Journal of Global Optimization* 42 (2008) 157-175.
2. Bozóki, S., Solution of the Least Squares Method problem of pairwise comparison matrices, *Central European Journal of Operations Research*, (2008). (accepted)
3. Forgó, F. and Fülöp, J., On the implementation of the L-Nash bargaining solution in two-person bargaining games, *Central European Journal of Operations Research*, (2008). (in print)
4. Fülöp, J., A method for approximating pairwise comparison matrices by consistent matrices, *Journal of Global Optimization*, (2008). (in print)
5. Rapcsák, T. and Ujvári, M., Some results on peseudolinear quadratic fractional functions, *Central European Journal of Operations Research* 16 (2008) 415-424.
6. Kéri, G. and Östergård, P. R. J, On the minimum size of binary codes with length  $2R+4$  and covering radius  $R$ , *Designs, Codes and Cryptography* 48 (2008) 165-169.
7. Kéri, G. and Szántai, T., Egy konstruktívan definiált többdimenziós gamma-eloszlás illeszthetőségi feltételével kapcsolatos kombinatorikus problémákról (Combinatorial problems according to conditions on fitting a constructively defined multivariate gamma distribution to empirical data), *Alkalmazott Matematikai Lapok* 25 (2008). (in print) (in Hungarian)
8. Kéri, G., The covering radius of extreme binary 2-surjective codes, *Designs, Codes and Cryptography* 46 (2008) 191-198.
9. Mészáros, C., On numerical issues of interior point methods, *SIAM J. on Matrix Anal. Appl.*, Vol 30, No. 1. (2008) 223-235.
10. Rapcsák, T., Sectional curvatures in nonlinear optimization, *Journal of Global Optimization* 40 (2008) 375-388.

**2007**

11. Kéri, G. and Östergård, P. R. J, Further results on the covering radius of small codes, *Discrete Mathematics* 307 (2007) 69-77.
12. Kéri, G., On small covering codes in arbitrary mixed Hamming spaces, *Studia Scientiarum Mathematicarum Hungarica* 44 (2007) 517-534.

13. Mészáros, C., Detecting “dense” columns in interior point methods for linear programs, *Computational Optimization and Applications*, Vol 36, issue 2-3 (2007). 309-320.
14. Rapcsák, T., On pseudolinearity of quadratic fractional functions, *Optimization Letters* 1 (2007) 193-200.

## 2006

15. Bozóki, S., Weights from the least squares approximation of pairwise comparison matrices (in Hungarian, Súlyok meghatározása páros összehasonlítás mátrixok legkisebb négyzetes közelítése alapján), *Alkalmazott Matematikai Lapok* 23, (2006) 121-137.
16. Kéri, G. and Östergård, P. R. J, The Number of Inequivalent  $(2R+3,7)R$  Optimal Covering Codes, *Journal of Integer Sequences* 9 (2006) Article 06.4.7 (electronical), 8 pp.
17. Kéri, G., Types of superregular matrices and the number of n-arcs and complete n-arcs in  $PG(r, q)$ , *Journal of Combinatorial Designs* 14 (2006) 363-390 and 16 (2008) 262.
18. Mészáros, C., Sparsity in convex quadratic programming with interior point methods, *Optimization Methods and Software*, Vol. 21, No. 5 (2006) 733-745.
19. Rapcsák, T., Review on Béla Martos' activity in the field of optimization theory - on the occasion of his being awarded Egerváry commemorative plaque, *Alkalmazott Matematikai Lapok* 23 (2006) 1-4. (in Hungarian)

## 2005

20. Balla, K., Márton, S. and Rapcsák, T., Air pollution modelling in action, in: Proceedings of the NATO ARW held in Borovetz, eds.: I. Faragó et al., *Springer, Advances in Air Pollution Modeling for Environmental Security, NATO Science Series: IV: Earth and Environmental Sciences* 54 (2005) 11-12.
21. Balogh, J., Csendes, T. and Rapcsák, T., Global optimization on Stiefel manifolds - an interesting result of discretization, *Alkalmazott Matematikai Lapok* 22 (2005) 163-176.
22. Bozóki, S., Lewis, R.H., Solving the Least Squares Method problem in the AHP for  $3 \times 3$  and  $4 \times 4$  matrices, *Central European Journal of Operations Research*, 13(3) (2005) 255-270.
23. Crouzeix, J.P. and Rapcsák, T., Integrability of pseudomonotone differentiable maps and the revealed preference problem, *Journal of Convex Analysis* 12 (2) (2005) 431-446.
24. Cushing, J.B., Wilson, T. et al. including Fülöp, J., Eco-informatics and natural resource management, *ACM International Conference Proceeding Series*, Vol. 89 (2005). Proceedings of the 2005 national conference on Digital government research, Atlanta, Georgia, 211-212.
25. Cushing, J.B., Wilson, T. et al. including Fülöp, J., Eco-Informatics for Decision makers: Advancing a Research Agenda. In L. Raschid and B. Ludaescher (eds.), Lecture Notes in Computer Science Subseries: Lecture Notes in Bioinformatics, *Springer* (2005), which is the Proceedings of the Second International Workshop on Data Integration in the Life Sciences (DILS-2005), San Diego, CA), 325-334.
26. Ekárt, A. and Németh, S.Z., Stability analysis of tree structured decision functions, *European Journal of Operational Research* 160 (2005) 676-695.
27. Forgó, F., Fülöp, J. and Prill, M., Game theoretic models for climate change negotiations, *European Journal of Operational Research* 160 (2005) 252-267.
28. Kéri, G. and Östergård, P. R. J, Bounds for covering codes over large alphabets, *Designs, Codes and Cryptography* 37 (2005) 45-60

29. Kéri, G. and Tuza, Zs., Egy minimax probléma halmazrendszerre (A minimax problem for set systems), *Matematikai Lapok* 12 (2004-2005) 20-30. (in Hungarian)
30. Kéri, G., Kritériumok páros összehasonlítás mátrixokra (Criteria for pairwise comparison matrices), *Szigma*, 36 (2005) 139-148. (in Hungarian)
31. Márton, S. and Rapcsák, T., Air pollution transmissions - case-studies, *Central European Journal of Operations Research* 13 (2005) 271-287.
32. Mészáros, C. and Rapcsák, T., A remark on: Rudolf Vetschera, Strict preference and sensitivity analysis in additive utility functions with interval data, *Central European Journal of Operations Research* 13 (2005) 209-210.
33. Mészáros, C., On the Cholesky factorization in interior point methods, *Computers & Mathematics with Applications* 50 (2005) 1157-1166.
34. Mészáros, C., On the performance of the Cholesky factorization in interior point methods on Pentium 4 processors, *Central European Journal of Operations Research*, Vol 13, No. 4 (2005) 289-298.
35. Németh, S.Z., Rapcsák, T. and J. Temesi, Evaluation of tenders for developing the economy, *Central European Journal of Operations Research* 13 (2005) 299-317.
36. Rapcsák, T., Fenchel problem of level sets, *Journal of Optimization Theory and Applications* 127 (2005) 177-191.
37. Rapcsák, T., Local convexity on smooth manifolds, *Journal of Optimization Theory and Applications* 127 (2005) 165-176.
38. Rapcsák, T., Survey on the Fenchel problem of level sets, in: Variational analysis and applications, eds.: F. Giannessi and A. Maugeri, *Springer* (2005) 935-950.

## 2004

39. Balla, K. and März, R., Linear Boundary Value Problems for Differential- algebraic Equations. *Mathematical Notes* 5 (2004) 3-17.
40. Balogh, J., Csendes, T. and Rapcsák, T., Some global optimization problems on Stiefel manifolds, *Journal of Global Optimization* 30 (2004) 91-101.
41. Fülöp, J., Roth, D. and Schweik, C., Decision Making in the Context of Eco-informatics, In: Cushing, J. and Wilson, T. (eds.), Eco-Informatics for Decision Makers: Advancing a Research Agenda, Report of an NSF- and USGS/NBII-sponsored Workshop on Eco-Informatics for Resource Management Decision Makers held at The Evergreen State College, Olympia, Washington, December 13-15, 2004, pp. 21-26.  
<http://www.evergreen.edu/bdei/documents/finalReport.pdf>
42. Gass, S.I. and Rapcsák, T., Singular value decomposition in AHP, *European Journal of Operational Research* 154(3) (2004) 573-584.
43. Kéri, G. and Kisvölcsay, Á., On computing the Hamming distance, *Acta Cybernetica* 16 (2004) 443-449.
44. Kéri, G., Classification of MDS codes by exhaustive computer search, 6th International Conference on Applied Informatics (Eger, Hungary, January 27 - 31, 2004) (ed. L. Csöke, P. Olajos, P. Szigetváry and T. Tómács), *Eszterházy Károly Tanárképző Főiskola*, Vol. II, 179-185.
45. Rapcsák, T., Some optimization problems in multivariate statistics, *Journal of Global Optimization* 28 (2004) 217-228.

## 2003

46. Abramov, A.A., Balla, K., Ulyanova, V.I. and Yuhno, L.Sz., Nelinejnaya samosopryazhennaja spektral'naya zadacha dlya differencial'no-algebraicheskikh uravnenij, *Differencial'nye uravneniya* 39(7) (2003) 867-878.  
Simultaneous English edition:  
Abramov, A.A., Balla, K., Ulyanova, V.I. and Yuhno, L.Sz., Nonlinear self-adjoint spectral problem for differential-algebraic equations, *Differential Equations* 39 (7) (2003) 913-925.
47. Abramov, A.A., Balla, K., Ulyanova, V.I. and Yuhno, L.Sz., O nelinejnoj samosopryazhennoj spektral'noj zadache dlya odnogo klassa differencial'no-algebraicheskikh uravnenij, *Zhurnal Vychislitel'noj matematiki i matematicheskoy fiziki* 43(3) (2003) 410-421.  
Simultaneous English edition:  
Abramov, A.A., Balla, K., Ulyanova, V.I. and Yuhno, L. Sz., On a nonlinear self-adjoint eigenvalue problem for a class of differential algebraic equations, *Journal of Computational Mathematics and Mathematical Physics* 43(3) (2003) 391-402.
48. Balla, K., Kurina, G.A. and März, R., O samosopryazhennyh differencial'no-algebraicheskikh uravneniyah v gil'bertovom prostranstve, in: Trudy matematiceszkogo centra imeni N.I. Lobacsevszkogo. Tom 19. Teorija funkcij, ejo prilozsenija i smezsyne voprosy. Izd. Kazanskogo matematiceszkogo obscseszta. Kazany (2003) 26-28 (extended abstract).
49. Bozóki, S., A method for solving LSM problems of small size in the AHP, *Central European Journal of Operations Research* 11 (2003) 17-33.
50. Gerencsér, L., Molnár-Sáska, G., Michaletzky, Gy., Tusnády, G. és Vágó, Zs., Rejtett Markov modellek, III. Rész. Egyetemi jegyzet (2003). (Hidden Markov models. Part III. Notes (in Hungarian).)
51. Gerencsér, L., Rásonyi, M. and Vágó, Zs., Controlled Lyapunov exponents in finance, biology and optimization, in: Proceedings of the European Control Conference, ECC 2003, Cambridge, September 1-4, 2003 (CD).
52. Gerencsér, L., Rásonyi, M. and Vágó, Zs., Controlled Lyapunov exponents with application in optimization, finance and biology, in: Proceedings of the 11th Mediterranean Conference on Control and Automation, MED'03, T7-054, Rhodes, June 18-20, 2003 (CD).
53. Gyöngy, I. and Michaletzky, Gy., On the Wong-Zakai approximations with delta martingales, *Proc. R. Soc. London, A.* 460 (2003) 309-324.
54. Isac, G. and Németh, S.Z., Scalar derivatives and asymptotic scalar derivatives. Properties and some applications, *Journal of Mathematical Analysis and Application* 278 (2003) 149-170.
55. Kéri, G., and Östergard, P.R.J., On the covering radius of small codes, *Studia Scientiarum Mathematicarum Hungaria* 40 (2003) 243-256.
56. Mészáros, C. and Suhl, U.H., Advanced Preprocessing Techniques for Linear and Quadratic Problems, *OR SPECTRUM* 25 (2003) 557-595.
57. Michaletzky, Gy., Quasi-similarity of compressed shift operators, *Acta Sci. Math.* 69 (2003) 223-239.

58. Németh, S.Z, Variational inequalities on Hadamard manifolds, *Nonlinear Analysis: Theory, Methods and Applications* 52 (2003) 1491-1498.
59. Rapcsák, T., Mechanical equilibrium and equilibrium systems, in: Equilibrium problems and variational models, eds.: P. Daniele, F. Giannessi and A. Maugeri, *Kluwer Academic Publishers* (2003) 379-399.

## 2002

60. Abramov, A.A., Balla, K., Ulyanova, V.I. AND Yuhno L.Sz., O nelinejnoj samosopryazhennoj spektral'noj zadache dlya nekotoryh differencial'no-algebraicheskikh uravnenij indeksa 1, *Zhurnal Vychislitel'noj matematiki i matematicheskoy fiziki* 42(7) (2002) 996-1012.  
Simultaneous English edition:  
On a nonlinear self-adjoint eigenvalue problem for certain differential algebraic equations of index 1, *Journal of Computational Mathematics and Mathematical Physics* 42(7) (2002) 957-973.
61. Balla, K. and Horvát, Z., Approximate solutions to some second order linear recurrences, in: Applied mathematics and scientific computing. Proceedings of the second conference on applied mathematics and scientific computing. Dubrovnik, 2001, eds.: Z.Drmac et al., *Kluwer Academic Publishers*, Boston, (2002) 191-197.
62. Balla, K. and März, R., A unified approach to linear differential algebraic equations and their adjoints, *Zeitschrift für Analysis und ihre Anwendungen* 21(3) (2002) 783-802.
63. Balla, K., Kéri, G., and Rapcsák, T., Pollution of underground water - a computational case study using a transport model, *Journal of Hydroinformatics* 4(4) (2002) 255-263.
64. Ekárt, A. and Németh, S.Z., Maintaining the diversity of genetic programs, in: Genetic programming. 5<sup>th</sup> European conference. EuroGP 2002. Kinsale, 2002, eds.: J.A. Foster et al., Berlin, *Springer-Verlag* (2002) 162-171. (Lecture notes in computer science 2278.)
65. Gerencsér, L. and Michaletzky, Gy., Risk sensitive identification of ARMA processes, in: Lecture Notes in Control and Information Sciences. 286. Directions in Mathematical Systems Theory and Optimization eds.: A. Rantzer, A., Byrnes, C.I., *Springer-Verlag*, Heidelberg, 2002 (141-157).
66. Gerencsér, L., Hill, S.D. and Vágó, Zs., Discrete optimization, SPSA and Markov Chain Monte Carlo methods, in: Proceedings of the 41<sup>st</sup> IEEE conference on decision and control. Las Vegas, 2002. Piscataway, IEEE, (2002) 2346-2347 (CD).
67. Gerencsér, L., Kozmann, Gy., Vágó, Zs. and Haraszti, K., The use of the SPSA method in ECG analysis, *IEEE Transactions on Biomedical Engineering* 49(10) (2002) 1094-1101.
68. Gerencsér, L., Michaletzky, Gy. and Reppa, Z., A two-step maximum-likelihood identification of non-Gaussian systems, in: Proceedings of 15<sup>th</sup> IFAC World Congress, Barcelona 2002.
69. Gerencsér, L., Michaletzky, Gy. and Vágó, Zs., Risk sensitive identification of ARMA processes, Stockholm, *Royal Institute of Technology* (2002) 24. (TRITA/MAT-02-OS04.)
70. Gerencsér, L., Molnár-Sáska, G., Michaletzky, Gy., Tusnády, G. and Vágó, Zs., New methods for the statistical analysis of Hidden Markov models, in: Proceedings of the 41<sup>st</sup> IEEE conference on decision and control. Las Vegas, 2002. Piscataway, IEEE, (2002) 2272-2277 (CD).

71. Gerencsér, L., Vágó, Zs. and Hjalmarsson, H., Randomization methods in optimization and adaptive control, in: Stochastic theory and control. Proceedings of a workshop. Lawrence, 2001, ed.: B. Pasik-Duncan. Berlin, *Springer-Verlag* (2002) 137-153. (Lecture notes in control and information sciences 280.)
72. Gerencsér, L., Vágó, Zs. and Hjalmarsson, H., Randomized iterative feedback tuning, in: 15<sup>th</sup> triennial world congress of the International Federation of Automatic Control. Barcelona, 2002, eds.: E.F. Camacho, L. Basanez, J.A. de la Puente, Barcelona, IFAC, 2002 (CD).
73. Gombani, A. and Michaletzky, Gy., On some interpolation problems, in: Electronic proceedings of 15<sup>th</sup> international symposium on the mathematical theory of networks and systems. South Bend, 2002, eds.: D.S. Gilliam, J. Rosenthal, South Bend, *Univ. of Notre Dame* (2002) 1-15.
74. Kozmann, Gy., Haraszti, K., Gerencsér, L. and Vágó, Zs., Evaluation of a new signal processing approach of high-resolution BSPM, *International Journal of Bioelectromagnetism* 4(2) (2002) 129-130.
75. Michaletzky, Gy. and Gerencsér, L., Bibo stability of switching systems, *IEEE Transactions on Automatic Control* 47(11) (2002) 1895-1898.
76. Prill, M., Operációkutatási eszközök alkalmazása villamosenergia-termelő rendszerek tervezési feladatainak megoldása során. Ph.D. értekezés, Budapest, *Eötvös Loránd Tudományegyetem* (2002) 9. (Application of Operations Research Methods in Solving Planning Problems of Electric Power Generating Systems, Ph.D. Theses (in Hungarian).)
77. Rapcsák, T., Egerváry Jenő élete és munkássága, *Szigma* 1-2 (2002) 1-12. (Path of life and scientific activity of Jenő Egerváry (in Hungarian).)
78. Rapcsák, T., On minimization on Stiefel manifolds, *European Journal of Operational Research* 143(2) (2002) 365-376.

## 2001

79. Csiszár, I., Tusnády, G., Michaletzky, Gy., Ispány, M., Verdes, E. and Rudas, T., Divergence minimization under prior inequality constraints, in: ISIT 2001, IEEE international symposium on information theory. Proceedings. Washington. 2001. Piscataway, IEEE, (2001) 21.
80. Ekárt, A. and Németh, S.Z., A noncontinuous generalization of the arithmetic-geometric mean, *Applied Mathematics and Computation* 124(2) (2001) 261-279.
81. Ekárt, A. and Németh, S.Z., A noncontinuous generalization of the arithmetic-geometric mean, *Applied Mathematics and Computation* 124(2) (2001) 261-279.
82. Ekárt, A. and Németh, S.Z., Selection based on the Pareto nondomination criterion for controlling code growth in genetic programming, *Genetic Programming and Evolvable Machines* 2 (2001) 61-73.
83. Ekárt, A. and Németh, S.Z., Stability of distributive and ideal AHP models with respect to the addition of a new alternative, in: ISAHP 2001. 6<sup>th</sup> international symposium on the analytic hierarchy process. Proceedings. Berne, 2001. Berne, (2001) 87-91.
84. Ekárt, A. and Németh, S.Z., Stability of tree based decision principles, in: Decision Analysis and Artificial Intelligence. *Proceedings of the XIXth Euro Summer Institute. Toulouse*, 2001. *Toulouse, IRIT*, (2001) 65-73.

85. Fülöp, J. and Temesi, J., A data envelopment analysis (DEA) alkalmazása ipari parkok hatékonyságának vizsgálatára, *Szigma* 32 (3-4) (2001) 85-109. (Data envelopment analysis for evaluating the efficiency of industrial parks in Hungary (in Hungarian).)
86. Gerencsér, L. and Vágó, Zs., A stochastic approximation method for noise-free optimization, in: ECC 2001. Proceedings of the European control conference. Porto, 2001. Porto, *EUCA* (2001) 1496-1500.
87. Gerencsér, L. and Vágó, Zs., Non-smooth optimization with randomization, in: Optimization theory, Recent development from Mátraháza, eds.: F. Giannessi, P. Pardalos, T. Rapcsák, Dordrecht, *Kluwer Academic Publisher* (2001) 111-117. (Applied optimization 59.)
88. Gerencsér, L. and Vágó, Zs., The mathematics of noise-free SPSA, in: Proceedings of the 40<sup>th</sup> IEEE conference on decision and control, Orlando, 2001. Piscataway, IEEE, (2001) 4400-4405 (CD).
89. Gerencsér, L., Hill S.D. and Vágó, Zs., Discrete optimization via SPSA, in: ACC 2001. Proceedings of the American Control Conference. Arlington, 2001. Arlington, AAC, (2001) 1503-1504.
90. Gerencsér, L., Michaletzky, Gy., Molnár-Sáska és Vágó, Zs., Rejtett Markov modellek. Egyetemi jegyzet. Budapest, *ELTE TTK Valószinűség-számítási Tanszék* (2001) 54. (Hidden Markov models. Lecture Notes (in Hungarian).)
91. Kéri, G., The Sherman-Morrison formula for the determinant and its application for optimizing quadratic functions on condition sets given by extreme generators, in: Optimization theory, Recent development from Mátraháza, eds.: F. Giannessi, P. Pardalos, T. Rapcsák. Applied optimization 59., Dordrecht, *Kluwer Academic Publishers* (2001) 119-138.
92. Márton, S. and Rapcsák, T., The possible effect of a turbine testing plant on the quality of the air. A case-study for air pollution transmissions, *ERCIM News* 46 (2001) 72-73.
93. Mészáros, C. and Gondzio, J., Addendum to "Presolve analysis of linear programs prior to applying an interior point method", *Informs Journal on Computing* 13(2) (2001) 169-170.
94. Michaletzky, Gy., Kockázati folyamatok, Egyetemi jegyzet, Budapest, *Eötvös Kiadó* (2001) 164. (Risk processes. Lecture Notes (in Hungarian).)
95. Németh, S.Z., Characterization of monotone operators by using a special class of preinvex functions, in: Optimization theory, Recent development from Mátraháza, eds.: F. Giannessi, P. Pardalos, T. Rapcsák, Dordrecht, *Kluwer Academic Publishers* (2001) 147-157. (Applied optimization 59.)
96. Németh, S.Z., Homeomorphisms and monotone vector fields, *Publicationes Mathematicae* 58(4) (2001) 707-716.
97. Németh, S.Z., Rapcsák, T. and Temesi, J., A Gazdaságfejlesztési Pályázat hatékonyságának vizsgálata, *Szigma* 32(1-2) (2001) 13-28. (Modelling efficiency of economic development tenders (in Hungarian).)
98. Rapcsák, T., Convexification of functions by nonlinear coordinate transformations, in: Optimization Theory, eds.: F. Giannessi, P. Pardalos and T. Rapcsák, *Kluwer Academic Publishers* (2001) 179-189.
99. Rapcsák, T., Minimalizálás Stiefel sokaságon, Közgyűlési előadások 2000, Operációkutatás, Millennium az Akadémián, *Magyar Tudományos Akadémia* (2001) 525-537. (On minimization on Stiefel manifolds, in: Lectures delivered at Assembly Meeting 2000, Millennium at the Academy (in Hungarian).)

100. Rapcsák, T., On minimization of sums of heterogeneous quadratic function on Stiefel manifolds, in: From local to global optimization, eds.: A. Migdalas, P. Pardalos and P. Varbrand, *Kluwer Academic Publishers* (2001) 277-290.
101. Rapcsák, T., On minimization of sums of heterogeneous quadratic function on Stiefel manifolds, in: From local to global optimization, eds.: A. Migdalas, P. Pardalos and P. Varbrand, *Kluwer Academic Publishers* (2001) 277-290.
102. Rapcsák, T., Smooth nonlinear nonconvex optimization, in: Encyclopedia of Optimization eds.: C.A. Floudas and P.M. Pardalos, *Kluwer Academic Publishers* 5 (2001) 234-237.
103. Vágó, Zs., Ökonometriai módszerek. Egyetemi jegyzet, Budapest, *Műszaki és Gazdaságtudományi Egyetem* (2001) 45. (Econometric methods. Lecture Notes (in Hungarian).)
104. Zsuffa, I. and Rapcsák, T., A Tápió patak vízjárásának matematikai statisztikai jellemzése, *Hidrológiai Közlöny* 81(2) (2001) 73-84. (Statistical characterization of the hidrological data of Tápió river (in Hungarian).)

## 2000

105. Balla, K. and März, R., Linear differential algebraic equations of index 1 and their adjoint equations, *Results in Mathematics* 37 (2000) 13-35.
106. Ekárt, A. and Németh, S.Z., A metric for genetic programs and fitness sharing, in: Genetic programming, European conference, EuroGP 2000. Proceedings. Edinburgh, 2000. eds.: R. Poli, at al., Berlin, *Springer-Verlag* (2000) 259-270. (Lecture notes in computer science 1802.)
107. Fülöp, J. and Muu, L.D., Branch-and-bound variant of an outcome-based algorithm for optimizing over the efficient set of a bicriteria linear programming problem, *Journal of Optimization Theory and Applications* 105(1) (2000) 37-54.
108. Fülöp, J. and Prill, M., Linearized segmentation method for probabilistic production cost simulation, *International Journal of Electrical Power and Energy Systems* 22 (2000) 471-481.
109. Gerencsér, L. and Michale茨ky, Gy., BIBO stability of switching systems. Royal Institute of Technology, Department of Mathematics. Preprint TRITA/MAT-00-OS20. Stockholm, *Royal Inst. of Techn.* (2000) 9.
110. Gerencsér, L. and Vágó, Zs., SPSA in noise free optimization, in: Proceedings of the American control conference. Chicago, 2000. Chicago, IEEE, (2000) 3284-3288 (CD).
111. Imreh, B., Fülöp, J. and Friedler, F., A note on the equivalence of the set covering and process network synthesis problems *Acta Cybernetica* 14 (2000) 497-501.
112. Kéri, G. and Rapcsák, T., A talajvíz-szennyeződés modellezése és számítása Nagykáta térségében, *Alkalmazott Matematikai Lapok* 20 (2000) 61-73. (Modelling of ground-water pollution in the area of Nagykáta (in Hungarian).)
113. Mastroeni, G. and Rapcsák, T., On convex generalized systems, *Journal of Optimization Theory and Applications* 104(3) (2000) 605-627.

114. Michaletzky, Gy., Kimura-Georgiou parametrization of the solutions of the Nevanlinna-Pick interpolation problem in the multivariate case, in: Proceedings of the fourteenth international symposium of mathematical theory of networks and systems, eds.: A.E. Jai, M. Fliess, MTNS 2000. Perpignan, 2000, Perpignan, LTS, (2000) 5 (CD).
115. Németh, S.Z., Bäcklund transformations of constant torsion curves in 3-dimensional constant curvature spaces, *Italian Journal of Pure and Applied Mathematics* (7) (2000) 125-138.
116. Rapcsák, T., Global Lagrange multiplier rule and smooth exact penalty functions for equality constraints, in: Nonlinear optimization and related topics, eds.: G. Di Pillo and F. Giannessi, *Kluwer Academic Publishers* (2000) 351-368.
117. Rapcsák, T., On vector complementarity systems and vector variational inequalities, in: Vector variational inequalities and vector equilibria, Mathematical theories, ed.: F. Giannessi, *Kluwer Academic Publishers* (2000) 371-380.
118. Rapcsák, T., Sági, Z., Tóth, T. and Kétszeri, L., Evaluation of tenders in information technology, *Decision Support Systems* 30 (2000) 1-10.
119. Vágó, Zs., Ökonometriai módszerek. Oktatási segédlet. Budapest, *Műszaki és Gazdaságtudományi Egyetem* (2000) 54. (Econometric methods. Theacher's guide (in Hungarian).)

### **1999**

120. Balla, K., Characterization of solutions in the discretization of a parabolic equation on an infinite strip, *Computers and Mathematics with Applications* 38(9-10) (1999) 101-106.
121. Balla, K., Kéri, G., Németh, E., Rapcsák, T., Sági, Z., Tóth, T. and Verrasztó, Z., A Ráckevei (Soroksári) Duna-ág vízminőségi modellezése többkritériumú döntési módszerek felhasználásával, *Sigma* (30)4 (1999) 135-159. (Multiattribute decision making for analysing the water quality of the Danube branch at Ráckeve-Soroksár (in Hungarian).)
122. Gerencsér, L. and Vágó, Zs., Adaptive control of multivariable linear stochastic systems. A strong approximation approach, in: European control conference. ECC '99. *Conference proceedings*. Karlsruhe, 1999. Karlsruhe, EUCA, 1999 (CD).
123. Gerencsér, L. and Vágó, Zs., Stochastic approximation for function minimization under quantization error, in: 38<sup>th</sup> IEEE conference on decision and control. Conference proceedings. Phoenix, 1999. Phoenix, IEEE, (1999) 2373-2377.
124. Gerencsér, L., Hill, S.D. and Vágó, Zs., Optimization over discrete sets via SPSA, in: 38<sup>th</sup> IEEE conference on decision and control, *Conference proceedings*. Phoenix, 1999. Phoenix, IEEE, (1999) 1791-1795.
125. Gerencsér, L., Hill, S.D. and Vágó, Zs., Optimization over discrete sets via SPSA, in: Proceedings of the 1999 winter simulation conference, eds.: P.A. Farrington et al., Phoenix, 1999. ACM, New York, (1999) 466-470.
126. Gerencsér, L., Kozmann, Gy. and Vágó, Zs., Non-smooth optimization via SPSA, in: Mathematical theory of networks and systems, eds.: A. Beghi, L. Finesso, G. Picci, Proceedings of the MTNS-98 symposium. Padova, 1998. Padova, Il Poligrafo, (1999) 803-806.

127. Gerencsér, L., Michaletzky, Gy. and Rásonyi, M., Model uncertainty and performance in option pricing, in: 38<sup>th</sup> IEEE conference on decision and control. *Conference proceedings*. Phoenix, 1999. Phoenix, IEEE, (1999) 3964-3965.
128. Kéri, G., Orsovai, I. and Rapcsák, T., Egy transzportmodell alkalmazása a Gyál térségében létesítendő hulladéklerakó esetleges talajszennyező hatásának vizsgálatára, Esettanulmány, *Alkalmazott Matematikai Lapok* 19 (1999) 169-183. (Application of a transport model to examine the possible soil pollution of a waste-material depository (A case-study) (in Hungarian).)
129. Konyukhova, N.B., Linh, V.H. AND Staroverova, I.B., O modifikacijah fazovogo metoda v zadachakh kvantovoj fiziki, *Zhurnal Vychislitel'noj Matematiki i Matematicheskoy Fiziki* 39(3) (1999) 492-522.
130. Lindquist, A. and Michaletzky, Gy., Stochastic model reduction, in: Mathematical theory of networks and systems, eds.: A. Beghi, L. Finesso, G. Picci. Proceedings of the MTNS-98 symposium. Padova, 1998. Padova, Il Poligrafo, (1999) 831-834.
131. Maros, I. and Mészáros, C., A repository of convex quadratic programming problems, *Optimization Methods and Software* 11-12 (1999) 671-681.
132. Maros, I. and Mészáros, C., QPDATA. A repository of convex quadratic problems, *Optimization Methods and Software* 11-12 (1999) (CD Suppl.) Test sets section.
133. Mészáros, C., BPMPD version 2.21, *Optimization Methods and Software* 11-12 (1999) (CD Suppl.) Software section.
134. Mészáros, C., Rapcsák, T. and Sági, Z., Pollution transmission in the air, in: Large scale computations in air pollution modelling, eds.: Z. Zlatev et al., Dordrecht, *Kluwer Academic Publishers* (1999) 235-247.
135. Mészáros, C., Steplengths in interior-point algorithms of quadratic programming, *Operations Research Letters* 25 (1999) 39-45.
136. Mészáros, C., The BPMPD interior point solver for convex quadratic programming problems, *Optimization Methods and Software* 11-12 (1999) 431-449.
137. Mészáros, C., The BPMPD interior point solver for convex quadratic problems, *Optimization Methods and Software* 11-12 (1999) 431-449.
138. Németh, S.Z., Five kinds of monotone vector fields, PU.M.A. Pure Mathematics and Applications, *Mathematics of Optimization* 9(3-4) (1999) 417-428.
139. Németh, S.Z., Geodesic monotone vector fields, *Lobachevskii Journal of Mathematics* 5 (1999) 13-28.
140. Németh, S.Z., Monotone vector fields, *Publicationes Mathematicae* 54(3-4) (1999) 437-449.
141. Németh, S.Z., Monotonicity of the complementarity vector field of a nonexpansive map, *Acta Mathematica Hungarica* 84(3) (1999) 189-197.
142. Rapcsák, T., Mechanikai egyensúly és egyensúlyi rendszerek, Új utak a magyar operációkutatásban, in memoriam Farkas Gyula, szerk.: Komlósi Sándor és Szántai T., *Dialóg Campus Kiadó* (1999) 32-42. (Mechanical equilibrium and equilibrium systems, in: New trends of operations research in Hungary; In memoriam Farkas Gyula, eds.: S. Komlósi and T. Szántai (in Hungarian).)

## 1998

143. Csáki, P., Fölsz, F., Rapcsák, T. and Sági, Z., On tender evaluations, *Journal of Decision Systems* 7 (1998) 179-194.
144. Gerencsér, L., Michaletzky, Gy. and Vágó, Zs., The algebra of risk sensitive identification, in: Mathematical theory of networks and systems, eds.: A. Beghi, L. Finesso, G. Picci, Proceedings of the MTNS-98 symposium. Padova, 1998 Padova, Il Poligrafo, (1999) 807-810.
145. Mészáros, C., On free variables in interior point methods, *Optimization Methods and Software* 4 (1998) 121-139.
146. Mészáros, C., Ordering heuristics in interior point LP methods, in: *New Trends in Mathematical Programming*, (eds.: F. Gianessi, S. Komlósi and T. Rapcsák), Kluwer Academic Publishers, (1998) 203-221.
147. Maros, I. and Mészáros, C., The Role of the Augmented System in Interior Point Methods. 1996. *European Journal of Operations Research* 107 (1998) 720- 736

## Books

1. Maros, I, Computational Techniques of the Simplex Method, *Kluwer Academic Publishers*, Boston, (2003) 352 p.
2. Michaletzky, Gy., Bokor, J., and Várlaki, P., Representability of stochastic systems, Budapest, Akad. K., (1998) 228 p.
3. Rapcsák, T., Smooth nonlinear optimization in R<sup>n</sup>, Kluwer Academic Publishers (1997) 374 p.
4. Andersen, E., Gondzio, J., Mészáros, C. and Xiaoije X.: Implementation of interior point methods for linear programming. in: *Interior Point Methods in Mathematical Programming*, (ed. T. Terlaky) Kluwer Academic Publisher, 1996. pp. 189-252.

## Editorial work

1. Balla, K., Galántai, A., Szabó, B. AND Szeidl, Gy., eds.: *Journal of Computational and Applied Mechanics* 4(1) (2003).
2. Illés, T., Rapcsák, T. and Terlaky T., eds.: Continuous optimization, *European Journal of Operation Research* 143 (2) (2002).
3. Giannessi, F., Pardalos, P. and Rapcsák, T., eds.: Optimization theory. Recent development from Mátraháza. Dordrecht, *Kluwer Academic Publishers*, 2001. VII, 278 p. (Applied optimization 59.)
4. Prékopa, A. and Rapcsák, T., eds.: Operációkutatás, Közgyűlési előadások 2000, Millennium az Akadémián, 2001. (*Operations Research* 2000. Hungarian Academy of Sciences (in Hungarian).)
5. Szabó, B., Balla, K., Galántai, A. and Szeidl, Gy., eds.: Numerical methods and computational mechanics, *International Journal Computers and Mathematics with Applications* 42(8/9) (2001).
6. Csendes, T. and Rapcsák, T., eds.: Proceedings of the XXIV. Hungarian operations research conference. Veszprém, 1999. Special issue, *Central European Journal of Operations Research* 8(1) (2000).
7. Giannessi, F., Rapcsák, T. and Komlósi S., eds.: New trends in equilibrium systems, *Kluwer Academic Publishers*, 1998, 314. p. (Applied optimization 13.)

## Translation

Borovkov, A.A., Matematicheskaya statistika, Nauka, Moscow, 1984. I. 472p., II. 142 p., Transl. by Michaletzky, Gy., Typotex, (1999) 635p.