Hamilton, 16 July, 2008.

Publications of Tamás Terlaky

1 Books

1. C. Roos, T. Terlaky, and J.-Ph. Vial: *Interior Point Approach to Linear Optimization: Theory and Algorithms*, John Wiley & Sons, Chichester, New York, 1997 (second print 1998).

2. J. Peng, C. Roos and T. Terlaky: *Self-Regularity: A New Paradigm for Primal-Dual Interior Point Methods*, Princeton University Press, 2002.

3. E. de Klerk, C. Roos, and T. *Terlaky: Nemlineáris Optimalizálás,* (in Hungarian, English title: Nonlinear Optimization), Aula Publishing, Budapest, Hungary, 2004.

4. C. Roos, T. Terlaky, and J.-Ph. Vial: *Interior Point Methods for Linear Optimization*, Springer Science, Heidelberg/Boston, 2006. *(Note: This book is a significantly revised new edition of #1.)*

2 Lecture Notes

1. C. Roos and T. Terlaky: *Inleiding Operationele Analyse*, Delft University of Technology, The Netherlands, 1996 (reprinted 1997, 1998, 1999, 2000, 2001). (in Dutch, English title: Introduction to Operations Research).

2. C. Roos and T. Terlaky: *Nonlinear Optimization*, Delft University of Technology, The Netherlands, 1997 (reprinted 1998, 1999).

3. E. de Klerk, C. Roos, and T. Terlaky: *Nonlinear Optimization*, Delft University of Technology, The Netherlands, 2001 (reprinted 2002, 2003, 2004, also at the University of Waterloo, 2004, 2005).

3 Edited Books, Volumes

1. T. Terlaky (editor): *Interior Point Methods in Mathematical Programming*, Kluwer Academic Publisher, Dordrecht, The Netherlands 1996.

2. F. Potra, C. Roos and T. Terlaky (Guest eds.): *Interior Point Methods*, A special volume of *Optimization Methods and Software*, Vol.11 & 12. (1999), Gordon and Breach.

3. J.B.G. Frenk, C. Roos, T. Terlaky and S. Zhang (editor): *High Performance Optimization*, Kluwer Academic Publisher, Dordrecht, The Netherlands 1999.

4 Edited Special Issues

1. B. Karasozen, M. Duer, T. Terlaky, and G.W. Weber (Guest Eds.): Special issue of *European Journal of Operational Research* 181/3, 2007, devoted to the workshop *Challenges of Continuous Optimization in Theory and Applications, Rhodos, 2004.*

2. B. Karasozen, G.W. Weber, M. Pinar and T. Terlaky (Guest Eds.): Special issue of *European Journal of Operational Research* 169/3, 2006, devoted to the workshop *Advances on Continuous Optimization, Istanbul, 2003.*

3. G. Still, J.G.B. Frenk and T. Terlaky (Guest Eds.): Special issue of *European Journal of Operational Research* 1xx/x, 2003, (available online 6 November, 2003) devoted to the *International Workshop on Smooth and Nonsmooth Optimization, Rotterdam, 2001.*

4. T. Illés, T. Rapcsák and T. Terlaky (Guest Eds.): Special issue of *European Journal of Operational Research* 143/2, 2002, devoted to the workshop *Interior Point Methods 2000, Budapest.*

5. C. Roos and T. Terlaky (Guest eds.): Special issue of *Applied Numerical Mathematics* Vol 29(3). dedicated to the HPOPT-I workshop held in Delft, 19-20 September 1996.

5 Contributions to Books

1. Interior Point Methodology for Linear Programming: Duality, Sensitivity Analysis and Computational Aspects (1993). In *Optimization in Planning and Operation of Electric Power Systems*, Eds. K. Frauendorfer, H. Glavitsch and R. Bacher. Physica–Verlag, 57–124. (Joint work with B. Jansen, C. Roos and J.-Ph. Vial).

2. Adding and Deleting Constraints in the Path–Following Method for Linear Programming (1994). In *Advances in Optimization and Approximation*, Eds. D. Du and J. Sun, 166–185. (Joint work with D. den Hertog and C. Roos).

3. Computational View of Interior Point Methods (1996). In *Advances in Linear and Integer Programming* , Ed. J. Beasley. Oxford University Press, Oxford, England, 103–144. (Joint work with J. Gondzio).

4. Target-following algorithms for linear programming (1996). In T. Terlaky, editor, *Interior Point Methods of Mathematical Programming*, pages 83–124. Kluwer Academic Publishers, Dordrecht, The Netherlands. (Joint work with B. Jansen and C. Roos.)

5. Introduction to the theory of interior point methods (1996). In T. Terlaky, editor, *Interior Point Methods of Mathematical Programming*, pages 3–34. Kluwer Academic Publishers, Dordrecht, The Netherlands. (Joint work with B. Jansen and C. Roos.)

6. Advances in linear optimization (1997). In M. Del. Amico, F. Maffioli, S. Martello, eds., *Annotated Bibliographies in Combinatorial Optimization*, pages 95–114. John Wiley and Sons, (Joint work with C. Roos.)

7. The optimal set and optimal partition approach (1997) Chapter 6 in: H.J. Greenberg and T. Gal, eds., *Advances in Sensitivity Analysis and Parametric Programming*, 6.1–6.44. Kluwer Academic Publishers, Dordrecht, The Netherlands. (Joint work with A.B. Berkelaar and C. Roos).

8. Polynomial affine scaling algorithms for $P_*(\kappa)$ linear complementarity problems (1997). In *Lecture Notes in Economics and Mathematical Systems* Vol. 452. Springer Verlag. Eds. P. Grintzman, R. Horst, E. Sacs and R. Tichatschke, *Recent Advances in Optimization* 119–137. (Joint work with T. Illés and C. Roos).

9. A short survey on semidefinite programming (1997). In CWI TRACT Vol 122, Eds. W.K. Klein Haneveld, O.J. Vrieze, L.C.M. Kallenberg, *Ten Years of LNMB, Ph.D. research and graduate courses of the Dutch Network of Operations Research*, 323–339. (Joint work with E. de Klerk and C. Roos).

10. On primal–dual path–following algorithms for semidefinite programming (1998). In *New Trends in Mathematical Programming*, 137–157. Proceedings of XIII. International Conference on Mathematical Programming, Mátraháza, Hungary. Eds. F. Gianessi, T. Rapcsák and S. Komlósi, Kluwer Academic Publishers (1998) (Joint work with E. de Klerk and C. Roos).

11. Infeasible–start semidefinite programming algorithms via self-dual embeddings, (1998). In: Fields Institute Communications, Vol. 18, *American Mathematical Society*(1998) ISBN: 0-8218-0825-7. Eds. H. Wolkowicz and P.M. Pardalos: *Topics*

in Semidefinite and Interior Point Methods, 215–237. (Joint work with E. de Klerk and C. Roos).

12. New complexity analysis of primal–dual Newton methods for $P_*(\kappa)$ linear complementarity problems. In *High Performance Optimization Techniques* 245–266. Eds.: J.B.G. Frenk, C. Roos, T. Terlaky and S. Zhang. Kluwer Academic Publishers, Dordrecht (1999). (Joint work with J. Peng and C. Roos).

13. A logarithmic barrier approach to Fischer function. In *Nonlinear Optimization and Applications 2* 277–298. Eds.: G. di Pillo and F. Gianessi. Kluwer Academic Publishers, Dordrecht (1999). (Joint work with J. Peng and C. Roos).

14. A simple treatment of the theory of interior point methods (In memoriam György Sonnevend). In *New Roads in the Hungarian Operations Research* Eds.: S. Komlósi and T. Szántai. Dialog Campus P.C. Pécs, Hungary (1999) 97–131. In Hunagrian.

15. Least index anti-cycling rules.
In *Encyclopedia of Optimization*, P.M. Pardalos and C. Fludas (eds.), 151–155, Kluwer Academic Publishers, 1999.

16. Principal pivoting methods for linear complementarity problems.
In *Encyclopedia of Optimization*, P.M. Pardalos and C. Fludas (eds.), 363–368, Kluwer Academic Publishers, 1999.

17. Criss-Cross pivoting rules.
In *Encyclopedia of Optimization*, P.M. Pardalos and C. Fludas (eds.), 361–366 361–366, Kluwer Academic Publishers, 1999.

18. Lexicographic pivoting rules.
In *Encyclopedia of Optimization*, P.M. Pardalos and C. Fludas (eds.), 173–177, Kluwer Academic Publishers, 1999.

19. Interior-point methods.
In *Encyclopedia of Operations Research and Management Science*, 2nd edition, S. Gass and C. Harris (eds.), Kluwer Academic Publishers, 402–411, 2000. (Joint work with P. Boggs.)

20. A homogenized cutting plane method to solve the convex feasibility problem. (Joint work with J.E. Mitchell, E.D. Andersen and C. Roos). In: *Optimization methods and applications, chapter 10*, 2001, 167–190, Eds. X.Q. Yang, K.L. Teo, and L. Caccetta.)

21. Self-dual embeddings. In: *Handbook of Semidefinite Programming*, (2000) Vol. 27 in: International Series in Operations research and Management Science Series editor F.S. Hillier Volume: 27 ISBN: 07923-7771-0. Eds. H. Wolkowicz, R. Saigal and L. Vandenberghe, 111–138. Kluwer Academic Publishers, 2000. (Joint work with E. de Klerk and C. Roos).

22. IPM 2000: Continuous Optimization. (Joint with T. Illés and T. Rapcsák) *European Journal of Operational Research*, 143/2, 231–233, 2002.

23. Linear Programming: Introduction. In.: Eds. P.M. Pardalos and M.G.C. Resende, *Handbook of Applied Optimization*, Oxford University Press, New York, 1–6, 2002.
The book was awarded honorable mention by the Associate of American Publishers' (AAP) in the category "Outstanding Professional and Scholarly Titles of 2002 in Computer Science".

24. Simplex-type algorithms. In Eds. P.M. Pardalos and M.G.C. Resende, *Handbook of Applied Optimization*, Oxford University Press, 7–20, 2002.
The book was awarded honorable mention by the Associate of American Publishers' (AAP) in the category "Outstanding Professional and Scholarly Titles of 2002 in Computer Science".

25. The use of low-rank updates in interior-point methods, In: Ed. Y. Yuan, *Numerical Linear Algebra and Optimization* (Science Press, Beijing, China), 1–12, 2004. (Joint work with E.D. Andersen, C. Roos, T. Trafalis and J.P. Warners.)

26. Interior Point and Semidefinite Approaches in Combinatorial Optimization. In: Eds. D. Avis, A. Hertz and O. Marcotte, Graph Theory and Combinatorial Optimization, Springer, 101–158, 2005. (Joint work with K. Krishnan).

27. Central path curvature and iteration-complexity for redundant Klee-Minty cubes. To appear in eds.: D. Gao and H. Sherali, *Advances in Mechanics and Mathematics*, Vol. III. Springer 215–248, (2007). Joint work with A. Deza, and Y. Zinchenko.

28. The gVERSE RF pulse: An optimal approach to MRI pulse design. To appear in eds.: H.G. Bock, E. Kostina, H.X. Phu, R. Rannacher, Modeling, Simulation and Optimization of Complex Processes. Proceedings of the International Conference on High Performance Scientific Computing, March 6-10, 2006, Hanoi, Vietnam. Springer, 2008. (Joint work with C.K. Anand and S. Stoyan).

29.

30. Interior Point Methods for Nonlinear Optimization. CIME School on Nonlinear Optimization, Springer, (Joint work with Imre Pólik)

6 Publications in Refereed Journals

Publications in English

1. On l_p Programming (1985). *European Journal of Operational Research* 22. 70–100.

2. A Convergent Criss–Cross Method (1985). *Mathemathische Operationsforschung und Statistics ser. Optimization* 16. 5. 683–690.

3. Smoothing Empirical Functions by *lp* Programming (1986). *European Journal of Operational Research* 27. 343–363.

4. A Finite Criss–Cross Method for Oriented Matroids (1987). *Journal of Combinatorial Theory* **B** 42, No.3. 319–327.

5. A New Algorithm for Quadratic Programming (1987). *European Journal of Operational Research* Vol. 32. No. 2. 294–301.

6. Remarks on the Feasibility Problems of Oriented Matroids (1987). *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae Sectio Computatorica* Tom VII. 155–157. (Joint work with E. Klafszky)

7. Variants of the Hungarian Method for Linear Programming (1989). *Mathemathische Operationsforschung und Statistics ser. Optimization* 20. No.1. 79–91. (Joint work with E. Klafszky)

8. Some Generalizations of the Criss–Cross Method for the Linear Complementarity Problem of Oriented Matroids (1989). *Combinatorica* 9(2). 189–198. (Joint work with E. Klafszky)

9. Linearly Constrained Estimation by Mathematical Programming (1989). *European Journal of Operational Research* 254–267. (Joint work with E. Klafszky and J. Mayer)

10. A New Convergent Algorithm for the Continuous Modular Design Problem, (1990). *The Arabian Journal for Science and Engineering* 15. No. 4B. 687–694. (Joint work with E. Klafszky and J. Mayer)

11. The Role of Pivoting in Proving Some Fundamental Theorems of Linear Algebra (1991). *Linear Algebra and Its Applications* 151. 97–118. (Joint work with E. Klafszky)

12. A Potential Reduction Variant of Renegar's Short–Step Path–Following Method for Linear Programming (1991). *Linear Algebra and Its Applications* 68. 43–68. (Joint work with D. den Hertog and C. Roos)

13. A Polynomial Method of Weighted Centers for Convex Quadratic Programming (1991). *Journal of Information and Optimization Sciences* 12. 187–205. (Joint work with D. den Hertog and C. Roos)

14. Some Generalizations of the Criss–Cross Method for Quadratic Programming (1992). *Mathemathische Operationsforschung und Statistics ser. Optimization* 24. 127–139. (Joint work with E. Klafszky)

15. A Geometric Programming Approach to the Channel Capacity Problem (1992). *Engineering Optimization* 19. 115–130. (Joint work with E. Klafszky and J. Mayer)

16. A Large–Step Analytic Center Method for a Class of Smooth Convex Programming Problems (1992). *SIAM Journal on Optimization* 2(1). 55–70. (Joint work with D. den Hertog and C. Roos)

17. On the Classical Logarithmic Barrier Function Method for a Class of Smooth Convex Programming Problems (1992). *JOTA* 73. 1–25. (Joint work with D. den Hertog and C. Roos)

18. A Build–Up Variant of the Path–Following Method for LP (1992). *Operations Research Letters* 12. 181–186. (Joint work with D. den Hertog and C. Roos)

19. Linear Complementarity and Oriented Matroids (1992). *Japanese Journal of Operations Research* 35. 45–61. (Joint work with K. Fukuda)
Selected as "The best OR paper of the year 1992" by The Operations Research Society of Japan.

20. On the Monotonicity of the Dual Objective Along Barrier Path (1992). *COAL Bulletin* 20. 2–8. (Joint work with D. den Hertog and C. Roos)

21. The Linear Comlementarity Problem, Sufficient Matrices and the Criss–Cross Method (1993). *Linear Algebra and Its Applications* 187. 1–14. (Joint work with D. den Hertog and C. Roos)

22. A Long Step Barrier Method for Convex Quadratic Programming (1993). *Algorithmica* 10. 365–382. (Joint work with K.M. Anstreicher, D. den Hertog and C. Roos)

23. Degeneracy in Interior Point Methods (1993). *Annales of Operations Research* 46. 107–138. (Joint work with D. den Hertog, O. Güler, C. Roos and T. Tsuchiya)

24. Pivot Rules for Linear Programming – A Survey (1993). *Annales of Operations Research* 46. 203–233. (Joint work with S. Zhang)

25. The Theory of Linear Programming: Skew Symmetric Self–Dual Problems and the Central Path (1993). *Optimization* 29. 225–233. (Joint work with B. Jansen and C. Roos)

26. An Investigation of Interior Point Algorithms for the Linear Transportation Problems (1993). *SIAM Journal on Computing* 17(5). 1202–1223. (Joint work with L. Portugal, F. Bastos, J. Judice and J. Paixõ)

27. A Monotonic Build-Up Simplex Algorithm (1994). *Operations Research* 42. 556–561. (Joint work with K.M. Anstreicher)

28. Inverse Barrier Methods for Linear Programming (1994). *Revue RAIRO – Operations Research* 28. 135–163. (Joint work with D. den Hertog and C. Roos)

29. Primal–Dual Algorithms for Linear Programming Based on the Logarithmic Barrier Method (1994). *Journal of Optimization Theory and Applications* 83. 1–26. (Joint work with B. Jansen, C. Roos and J.-Ph. Vial)

30. Pseudoconvex Optimization for a Special Problem of Paint Industry (1994). *European Journal of Operational Research* 79. 537–548. (Joint work with T. Illés and J. Mayer)

31. A Logarithmic Barrier Cutting Plane Method for Convex Programming (1995). *Annals of Operations Research* 58. 69–98. (Joint work with D. den Hertog, J. Kaliski and C. Roos)

32. A Survey of the Implications of the Behavior of the Central Path for the Duality Theory of Linear Programming (1995). *Management Science* 41. 1922–1934. (Joint work with O. Güler, C. Roos and J.-Ph. Vial)

33. A Sufficient Condition for Self–Concordance with Application to Some Classes of Structured Convex Programming Problems (1995). *Mathematical Programming* 69. 75–88. (Joint work with D. den Hertog, F. Jarre and C. Roos)

34. A Polynomial Dikin–Type Primal–Dual Algorithm for Linear Programming (1996). *Mathematics of Operations Research* 21. 341–353. (Joint work with B. Jansen and C. Roos)

35. Improved Complexity Using Higher-Order Correctors for Primal–Dual Dikin Affine Scaling (1996). *Mathematical Programming* 76(1). 117–130. (Joint work with B. Jansen, C. Roos and Y. Ye)

36. Primal–Dual Target–Following Algorithms for Linear Programming (1996). *Annals of Operations Research* 62. 197–231. (Joint work with B. Jansen, C. Roos and J.-Ph. Vial)

37. Interior Point Methods, a Decade After Karmarkar – a Survey With Application to the Smallest Eigenvalue Problem (1996). *Statistica Neerlandica* 50. 146–170. (Joint work with B. Jansen and C. Roos)

38. Long–Step Primal–Dual Target–Following Algorithms for Linear Programming (1996). *Mathematical Methods of Operations Research* 44. 11–30. (Joint work with B. Jansen, C. Roos and J.-Ph. Vial)

39. Optimization of Nuclear Reactor Reloading Patterns (1997). *Annals of Operations Research* 69. 65–84. (Joint work with E. de Klerk, T. Illés, A. de Jong, C. Roos, J. Valkó and J.E. Hoogenboom)

40. A Family of Polynomial Affine Scaling Algorithms for Positive Semidefinite Linear Complementarity Problems (1997). *SIAM Journal on Optimization* 7(1). 126–140. (Joint work with B. Jansen and C. Roos)

41. Inverse Barriers and CES-Functions in Linear Programming (1997). *Operations Research Letters* 20. 15–20. (Joint work with H. van Maaren)

42. Initialization in Semidefinite Programming Via a Self–Dual, Skew-Symmetric Embedding (1997). *Operations Research Letters* 20(5). 213–221. (Joint work with E. de Klerk and C. Roos)

43. Criss-Cross Methods: A Fresh View on Pivot Algorithms (1997). *Mathematical Programming Series B* 79(1–3). 369–395. (Joint work with K. Fukuda)

44. Polynomiality of Primal–Dual Affine Scaling Algorithms for Nonlinear Complementarity Problems (1997). *Mathematical Programming* 78. 315–345. (Joint work with B. Jansen, C. Roos and A. Yoshise)

45. A Potential Reduction Approach to the Frequency Assignment Problem (1997). *Discrete Applied Mathematics* 78. 252–282. (Joint work with B. Jansen, C. Roos and J. Warners)

46. Potential Reduction Algorithms for Structured Combinatorial Optimization Problems (1997). *Operations Research Letters* 21. 2. 55–65. (Joint work with B. Jansen, C. Roos and J. Warners)

47. Method of Approximate Centers for Semi–Definite Programming (1997). *Optimization Methods and Software* 7. 291–309. (Joint work with B. He, E. de Klerk and C. Roos)

48. Sensitivity Analysis in Linear Programming: Just be Careful! (1997). *European Journal of Operational Research* 101. 15–28. (Joint work with B. Jansen, J.J. de Jong and C. Roos)

49. Logarithmic Barrier Decomposition Methods for Semi-Infinite Programming (1997). *International Transactions in Operations Research* 4(4). 285–303. (Joint work with J. Kaliski, D. Haglin and C. Roos)

50. Polynomial Primal–Dual Affine Scaling Algorithms in Semidefinite Programming (1998). *Journal of Combinatorial Optimization* 2. 51–69. (Joint work with E. de Klerk, C. Roos)

51. Computing Maximum Likelihood Estimators of Convex Density Functions (1998). *SIAM Journal on Scientific Computing* 19(2). 675–694. (Joint work with J.-Ph. Vial)

52. A Nonconvex Weighted Potential Function for Polynomial Target Following Methods (1998). *Annals of Operations Research* 81. 3–14. (Joint work with E. de Klerk and C. Roos)

53. Copositive Relaxation for General Quadratic Programming (1998). *Optimization Methods and Software* 9. 185–208. (Joint work with A.J. Quist, E. de Klerk and C. Roos)

54. Primal-Dual Potential Reduction Methods for Semidefinite Programming Using Affine-Scaling Directions (1999). *Applied Numerical Mathematics* 29(3). 335–360. A special issue devoted to the HPOPT-I workshop held in Delft, 19-20 September 1996. (Joint work with E. de Klerk and C. Roos)

55. Application of Nonlinear Optimization to Reactor Core Fuel Reloading (1999). *Annals of Nuclear Energy* 26. 423–448. (Joint work with A.J. Quist, E. de Klerk, C. Roos, R. van Geemert, J.E. Hoogenboom and T. Illés)

56. Complexity Analysis of a Logarithmic Barrier Decomposition Method for Semi-Infinite Linear Programming (1999). *Applied Numerical Mathematics* 29(3). 379–395. Special issue dedicated to the HPOPT-I workshop held in Delft, 19-20 September 1996. (Joint work with Z.-Q. Luo and C. Roos)

57. On the Dimension of the Set of Rim Perturbations for Optimal Partition Invariance (1999). *SIAM Journal on Optimization* 9(1). 207–216. (Joint work with H.J. Greenberg, A.G. Holder and C. Roos)

58. Finding Optimal Nuclear Reactor Core Reload Patterns Using Nonlinear Optimization and Search Heuristics (1999). *Engineering Optimization* 32. 143-176. (Joint work with A.J. Quist, E. de Klerk, C. Roos, R. van Geemert, J.E. Hoogenboom and T. Illés)

59. A Finite Criss-Cross Method for Hyperbolic Programming (1999). *European Journal of Operational Research* 114. 198–214. (Joint work with T. Illés and Á. Szirmai)

60. On the Ellipsoid Method (1992). *Radovi Mathematicki* 8. 269–280. (Joint work with E. Klafszky). Note: This paper appeared in print in 1999.

61. On Maximization of Quadratic Forms Over Intersection of Ellipsoids with Common Center (1999). *Mathematical Programming* 86(3). 463-473. (Joint work with A. Nemirovskii and C. Roos)

62. Note on a Paper of Broyden (1999). *Operations Research Letters* 25(4). 183–186. (Joint work with C. Roos)

63. A Note on Mascarenhas' Counter Example About Global Convergence of the Affine Scaling Algorithm (1999). *Applied Mathematics and Optimization* 40(3). 287–314. (Joint work with T. Tsuchiya)

64. Basis- and Tripartition Identification for Quadratic Programming and Linear complementarity Problems. From an Interior Point Solution to an Optimal Basis and Vice Versa (1999). *Mathematical Programming* 86(2). 261-282. (Joint work with A.B. Berkelaar, B. Jansen and C. Roos)

65. A Strongly Polynomial Rounding Procedure Yielding a Maximally Complementary Solution for $P_*(\kappa)$ Linear Complementarity Problems (2000). *SIAM Journal on Optimization* 11(2). 320-340. (Joint work with T. Illés, J. Peng and C. Roos)

66. The Difference between the Managerial and Mathematical Interpretation of Sensitivity Analysis Results in Linear Programming (2000). *International Journal on Production Economics* 65(3). 257-274. (Joint work with T. Koltai)

67. A New Complexity Analysis of the Primal-Dual Newton Method for linear optimization (2000). *Annales of Operations Research* 99. 23–39. (Joint work with J. Peng and C. Roos)

68. On Copositive Programming and Standard Quadratic Optimization Problems (2000). *Journal of Global Optimization* 18. 301–320. (Joint work with I.M. Bomze, M. Duerr, E. de Klerk, C. Roos and A.J. Quist)

69. On the Existence of Short Admissible Pivot Sequences for Feasibility and Liner Optimization Problems (2000). *PUMA: Mathematics of Optimization* 10(4). 431–488. (Joint work with K. Fukuda)

70. A New Complexity Analysis of the Primal-Dual Method for Semidefinite Optimization Based on the NT-Direction (2001). *Journal of Optimization Theory and Applications* 109(2). 327-343. (Joint work with J. Peng and C. Roos)

71. A New Approach to Optimizing Energy Systems (2001). *Computer Methods in Applied Mechanics and Engineering* 190(40-41). 5297–5310. (Joint work with P.E.A. van der Lee and Th. Woudstra)

72. An Easy Way to Teach Interior Point Methods (2001). *European Journal of Operational Research* 130(1). 1–19.

73. Algorithmic Concepts for Linear Optimization (2001). *CORS-SCORO Bulletin* 35(2). 7–33.

74. A Scaled Gauss-Newton Primal–Dual Search Direction for Semidefinite Optimization (2001). *SIAM Journal on Optimization* 11(4). 870–888. (Joint work with E. de Klerk, J. Peng and C. Roos)

75. Reloading Nuclear Reactor Fuel Using Mixed-Integer Nonlinear Optimization (2001). *Optimization and Engineering* 2(3). 251–276. (Joint work with A.J. Quist, C. Roos, R. van Geemert and J.E. Hoogenboom)

76. Notes on Duality in Second Order and p-order Cone Optimization (2002). *Optimization* 51(4). 627–643. (Joint work with E.D. Andersen and C. Roos)

77. Pivot versus Interior Point Methods: Pros and Cons (2002). *European Journal of Operational Research* 140(2). 6–26. (Joint work with T. Illés)

78. New Primal–Dual Algorithms for Second-Order Conic Optimization Based on Self-regular Proximities (2002). *SIAM Journal of Optimization* 13(1). 179–203. (Joint work with J. Peng and C. Roos)

79. A New Class of Polynomial Primal–Dual Methods for Linear and Semidefinite Optimization (2002). *European Journal of Operational Research* 143(2). 234–256. (Joint work with J. Peng and C. Roos)

80. Self–Regular Functions and New Search Directions for Linear and Semidefinite Optimization (2002). *Mathematical Programming* 93. 129-171. (Joint work with J. Peng and C. Roos)

81. A Dynamic Large-Update Primal-Dual Interior-Point Method for Linear Optimization (2002). *Optimization Methods and Software* 17(6). 1077-1104. (Joint work with J. Peng)

82. On Implementing a Primal–Dual Interior–Point Method for Conic Quadratic Optimization (2003). *Mathematical Programming* Ser.B. 95(2). 249-277. (Joint work with E.D. Andersen and C. Roos)

83. An Efficient Optimization Method in Groundwater Resource Management (2003). *Water South Africa* 29(4). 359–364. (Joint work with J.M. Ndambuki, F.A.O. Otieno, C.B.M. Stroet, and E.J.M. Veling)

84. A Conic Formulation for l_p-norm Optimization (2004). *Journal of Optimization Theory* 122. 285–307. (Joint work with F. Glineur)

85. Rapid, Embeddeable Design Method for Magnetic Resonance Image Reconstruction Resampling Kernels (2004). *Optimization and Engineering* 5(4). 485–502. (Joint work with Ch. Anand and B. Wang)

86. An Adaptive Self–Regular Proximity Based Large–Update IPM for Linear Optimization (2005). *Optimization Methods and Software* 20(1). 168–195. (Joint work with M. Salahi)

87. On Self–Regular IPMs (2004). TOP: Sociedad de Estatisdíca Investigación Operativa 2(2) . 209–300. (Joint work with M. Salahi and R. Sotirov)

88. Sensitivity Analysis in Convex Quadratic Optimization: Invariant Support Set Intervals (2005). *Optimization* 54(1). 59–79. (Joint work with A.R. Ghaffari Hadigheh)

89. Sensitivity Analysis in Linear Optimization: Invariant Support Set Intervals (2006). *European Journal of Operational Research* 169(3). 1158–1175. (Joint work with A.R. Ghaffari Hadigheh)

90. A Predictor-Corrector Algorithm for Linear Optimization Based on A Specific Self–Regular Proximity Function (2005). *SIAM Journal on Optimization* 15(4). 1105–1127. (Joint work with J. Peng and Y. Zhao)

91. On the Complexity of Self–Regular Proximity Based Infeasible IPMs (2006). *Computational Optimization and Applications* 33(2-3). 157–186. (Joint work with M. Salahi and G. Zhang)

92. Sensitivity Analysis in Linear and Convex Quadratic Optimization: Invariant Active Constraint Set and Invariant Set Intervals (2006). *Information Systems and Operations Research (INFOR)* 44(2). 129–155. (Joint work with A. Ghaffari Hadigheh, and K. Mirnia)

93. The Central Path Visits All the Vertices of the Klee-Minty Cube (2006). *Optimization Methods and Software* 21(5). 851–865. (Joint work with A. Deza, E. Nematollahi, and R. Peyghami)

94. Colourful Simplicial Depth (2006). *Computational and Discrete Geometry.* 35(4). 597–615. (Joint work with A. Deza, S. Huang and T. Stephen)

95. Generalized Support Set Invariancy Sensitivity Analysis (2006). *Journal of Industrial and Management Optimization* 2(1). 1–18. (Joint work with A.R. Ghaffari Hadigheh)

96. Optimal Nearly-Analytic Discrete Approximation to the Scalar Wave Equation (2006). *The Bulletin of the Seismological Society of America (BSSA)* 96. 1114–1130. (Joint work with D. Yang, J. Peng and M. Lu)

97. A Nearly Analytical Discrete Method for Wave-Field Simulations in 2D Porous Media (2006). *Communications in Computational Physics* 1(3). 530–549. (Joint work with D. Yang, J. Peng and M. Lu)

98. Adaptive Large Neighborhood Self-Regular Predictor-Corrector IPMs for LO (2006). *Journal of Optimization Theory and Applications*, 132, 143–160, (2007). (Joint work with M. Salahi)

99. New Complexity Analysis of IIPMs for Linear Optimization Based on a Specific Self-Regular Function. *European Journal on Operational Research* 182, 502–513 (2007). (Joint work with M. Salahi and M.R. Peyghami.)

100. Sensitivity Analysis in Convex Quadratic Optimization: Simultaneous Perturbation of the Objective and Right-Hand-Side Vectors (2007). *Algorithmic Operations Research*, 2(2), 94–111 (2007). (Joint work with A.R. Ghaffari Hadigheh and O. Romanko)

101. Active Constraint Set Invariancy Sensitivity Analysis in Linear Optimization (2007). *Journal of Optimization Theory and Applications* 133(3), 303–315 (2007).

     (Joint work with A. Ghaffari Hadigheh, and K. Mirnia)

102. Postponing the Choice of the Barrier Parameter in Mehrotra-Type Predictor-Corrector Algorithms (2007). *European Journal on Operational Research* 182, 502–513 (2007). (Joint work with M. Salahi.)

103. How Good are Interior Point Methods? Klee-Minty Cubes Tighten Iteration-Complexity Bounds (2008). *Mathematical Programming*, 113, 1–14 (2008). (Joint work with A. Deza and E. Nematollahi).

104. A Survey of the S-Lemma (2007). *SIAM Review*, 49(3), 371–418. (Joint work with I. Pólik).

105. Magnetic Resonance Tissue Density Quantification Using Optimal bSSFP Pulse-Sequence Design. (2007) *Optimization and Engineering*, 8 (2) (2007) 215238. (Joint work with Ch. Anand, R. Sotirov, and Z. Zheng).

106. On Mehrotra-Type Predictor-Corrector Algorithms. (2007) *SIAM Journal on Optimization,* 18(4) (2007) 1377-1397. (Joint work with M. Salahi and J. Peng).

107. Optimizing Teardrop, and MRI Sampling Trajectory. (2007) To appear in *Optimization Methods and Software*, 2008. (Joint work with Ch. Anand, and T. Ren).

108. Polytopes and Arrangements: Diameter and Curvature. (2008) *Operations Research Letters*, 36-2 (2008) 215-222. (Joint work with A. Deza and Y. Zinchenko)

109. A Simpler and Tighter Redundant Klee-Minty Construction. (2008) To appear *Optimization Letters*, 2008 (Joint work with E. Nematollahi.

110. A Fuzzy Voting Process for Ranking Problems Based on Support Vector Machines. To appear in *Annals of Operations Research,* 2008. (Joint work with T. Jiao and J. Peng).

111. Self-Adaptive Support Vector Machines: Modelling and Experiments. To appear in *Computational Management Science*, 2008. Joint work with P. Du and J. Peng.)

112. On bi-parametric programming in Quadratic Optimization. *Central European Journal on Operations Research*, Vol. 16(2) 215-238, 2008. (Joint work with A.R. Ghaffari-Hadigheh and O. Romanko)

113. Comments on Dual Methods for Nonconvex Spectrum Optimization of Multicarrier Systems. To appear in *Optimization Letters*, 2008. (Joint work with J. Zhu.)

114. Packing Trees in Communication Networks. To appear in *Journal of Combinatorial Optimization*, 2008. (Joint work with M. Saad, A. Vannelli and H. Zhang.)

115. Colourful Feasibility Problem. To appear in *Discrete Applied Mathematics*, 2008. (Joint work with A. Deza, S. Huang, and T. Stephen.)

116. A Redundant Klee-Minty Construction with All the Redundant Constraints Touching the Feasible Region. To appear in *Operations Research Letters.* (Joint work with E. Nematollahi)

117. An EP Theorem for Dual Linear Complementarity Problems. To appear in *Journal of Optimization Theory and Applications.* (Joint work with T. Illés and M. Nagy).

118. Controlling the dose distribution with gEUD-type constraints within the convex IMRTP framework. *Physics in Medicine and Biology*, Vol. 53, 3231–3250 (2008). (Joint work with T. Craig, M. Sharpe, and Y. Zinchenko.)

119. Optimizing the gVERSE RF Pulse Design via Optimal Control. To appear in *Algorithmic Operations Rese3arch.* (Joint work with C.K. Anand and S. Stoyan).

120. The continuous d-step conjecture for polytopes. To appear in *Discrete and Computational Geometry.* (Joint work with A. Deza and Y. Zinchenko.)

Publications in Spanish

1. El Papel de la Tecnica del Pivote en la Demostracion de Algunos Teoremas Fundamentales del Algebra Lineal (1989). *Revista de Investigacion Operational* X(3). 141–167. (Joint work with E. Klafszky)

Publications in Hungarian

1. On *lp*–Programming (1980). *Alkalmazott Matematikai Lapok* 6. 27–63.

2. A New Proof for the Weak Duality Theorem of Geometrical and *lp*–Programming (1984). *Alkalmazott Matematikai Lapok* 10. 283–288.

3. Smoothing Empirical Functions by *lp* Programming (1984). *Alkalmazott Matematikai Lapok* 10. 323–352.

4. A Finite Criss–Cross Method for Linear Programming and the Proof of its Finiteness (1984). *Alkalmazott Matematikai Lapok* 10. 289–296.

5. The Finite Criss–Cross Method and Oriented Matroid Programming (1985). *Alkalmazott Matematikai Lapok* 11. 385–398.

6. Methods of "Hungarian Type" for Solving Linear Programming Problems (1985). *Alkalmazott Matematikai Lapok* 11. 1–14. (Joint work with E. Klafszky)

7. A New Algorithm for Quadratic Programming (1986). *Alkalmazott Matematikai Lapok* 12. 283–293.

8. A New Approach to the Feasibility Problems of Oriented Matroids (1986). *Alkalmazott Matematikai Lapok* 12. 279–282. (Joint work with E. Klafszky)

9. Bland's Rule for the Primal and Dual Simplex Method (1987). *Alkalmazott Matematikai Lapok* 13. 1–5. (Joint work with E. Klafszky)

10. On the Ellipsoid Method (1987–88). *Szigma* XX(2-3). 195–208. (Joint work with E. Klafszky)

11. Oriented Matroids, Quadratic Programming and the Criss–Cross Method (1989). *Alkalmazott Matematikai Lapok* 14. 365–375. (Joint work with E. Klafszky)

12. On the Mathematical Programming Models of Mixing (1989). *Alkalmazott Matematikai Lapok* 14. 99–117. (Joint work with J. Mayer and E. Klafszky)

13. Pivoting in Linear Algebra (1989). *Alkalmazott Matematikai Lapok* 14. 425–448. (Joint work with E. Klafszky)

14. On Karmarkar Type Algorithms (1990-91). *Alkalmazott Matematikai Lapok* 15. 133–162.

15. Algorithms for Linear Programming with Polynomial Expected Number of Steps (1990). (Joint work with J. C. Fodor and A. Zempléni)

16. A finite Criss-Cross Method for Hyperbolic Programming (1996). *SZIGMA* XXVII (1-2). 19–34. (Joint work with T. Illés and Á. Szirmai)

17. Interior Point Methods with Self-Regular Distance Functions (2005). *Alkalmazott Matematikai Lapok* 22. 177–198. (Joint work with I. Pólik)

18. Interior Point Methods (2005). In: A. Iványi (ed.) Algorithms in Informatics, Vol. II, 1230–1297. (Joint work with (T. Illés and M. Nagy)

Remark:
Alkalmazott Matematikai Lapok is a Hungarian journal of applied mathematics.
Szigma is a Hungarian journal of econometrics.

7 Thesis

1. On *lp*–Programming, (1980) *Ph.D. Thesis, Faculty of Sciences*, L. Eötvös University, Budapest, Hungary.
2. A Finite Criss–Cross Method and its Applications (1984) *Thesis: "Candidate" of Mathematical Sciences (Operations Research)* Hungarian Academy of Sciences, Budapest, Hungary.
3. Optimization for Information Technology, (2004) *Doctor of Science*, Hungarian Academy of Sciences.

8 Publications in Proceedings

1. On a Mathematical Programming Model of Gasoline Mixing (A Case Study) (1988). (Joint work with G. Wéber)
   Workshop on Production Management, Janus Pannonius University, 1988, Pécs, Hungary. pp. 162–178.
2. A New Algorithm for the Continuous Modular Design Problem (1989). (Joint work with E. Klafszky and J. Mayer)
   Association of Information Science, Japan. Proceedings of the SIGAL Workshop on Algorithms 10. pp. 1–8.
3. Experiences and Theoretical Investigations on Practical Random Linear Programs (1992). (Joint work with J.C. Fodor, Cs.I. Fábián snd A. Zempléni)
   Transactions of the Eleventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, Prague, Czechoslovakia. pp. 396–408.
4. The Linear Complementarity Problem, Sufficient Matrices and the Criss–Cross Method (1992). (Joint work with D. den Hertog and C. Roos)
   NATO ASI Series Vol. F82. Combinatorial Optimization, Edited by M. Akgül et al., Springer Verlag Berlin Heidelberg. pp. 253–257.
5. A Unifying Investigation of Interior Point Methods for Convex Programming (1992). (Joint work with D. den Hertog, F. Jarre and C. Roos)
   Symposium on Applied Mathematical Programming and Modeling APMOD93,

January 6–8, 1993, Budapest, Hungary. Volume of Extended Abstracts, ed. I. Maros. pp. 274–282.

6. A General Scheme for Solving Linear Complementarity Problems in the Setting of Oriented Matroids (1993). (Joint work with Z. Wang)
   In *Combinatorics and Graph Theory*, eds. H.P. Yap, T.H. Ku, E.K. Lloyd and Z.M. Wang. pp. 244–255. *Proceedings of the Spring School and International Conference on Combinatorics: SSIC'92, China*, World Scientific, Singapore.

7. On Vaydia's Volumetric Center Method for Convex Programming (1993). (Joint work with B. Jansen and C. Roos)
   Symposium on Applied Mathematical Programming and Modeling APMOD93, January 6–8, 1993, Budapest, Hungary. Volume of Extended Abstracts, ed. I. Maros. pp. 289–295.

8. A Logarithmic Barrier Cutting Plane Method for Convex Programming, (1993). (Joint work with D. den Hertog, J. Kaliski and C. Roos)
   Symposium on Applied Mathematical Programming and Modeling APMOD93, January 6–8, 1993, Budapest, Hungary. Volume of Extended Abstracts, ed. I. Maros. pp. 266–273.

9. Interior Point Approach to the Theory of Linear Programming (1993). (Joint work with O. Güler, C. Roos and J.-Ph. Vial)
   Proceeding of the Workshop "Interior Point Methods", January 5, 1993, Budapest, Hungary. Report No. 1992–04, Department of Operations Research, Eötvös University Budapest, Hungary.

10. An Interior Point Approach to Postoptimal and Parametric Analysis in Linear Programming (1992). (Joint work with B. Jansen and C. Roos)
    Proceeding of the Workshop "Interior Point Methods", January 5, 1993, Budapest, Hungary. Report No. 1992–04, Department of Operations Research, Eötvös University Budapest, Hungary.

11. Primal–Dual Algorithms for Linear Programming Based on the Logarithmic Barrier Method (1992). (Joint work with B. Jansen, C. Roos and J.–Ph. Vial)
    Proceeding of the Workshop "Interior Point Methods", January 5, 1993, Budapest, Hungary. Report No. 1992–04, Department of Operations Research, Eötvös University Budapest, Hungary.

12. Maximum Likelihood Estimation of Convex Density (1995). Proceedings of the "International Symposium of Economic Informatics", 10-13 May, Bucharest, Romania, pp. 322-329 (Joint work with J.-Ph. Vial).

13. Nuclear Reactor Fuel Management Optimization (1997). Proceedings of the conference *Optimization in Industry – 1997*, March 22–27, 1997, Palm Coast, Florida.

153–158 (Joint work with A.J. Quist, R. van Geemert, J.E. Hoogenboom, T. Illés, E. de Klerk and C. Roos).

14. An Easy Way to Teach Interior Point Methods (1998). EURO-XVI: *Tutorials and Reseach Reviews*, pp. 1–28. July 12–15, (1998), Brussels, Belgium.

15. Robust Groundwater Management Through Second-Order Cone programs (SOCP) (2000). (Joint work with J.M. Ndambuki, C.B.M. Stroet, and E.J.M. Veling) in: Eds. O. Sillio et al. Proceedings of the XXXth IAH Congress, Groundwater: Past Achievements and Future Challenges, 413–417.

16. Interior Point Methods for Cone-linear Optimization: Solvability, Modeling and Engineering Applications (2000). Proceedings of the conference *Optimization in Industry – 1998* Banff, Alberta, Canada. 381–387.

17. Linear Optimization: Pivot v/s Interior Point Methods. (Joint work with T. Illés.) In, Eds. M. Yue, J. Han, L. Zhang and S. Zhang, *Proceedings of the International Conference on Mathematical Programming*, Shanghai University Press, 60–69, (2004).

18. Packing Trees in Communication Networks (2005). (Joint work with M. Saad, A. Vannelli and H. Zhang.) In: X. Deng and Y. Ye (eds.) *Proceedings of the 1st Workshop on Internet and Network Economics No. 3828* (WINE 2005), Springer LNCS. 688-697.

19. On Routing in VLSI Design and Communication Networks (2005). (Joint work with M. Saad, A. Vannelli and H. Zhang.) In X. Deng and D. Du (eds.) *Proceedings of the 16th Annual International Symposium on Algorithms and Computation* (ISAAC 2005), Springer LNCS 3287 (2005), 1051–1060.

20. Surface Reconstruction from Structured-Light Images for Radiation Therapy (2005). (Joint work with O. Peshko and C.K. Anand.) In, Eds. W.C. Chan, K. Yu, U.J. Krull, R.I..Hornsey, B.C. Wilson, R.A. Weersink, *Photonic Applications in Biosensing and Imagin*, SPIE Vol. 5969, (2005), 427–436.

9 Publications in Professional Newspapers

Publications in Dutch

1. LP-Software survey (1995) *ITW Nieuws* 5. 3. 22–24. (Joint work with A. Quist)
2. NLP-Software survey (1996) *ITW Nieuws* 6. 4. 20–23. (Joint work with A. Quist)

Publications in English

1. High Performance Optimization: Theory, Algorithm Design and Engineering Applications (2006/4). *MITACS Connections.* (Joint work with M.F. Anjos)

10 Reports

1. A Finite Criss–Cross Method and its Applications (1986)
   Report No. 179/1986. Computer and Automation Institute of the Hungarian Academy of Sciences, Budapest, Hungary (in Hungarian).
2. A Model for the Optimal Schedule of MALÉV Flights (1988) (Joint work with M. Biró, Zs. Kemény, I. Simon and L. Táncos)
   Case Study. Research Institute of Aviation, Budapest, Hungary (in Hungarian).
3. Notes on the Edmonds–Fukuda Pivoting Rule for Oriented Matroids (1988). (Joint work with J. Clausen.)
   Preprint, Department of Operations Research, Eötvös University Budapest, Hungary.
4. Edmonds–Fukuda Rule and a General Recursion for Quadratic Programming (1989). (Joint work with K. Fukuda)
   Preprint, Department of Operations Research, Eötvös University Budapest, Hungary.
5. A Potential Reduction Method for a Class of Smooth Convex Programming Problems (1990). (Joint work with D. den Hertog and C. Roos)
   Report No. 90–01, Faculteit der Technische Wiskunde en Informatica, Technische Universiteit Delft, The Netherlands.
6. Iri's Polynomiality Proof for the Iri–Imai Method Recast (1991). (Joint work with D. den Hertog and C. Roos)
   Report No. 91–74, Faculteit der Technische Wiskunde en Informatica, Technische Universiteit Delft, The Netherlands.

7. A New Approach to the Color Matching Problem (1991). (Joint work with T. Illés and J. Mayer)
   Report No. 1. 1991. Department of Operations Research, Eötvös University, Budapest, Hungary.

8. An Interior Point Approach to Postoptimal and Parametric Analysis in Linear Programming (1992). (Joint work with B. Jansen and C. Roos)
   Report No. 92–21, Faculteit der Technische Wiskunde en Informatica, Technische Universiteit Delft, The Netherlands.

9. Interior Point Approach to the Theory of Linear Programming (1992). (Joint work with O. Güler, C. Roos and J.-Ph. Vial)
   Cahiers de Recherche No. 1992.3, Université de Genève, Département d'Economie Commerciale et Industriell, Genève, Switzerland.

10. A Unifying Investigation of Interior Point Methods for Convex Programming (1992). (Joint work with D. den Hertog, F. Jarre and C. Roos)
    Report No. 92–89, Faculteit der Technische Wiskunde en Informatica, Technische Universiteit Delft, The Netherlands.

11. A Note on Central Cutting Plane Methods for Convex Programming, (1993). (Joint work with D. den Hertog, J. Kaliski and C. Roos)
    Report No. 93–44, Faculteit der Technische Wiskunde en Informatica, Technische Universiteit Delft, The Netherlands.

12. Nonlinear Programming in Computer Aided Color Matching (1993). (Joint work with T. Illés, Gy. Lukács, J. Mayer and Á. Tóth)
    Preprint, Department of Operations Research, Eötvös University Budapest, Hungary.

13. A Short Survey on Ten Years Interior Point Methods (1995). (Joint work with B. Jansen and C. Roos)
    Report No. 95–45, Faculteit der Technische Wiskunde en Informatica, Technische Universiteit Delft, The Netherlands.

14. A New Algorithm for the Computation of the Smallest Eigenvalue of a Symmetric Matrix and Its Eigenspace (1995). (Joint work with B. Jansen and C. Roos)
    Report No. 95–70, Faculteit der Technische Wiskunde en Informatica, Technische Universiteit Delft, The Netherlands.

15. A Smoothness Condition for Nonlinear Monotone Complementarity Problems (1995). (Joint work with B. Jansen, C. Roos and A. Yoshise).
    The Institute of Statistical Mathematics Cooperative Research Report, Optimization, Japan.

16. A Branch and Cut Algorithm for the Frequency Assignment Problem (1995). (Joint work with K.I. Aardal, A.L. Hipolito, C.P.M. van Hussel, B. Jansen and C. Roos)
Report 2.2.1 and Technical Annex T-2.2.1 A, EUCLID RTP6.4, Combinatorial Algorithms for Military Applications Delft University of Technology, Department of Technical Mathematics and Informatics, The Netherlands.

17. Potential Reduction Methods (1995). (Joint work with H. van Benthem, A.L. Hipolito, B. Jansen, C. Roos, and J.P. Warners)
Report 2.3.2, and Technical Annex T-2.3.2 A, EUCLID RTP6.4, Combinatorial Algorithms for Military Applications Delft University of Technology, Department of Technical Mathematics and Informatics, The Netherlands.

18. GRAPH. A Test Problem Generator for the Radio Link Frequency Assignment Problem (1995). (Joint work with H. van Benthem, A.L. Hipolito, B. Jansen, C. Roos and J.P. Warners)
Report 2.3.2a, and Technical Annex T-2.3.2a A, EUCLID RTP6.4, Combinatorial Algorithms for Military Applications Delft University of Technology, Department of Technical Mathematics and Informatics, The Netherlands.

19. Semi–Definite Problems in Truss Topology Optimization (1995). (Joint work with E. de Klerk and C. Roos)
Technical Report 95–128, Faculty of Technical Mathematics and Computer Science, Delft University of Technology, Delft, The Netherlands. 30 pages.

20. Sensitivity Analysis in (Degenerate) Quadratic Programming (1996). (Joint work with A.B. Berkelaar, B. Jansen and C. Roos).
Technical Report 96–26, Faculty of Technical Mathematics and Computer Science, Delft University of Technology, Delft, The Netherlands.

21. Solving Linear Systems With Low–Rank Updates (1996). (Joint work with C. Roos, T. Trafalis and J.P. Warners).
Revised version in 1999, new coauthor E.D. Andersen.
Technical Report 96–149, Faculty of Mathematics and Computer Science, TU Delft, NL–2628 BL Delft, The Netherlands.

22. Unsupervised Neural Network Training Via a Potential Reduction approach (1996). (Joint work with C. Roos, T. Trafalis and J.P. Warners).
Technical Report 96-172, Faculty of Mathematics and Computer Science, TU Delft, NL–2628 BL Delft, The Netherlands. 16 pages.

23. COLPO: An Interactive Software System for Teaching Linear Programming Modeling (1997). (Joint work with T. Bedford, J.J. de Jong, E. de Klerk, L. Rog, C. Roos and M. van de Veen. Manuscript, Faculty of Mathematics and Computer Science, TU Delft, NL–2628 BL Delft, The Netherlands. 4 pages.

24. An Easy Way to Teach Interior Point Methods (1998). Technical Report 98-24, Faculty of Mathematics and Computer Science, TU Delft, NL–2628 BL Delft, The Netherlands. 28 pages.

25. A Simple Approach to the Interior Point Theory of $P_*(\kappa)$ Linear Complementarity Problems (1999). (Joint work with T. Illés and C. Roos)
Technical Report 99-??, Faculty of Mathematics and Computer Science, TU Delft, NL–2628 BL Delft, The Netherlands. 15 pages.

26. Relations Between the Scaled Gauss-Newton Search Direction and the H..K..M. Search Direction for Semidefinite Optimization and their Implementation (1999). (Joint work with J. Peng and C. Roos)
Technical Report 99-??, Faculty of Mathematics and Computer Science, TU Delft, NL–2628 BL Delft, The Netherlands. 18 pages.

27. Second Order Cone Optimization Approach to Groundwater Quantity Management (2000). (Joint work with J.M. Ndambouki, C.B.M. Stroet and E.J.M. Veling)
Technical Report August 2000, Faculty of Civil Engineering, TU Delft, NL–2628 BL Delft, The Netherlands. 11 pages.

28. Robust Optimization: A Real Case Application (2000). (Joint work with J.M. Ndambouki, C.B.M. Stroet and E.J.M. Veling)
Technical Report September 2000, Faculty of Civil Engineering, TU Delft, NL–2628 BL Delft, The Netherlands. 14 pages.

29. Self–Regular Proximities and New Search Directions for $P_*(\kappa)$ Complementarity Problems (2000). (Joint work with J. Peng, C. Roos and A. Yoshise). (Submitted to Mathematics of Operations Research)
Technical Report December 2000, Department of Computing and Software, McMaster University, Hamilton, Ontario, Canada. 31 pages.

30. Application of Direct Search Methods in Molecular Conformation Problems. AdvOL-Report #2002/2, September 2002, Hamilton, Ontario, Canada. (Joint work with E. Fan.)

31. A Self-Regularity Based Predictor-Corrector Algorithm for Linear Optimization. AdvOL-Report #2002/3, September 2002, Hamilton, Ontario, Canada. (Joint work with J. Peng, and Y. Zhao).

32. Computational Experiences with Dynamic Self-Regular IPMs by Using the Homogeneous Embedding Model. AdvOL-Report No. 2003/2, December 2002, Hamilton, Ontario, Canada. (Joint work with J. Peng, G. Zhang and L. Zhu).

33. Basis Identification Procedure. AdvOL-Report #2003/1. McMaster U. Hamilton, Ontario, Canada. (Joint work with A. Watanabe).

34. On Implementing Self-Regular Proximity Based Feasible IPMs. AdvOL-Report #2004/3. McMaster U. Hamilton, Ontario, Canada. (Joint work with X. Zhu, J. Peng, and G. Zhang).

35. A Combinatorial Technique for Optimization Problems in Lattice Graphs and Its Application in VLSI Design. March 2005. AdvOl-Report #2005/3. McMaster U. Hamilton, Ontario, Canada. (Joint work with A. Vannelli and H. Zhang).

36. Second-Order Cone Optimization Approach to Groundwater Quantity Management. AdvOl-Report #2005/9. McMaster U. Hamilton, Ontario, Canada. (Joint work with J.M. Ndambuki, C.B.M. Stroet, and E.J.M. Veling.)

37. On Routing in VLSI Design and Communication Networks. AdvOl-Report #2005 /14. McMaster U. Hamilton, Ontario, Canada. (Joint work with A. Vannelli and H. Zhang.)

38. A Provably Good Global Routing Algorithm in Multilayer IC and MCM Layout Designs. AdvOl-Report #2005/15. McMaster U. Hamilton, Ontario, Canada. (Joint work with M. Saad, A. Vannelli, and H. Zhang.)

39. Sensitivity Analysis in Convex Quadratic Optimization: Simultaneous Perturbation of the Objective and Right-Hand-Side Vectors. AdvOL-Report #2005/18. McMaster U. Hamilton, Ontario, Canada. (Joint work with A.R. Ghaffari Hadigheh and O. Romanko.)

40. A Conic Decompositions Approach for Semidefinite Programming. AdvOL-report #2005/22. McMaster U. Hamilton, Ontario, Canada. (Joint work with K. Srivaramakrishnan, and G. Plaza.)

41. Central Path Curvature and Iteration-Complexity and for Redundant Klee-Minty Cubes. AdvOL-report #2006/3. McMaster U. Hamilton, Ontario, Canada. (Joint work with A. Deza and Y. Zinchenko.)

42. Modified BFGS Update for Microwave Circuit Design using Aggressive Space Mapping. AdvOL-report #2006/05. McMaster U. Hamilton, Ontario, Canada. (Joint work with A.S. Mohamed, J.W. Bandler, M.H. Bakr, and K. Madsen)

43. Polytopes and Arrangements: Diameter and Curvature. AdvOL-report #2006/09. McMaster U. Hamilton, Ontario, Canada. (Joint work with A. Deza and Y. Zinchenko)

44. Efficient Preprocessing for VLSI Optimization Problems. AdvOL-report #2006/10. McMaster U. Hamilton, Ontario, Canada. (Joint work with W. Hare and J. Liu)

45. Sensitivity Analysis in Linear Semi–Infinite Programming Via Partitions. AdvOL-report #2006/14. McMaster U. Hamilton, Ontario, Canada. (Joint work with M.A. Goberna and M.I. Todorov).

46. Mehrotra-Type Predictor-Corrector Algorithms Revisited. AdvOL-report #2007 /01. McMaster U. Hamilton, Ontario, Canada. (Joint work with M. Salahi).

47. On the Extension of a Mehrotra-Type Algorithm for Semidefinite Optimization. AdvOL-report #2007 /04. McMaster U. Hamilton, Ontario, Canada. (Joint work with M.H. Koulaei).

48. Volumetric Path and Klee-Minty Constructions. Extended abstract for *Workshop on Advances in Optimization*, 19-21 April, 2007, Tokyo, Japan. (Joint Work with E. Nematollahi).

49. Global Routing in VLSI Design: Algorithms, Theory, and Computational Practice. (Joint work with A. Deza, C. Dickson, A. Vanelli, and H. Zhang.)

50. New stopping criteria for detecting infeasibility in conic optimization. AdvOL-report #2007 /09. McMaster U. Hamilton, Ontario, Canada. (Joint work with I. Pólik)

51. A strong duality theory for optimization over symmetric cones. AdvOL-report #2007 /10. McMaster U. Hamilton, Ontario, Canada. (Joint work with I. Pólik)

52. Intriguing analogies between the diameter and curvature. AdvOL-report #2007 /xx. McMaster U. Hamilton, Ontario, Canada. (Joint work with A. Deza, Feng Xie and Y. Zinchenko.)

53. Bi-parametric Convex Quadratic Optimization. AdvOL-report #2008 /1. McMaster U. Hamilton, Ontario, Canada. (Joint work with A.R. Ghaffari-Hadigheh and O. Romanko)

54. Interior Point Methods for Nonlinear Optimization. AdvOL-report #2008 /4. McMaster U. Hamilton, Ontario, Canada. (Joint work with Imre Pólik)

55. A new class of large neighborhood path-following interior point algorithms for semidefinite optimization with $O(\sqrt{n}\log\frac{\mathrm{Tr}(X^0S^0)}{\epsilon})$ iteration complexity. AdvOL-report #2008 /5. McMaster U. Hamilton, Ontario, Canada. (Joint work with Y. Li)

56. Using Uni-modularity in Solving ILP models of the Global Routing Problem. AdvOL-report #2008 /x. McMaster U. Hamilton, Ontario, Canada. (Joint work with L. Behjat, J. Liu and J. Zhu)

Book Reviews, Editorials

1. D. den Hertog: *Interior Point Approach to Linear, Quadratic and Convex Programming: Algorithms and Complexity* Kluwer Academic Publishers (1993). In Mathematical Reviews, 95d:90001 (1995).

2. S.G. Nash and A. Sofer: *Linear and Nonlinaer Programming* McGrow Hill (1996). In ITW News, 7. 3. 23 (1997).

3. R. Saigal: *Linear Programming: A Modern Integrated Analysis* Kluwer Academic Publishers (1993). In Mathematical Reviews, 97h:90003 (1997).

4. M. Padberg: *Linear Optimization and Extensions* Springer Verlag (1995). In Mathematical Reviews, 98a:90003 (1998).

5. G. Dantzig and M. Thapa: *Linear Programming I*, Springer Verlag (1997). In INFOR, August (1998).

6. E. Polak: *Optimization Algorithms and Consistent Approximations*, Springer Verlag (1997). In EJOR, 755–756. 107. (1998).

7. J.K. Lenstra and E. Aarts: *Local Search in Combinatorial Optimization* John Wiley (1997). In ITW News, 8-3. pp. 30 (1998).

8. M.A. Goberna and M.A. López: *Linear Semi-infinite Optimization* John Wiley (1998). To appear in: Structural Optimization (1999).

9. I. Maros: *Computational Techniques of the Simplex Method* Kluwer A.P.C. (2002). *Computational Optimization and Applications*, 26, Issue: 2, November 2003, pp. 209-210.

10. Preface. *Applied Numerical Mathematics*. Vol. 29/3, pp. 253 (1999). C. Roos and T. Terlaky.

11. Editorial: IPM 2000. Continuous Optimization. *European Journal of Operational Research*. Vol. 143/2, 231–233 (2002). T. Illés, T. Rapcsák and T. Terlaky.

12. Editorial: International workshop on smooth and nonsmooth optimization (Rotterdam, July 1213, 2001). *European Journal of Operational Research*. Vol. 157/1, 1–2 (2004). J. Brinkhuis, T. Illés , H. Frenk, G. Still, G. Weber, and T. Terlaky

13. Editorial Feature Cluster: Advances in Optimization. *European Journal of Operational Research*. Vol. 169/3, 1077–1078 (2006). B. Karasözen, M.C. Pinar, T. Terlaky, and G. Weber.

14. Seventh IMACS International Symposium on Iterative Methods in Scientific Computing May 5-8, 2005. Special issue of Applied Numerical Mathematics, In Press, Corrected Proof, Available online 24 February 2007. C. Christara, P. Forsyth, T. Terlaky and J.W.L. Wan.

15. Editorial Feature Cluster: Advances in Continuous Optimization. *Central European Journal of Operational Research*. Vol. 16(2), 107–109 (2008). O. Stein, G. Still and G. Weber.

11 Computer Aided Teaching

- Architect of an interactive teaching program for linear programming (LP–TEACH), (1998)
  quadratic programming (QP–TEACH) (1998) and
  interior point methods (IP–TEACH) (1999).

- COLPO, computerized teaching of linear programming modeling.

12 Optimization Software Packages

- SeDuMi: A semi-definite optimization package, originally developed by Jos F. Sturm; Joint work with I. Pólik, O. Romanko and Y. Zinchenko, since November 2004.

- McDFO: A derivative free optimization software package. Joint work with E. Fan, 2002.

- McIPM: A Self-Regular Proximity based interior point software package for Linear Optimization. Joint work with J. Peng and X. Zhu, 2003.

- McIIPM: A Self-Regular Proximity based infeasible interior point software package for Linear Optimization. Joint work with J. Peng and G. Zhang, 2003.

- McSML: A sparse matrix software package to solve symmetric positive definite and quasi-symmetric equation systems. Joint work with T. Seol and X. Zhu, 2004.

- McPRE: Preprocessing and postprocessing for for Linear Optimization. Joint work with X. Huan and X. Zhu, 2004.

Talks Given by Invitation in 2008

1. *Pivot algorithms, sensitivity and parametric analysis of LO.* "First i-MATH Intensive School on Mathematical Programming and its Applications", CIEM, Castro Urdiales Santander, Spain, January 28 2008.

2. *Interior point methods.* "First i-MATH Intensive School on Mathematical Programming and its Applications", CIEM, Castro Urdiales Santander, Spain, January 29 2008.

3. *Pivot v/s Interior Point Methods, worst case examples and conjectures.* "First i-MATH Intensive School on Mathematical Programming and its Applications", CIEM, Castro Urdiales Santander, Spain, January 30 2008.

4. *Diameter and curvature – The Hirsh conjecture and its relatives.* University of Tilburg, Tilburg, The Netherlands, 6 February, 2008.

5. *Linear Optimization – Twenty years of Interior Point Methods – What is next?.* University of Strathclyde, Glasgow, UK, 7 February, 2008.

6. *Conic Linear Optimization: Applications and Interior Point Methods.* University of Strathclyde, Glasgow, UK, 14 February, 2008.

7. *Linear Optimization – Twenty years of Interior Point Methods – What is next?.* Imperial College, London, UK, 12 February, 2008.

8. *Diameter and curvature – The Hirsh Conjecture and its relatives.* University of Edinburgh, Edinburgh, UK, 13 February, 2008.

9. *Klee-Minty Constructions for Interior Point Methods.* IBM T.J. Watson Research Lab. NJ, 25 March, 2008.

10. *Diameter and curvature – The Hirsch Conjecture and its relatives.* IBM T.J. Watson Research Lab. NJ, 2 April, 2008.

11. *The Hirsch Conjecture and its relatives: Polytopes and Arrangements – Diameter and curvature.* University of Vienna, Austria, 26 June, 2008.

12. *High Performance Optimization: The limits of Interior Point Methods* APMOD 2008, Bratislave, Slovakia, May 27-30, 2008.

Talks Given by Invitation in 2007

1. *Linear Optimization – Twenty years of Interior Point Methods – What is next?.* Technical University of Budapest, Budapest, Hungary, 6 December, 2007.

2. *Polytopes and arrangements: diameter and curvature..* University of Pannonia, Veszprém, Hungary, 5 December, 2007.

3. *Generalized Convexity, Strong Duality and a Dual Method for Nonconvex Spectrum Optimization of Multicarrier Systems.* University of Pécs, Hungary, December 3, 2007.

4. *Polytopes and arrangements: diameter and curvature.* University of Szeged, Szeged, Hungary, 30 November, 2007.

5. *Klee-Minty Cubes: Worst Case Examples for Simplex and Interior Point Methods* . University of Debrecen, Debrecen, Hungary, 29 November, 2007.

6. *Linear Optimization – Twenty years of Interior Point Methods – What is next?.* University of Györ, Györ, Hungary, 21 November, 2007.

7. *Interior Point Methods for NonLinear Optimization.* Winter School on IPMs. University of Pannonia, Veszprém, Hungary, 10-17 December, 2007.

8. *Interior Point Methods for Conic Linear Optimization.* Winter School on IPMs. University of Pannonia, Veszprém, Hungary, 10-17 December, 2007.

9. *Pivot versus Interior Point Methods: Pros and Cons.* Winter School on IPMs. University of Pannonia, Veszprém, Hungary, 10-17 December, 2007.

10. *Interior Point Methods for Linear Optimization: Advances and Impact.* Winter School on IPMs. University of Pannonia, Veszprém, Hungary, 10-17 December, 2007.

11. *Duality Theory for Linear Optimization Based on Interior Point Methods: Initialization by Embedding, Rounding to exact solution.* Winter School on IPMs. University of Pannonia, Veszprém, Hungary, 10-17 December, 2007.

12. *Strong Duality and a Dual Method for Nonconvex Spectrum Optimization of Multicarrier Systems.* INFORMS Annual Meeting, Seattle, WA, November 4-7, 2007.

13. *Polytopes and arrangements: diameter and curvature.* University of Calgary, PIMS Distinguished Lecturer, October 26 2007.

14. *Klee-Minty cubes and the central path.* University of Calgary, PIMS Distinguished Lecturer, October 25 2007.

15. *Pivot v/s interior point methods: pros and cons.* University of Calgary, PIMS Distinguished Lecturer, October 24 2007.

16. *Interior Point Methods for Conic Linear Optimization: SDO and SOCO.* Chinese Academy of Sciences, Beijing, China, 14 September, 2007.

17. *Edge Path and Central Path: Diameter and Curvature.* International Conference on Numerical Linear Algebra and Optimization, Urumqi, China, 8-12 September, 2007.

18. *The Present and Future of SeDuMi.* ICCOPT 07 – MOPTA 07 Conference, Hamilton, Ontario, 12-16 August, 2007.

19. *A (Re)implementation Challenge: Rewriting SeDuMi.* EURO-XXII Conference, Prague, Czech Republic, 9-11 July, 2007.

20. *Interior Point Methods for NonLinear Optimization.* CIME Summer School on Nonlinear Optimization, Cetraro, Italy, 01-07 July, 2007.

21. *Interior Point Methods for Conic Linear Optimization.* CIME Summer School on Nonlinear Optimization, Cetraro, Italy, 01-07 July, 2007.

22. *Pivot versus Interior Point Methods: Pros and Cons.* CIME Summer School on Nonlinear Optimization, Cetraro, Italy, 01-07 July, 2007.

23. *Interior Point Methods for Linear Optimization: Advances and Impact.* CIME Summer School on Nonlinear Optimization, Cetraro, Italy, 01-07 July, 2007.

24. *Duality Theory for Linear Optimization Based on Interior Point Methods: Initialization by Embedding, Rounding to exact solution.* CIME Summer School on Nonlinear Optimization, Cetraro, Italy, 01-07 July, 2007.

25. *Edge Path & Central Path: Diameter & Curvature.* MITACS-CMS Conference, Winnipeg, Manitoba, 30 May - 3 June, 2007.

26. *Polytopes & Arrangements: Diameter & Curvature.* CANADAM, Banff, Alberta, 28 - 31 May, 2007.

27. *Interior Point Methods for Linear Optimization: Advances and Impact.* AMSI / MASCOS Industry workshop & ICE-EM short course: The mathematics of electricity supply and pricing Holiday Inn, Surfers Paradise, Queensland, 22-26 April, 2007.

28. *IPMs for Conic Linear Optimization: LO, SOCO, SDO, Robust LO.* AMSI / MASCOS Industry workshop & ICE-EM short course: The mathematics of electricity supply and pricing Holiday Inn, Surfers Paradise, Queensland, 22-26 April, 2007.

29. *IPMs for NonLinear (Conic) Optimization.* AMSI / MASCOS Industry workshop & ICE-EM short course: The mathematics of electricity supply and pricing Holiday Inn, Surfers Paradise, Queensland, 22-26 April, 2007.

30. *The Volumetric Path and the Klee-Minty Example.* Workshop on Advances in Optimization, Tokyo, Japan, 18 - 21 April, 2007.

31. *Edge Path & Central Path: Diameter & Curvature.* Complementarity, Duality and Global Optimization, Gainswille, Florida, 28 February - 2 March, 2007.

32. *Edge Path & Central Path: Diameter & Curvature.* Computational Mathematics Colloquium Series, University of Waterloo, ON, 19 February, 2007.

Talks Given by Invitation in 2006

1. *Implications of the Worst Case Central Path Example: Polytopes & Arrangements and Diameter & Curvature.* University of Pannonia, Veszprém, 19 December, 2006.

2. *Polytopes & Arrangements: Diameter & Curvature.* University of Guelph, 29 November, 2006.

3. *Interior Point Approach to Linear Optimization: Theory and Algorithms.* INFORMS Annual Meeting, Pittsburgh, PA, 5–8 November, 2006.

4. *Klee-Minty Cubes: The worst case example for linear optimization algorithms* University of Illinois, Urbana-Champaign, IL, October 26, 2006.

5. *Linear Optimization – Twenty Years of Interior Point Methods – What is Next?* Faculty of C.S., University of New Brunswick, NB, 5 October, 2006. **IVS/NVision Lecture.**

6. *Klee-Minty Cubes and the Central Path.* Atlantic Optimization Days, Faculty of C.S., University of New Brunswick, NB, 5–6 October, 2006.

7. *Tutorial on Interior Point Methods.* EURO Summer Institute. Wittenberg, Germany, August 20– September 2, 2006. **Short course.**

8. *How Good Are Interior Point Methods: Klee-Minty Cubes Tighten Iteration Complexity Bounds.* EURO-2006 Conference, Reykjavik, Iceland, July 6-10, 2006. **Semiplenary talk, featured speaker.**

9. *Panelist on Nonlinear Optimization Software.* EURO-2006 Conference, Reykjavik, Iceland, July 6-10, 2006.

10. *Klee-Minty Cubes, the Central Path and Complexity of Interior Point Methods?.* ISMP 2006, Rio de Janeiro, Brazil, August 2–5, 2006.

11. *The Central Path and Klee-Minty Cubes.* MOPTA-2006 Conference, Waterloo, July 24-26, 2006.

12. *How curvy the central path can be?* HPOPT 2006, Delft, June 15-16, 2006.

13. *Two Decades of Interior Point Methods: What Next?* Carleton University, April 28, 2006.

14. *Klee-Minty Cubes: The worst case example for linear optimization algorithms* Department of Management Sciences, University of Waterloo, April 27, 2006.

15. *Interior and Simplex Methods – What next?* 3rd International Conference on High Performance Scientific Computing: Modeling, Simulation and Optimization of Complex Processes. Hanoi, Vietnam, March 6-10, 2006.

16. *Panelist on implementation issues of SDP.* Workshop on Semidefinite Programming and Its Applications. Singapore, January 9-13, 2006.

Talks Given by Invitation in 2005

1. *Recent Advances in Interior Point Methods.* University of Kaposvár, Kaposvár, Hungary, 28 December, 2005.

2. *Two decades of Interior Point Methods: What next?* University of Veszprém, Veszprém, Hungary, 18 December, 2005.

3. *Optimization for Information Technology.* Hungarian Academy of Sciences, Budapest, Hungary, 15 December, 2005.

4. *How Good Are Interior Point Methods: Klee-Minty Cubes Tighten Iteration Complexity Bounds.* INFORMS Annual Conference, San Francisco, CA, November 13-16, 2005.

5. *Klee-Minty Cubes and the Central Path.* Optimization Technology Center Seminar, Delft University of Technology, Delft, The Netherlands, October 25, 2005.

6. *How Good Are Interior Point Methods: Klee-Minty Cubes Tighten Iteration Complexity Bounds.* International Conference on Complementarity, Duality and Global Optimization, Blacksburg, Virginia. August 15–17, 2005. **Semiplenary talk, featured speaker.**

7. *How Good Are Interior Point Methods: Klee-Minty Cubes Tighten Iteration Complexity Bounds.* International Conference on Numerical Linear Algebra and Optimization, Lhasa, Tibet, China. August 8–12, 2005. **Plenary talk.**

8. *How good (how bad) are Simplex and Interior Point Methods? – What next?.* Data Mining Institute of the Chinese Academy of Sciences, Beijing, China, August 6, 2005.

9. *Recent Advances in Interior Point Methods*, Tsinghua University, Beijing, China, August 5, 2005.

10. *Recent Advances in Interior Point Methods*, Institute of Scientific and Engineering Computing of the Chinese Academy of Sciences, Beijing, China, August 3, 2005.

11. *How good (how bad) are Simplex and Interior Point Methods? – What next?.* MOPTA 2005, Windsor ON, July 24-26, 2005.

12. *How Good Are Interior Point Methods: Klee-Minty Cubes Tighten Iteration Complexity Bounds*. Optimization for Industry, Pécs, Hungary. June 29-July 1, 2005.

13. *The central path and the the Klee-Minty cube*. Geometric Combinatorics and Optimization. ETH, Zürich, Switzerland, May 21-26, 2005. **Plenary talk.**

14. *The central path visits all the vertices of the Klee-Minty cube*. SIAM Optimization Conference, Stockholm, Sweden. May 15-19, 2005.

15. *Recent Advances in Convex Optimization*, University of Toronto, ON. February 18, 2005.

Talks Given by Invitation in 2004

1. *The CaNEOS server for Optimization*, February 18, 2004, General Motors Technological Center, Detroit, MI.

2. *Interior Point Methods*, February 18, 2004, General Motors Technological Center, Detroit, MI.

3. *A Rapid, efficient solution method for MRI sampling,* CORS/INFORMS Conference, May 16-20, 2004, Banff, AL.

4. *Advances in Self-Regular Interior Point Methods,* APMOD 2004, June 21-23, 2004, Brunel University, London, UK.

5. *A Rapid embedable optimization method for MRI sampling,* EUROPT Workshop: Challenges of Continuous Optimization in Theory and Practice, July 2-3, 2004, Rhodes, Greece.

6. *Self-Regular Infeasible Interior Point Methods,* EURO-XX, July 4-7, 2004, Rhodes, Greece.

7. *Self-Regular Infeasible IPMs* First International Conference on Continuous Optimization – ICCOPT-I, RPI Troy, NY, August 2-4, 2004.

8. *Self-Regular Interior Point Methods* Monterrey Tech. MX, September 20–25, 2004.

9. *Sensitivity Analysis in LO: Old Traps, New solutions* Monterrey Tech. MX, September 20–25, 2004.

10. *The role of pivoting in linear algebra* Monterrey Tech. MX, September 20–25, 2004.

11. *Computational aspects of interior point methods* Monterrey Tech. MX, September 20–25, 2004.

12. *The central path visits all the vertices of the Klee-Minty cube* INFORMS Annual Meeting, Denver Colorado, October 23–27, 2004.

13. *Colorful Linear Programming* INFORMS Annual Meeting, Denver Colorado, October 23–27, 2004.

14. *A New Self-Regular proximity based Infeasible Interior Point Method* INFORMS Annual Meeting, Denver Colorado, October 23–27, 2004.

15. *The central path visits all the vertices of the Klee-Minty cube* Guelph University, November 18, 2004.

16. *Advances in Computational Optimization* Dept. of Chemical Engineering, McMaster University November 25, 2004.

17. *The central path visits all the vertices of the Klee-Minty cube* Veszprém Optimization Conference: Advanced Algorithms – VOCAL, December 12-15, Veszprém, Hungary.

Talks Given by Invitation in 2003

1. *Self-Regular Predictor-corrector IPMs* Foundations of Computational Sciences, Workshop on Semidefinite Programming, Minneapolis, Minnesota, March 17-24, 2003.

2. *Advances in Interior Point Methods: Self-Regular IPMs and Their Relatives* XXVIIth Spanish Conference on Statistics and Operational Research, April 8-12, 2003, Lleida, Spain. **Semiplenary talk, featured speaker.**

3. *New variants of Dynamic Update Self-Regular IPMs*, LORDS, Computer and Automation Institute, Hungarian Academy of Sciences April 18, 2003, Budapest, Hungary.

4. *Optimization and Engineering*, CORS Conference, June 2-5, 2003, Vancouver, BC, Canada. **Semiplenary talk, featured speaker.**

5. *Predictor-Corrector Self-Regular Interior Point Methods*, Optimization Days, May 4-6, 2003, Montèal, QC, Canada. **Semiplenary talk, featured speaker.**

6. *Quadratically Convergent Predictor-Corrector Self-Regular Proximity Based Interior Point Methods*, EUROPT Workshop: Advances in Continuous Optimization, July 4-5, 2003, Istanbul, Turkey. **Plenary talk.**

7. *Self-Regular Proximity Based Infeasible IPMs*, EURO/INFORMS conference, July 6-9, 2003, Istanbul, Turkey.

8. *Optimization and Engineering*, July 11, 2003, Delft University of Technology, Delft, The Netherlands.

9. *Self-Regular Proximity Based Dynamic Large-Update Primal-Dual IPMs for Linear Optimization*, ISMP August 18-22, 2003, Copenhagen Denmark.

10. *Implementing Self-Regular Proximity Based IPMs for Linear and Second Order Cone Optimization*, International Conference on Numerical Linear Algebra and Optimization – ICNLAO, October 7-10, 2003, Guilin, China.

11. *On the S-procedure*, INFORMS Annual Meeting, October 19–22, 2003, Atlanta, GA.

12. *Adaptive Self-Regular Primal-Dual IPMs*, Georgia Institute of Technology, October 23, 2003, Atlanta, GA.

13. *The CaNEOS server for Optimization*, December 3, 2003, ORION Network Day, McMaster University, Hamilton, ON, Canada.

Talks Given by Invitation in 2002

1. *Dynamical IPMs and Computational experiments with the new IPMs* IBM T.J. Watson Research Center, January 29, 2002.

2. *Algorithmic Concepts in Linear Optimization.* Invited talk CORS Maritime Chapter, Dalhousie University, Halifax, March 15, 2002.

3. *Pivot v/s Interior Point Methods: Pros and Cons* Guelph University, April 2, 2002.

4. *Dynamic Update IPMs: Complexity and Computational experiments* GERAD, University of Montreal, June 11, 2002.

5. *A Survey of Pivot and Interior Point Methods for Linear Optimization* Dept. CS, McGill University, April 12, 2002.

6. *Interior Point Methods: Dynamic Updates and Self-Regularity* WCOM02, Simon Fraser University, May 4, 2002.

7. *Self-Regular Proximity based IPMs: An Introduction.* SIAM Conference on Optimization, May 20-22, 2002.

8. *Computational Experience with Self-Regular IPMs.* CORS Annual Conference, Toronto, June 2-4, 2002.

9. *Computational Experiments with IPMs based on Self-Regular Functions* Foundations Of Computational Sciences, Minneapolis, Minnesota, August 5-8, 2002.

10. *Self-Regular IPMs.* Graz University, Graz, Austria, August 19, 2002.

11. *Dynamic Update Self-Regular IPMs.* Technical University, Budapest, Hungary, August 26, 2002.

12. *On an Implementation of Self-Regular Proximity Based IPMs* Advances in Linear and Semidefinite Programming, Tokyo Institute of Technology, Tokyo, Japan, September 28, 2002.

13. *Quadratically Convergent Predictor-Corrector Self-Regular IPMs* Sino – Japanese Optimization Conference, September 25-27, 2002.

14. *Optimization: Problem Classes, Solvability and Algorithms* CASCON Conference, IBM Toronto, October 3, 2002.

15. *Computational Experiments with IPMs based on Self-Regular Functions* INFORMS National Meeting, San Jose, California, November 3-6, 2002.

16. *Dynamic Update Self-Regular IPMs* Conference on Optimization Methods and Software, Hangzhou, China, December 16-19, 2002. **Plenary talk.**

17. *Interior point v/s pivot methods: Pros and cons*, International Conference on Mathematical Programming, Shanghai, Shanghai, China, December 20-21, 2002. **Plenary talk.**

Talks Given by Invitation in 2001

1. *Pivot v/s Interior Point Methods: Pros and Cons.* Tutte Seminar, University of Waterloo, February 16, 2001.

2. *Algorithmic Concepts in Linear Optimization.* University of Toronto, February 23, 2001.

3. *Linear Optimization: Pivot v/s Interior Point Methods.* Delft University of Technology, April 19, 2001.

4. *New Interior Point Methods for Conic Linear Optimization.* CORS Annual Conference, Quebec City. May 2001

5. *Interior Point Algorithms for Linear Optimization.* South Ontario Numerical Analysis Day, University of Waterloo, June 15, 2001.

6. *Interior Point Methods.* Eötvös University, Budapest, Hungary, June 26, 2001.

7. *Self-Regular proximities for second-order conic optimization.* EURO-2001, Rotterdam, The Netherlands, July 9-12, 2001.

8. *New IPMs Based on Self-regular functions.* EUROPT Workshop, Rotterdam, The Netherlands, July 13-14, 2001

9. *Advances in Interior Point Methods.* Optimization 2001, Aveiro, Portugal July 23-25, 20001. **Plenary talk.**

10. *Self-regularity: A New Paradigm for Interior Point Methods* University of Mariland, Baltimore, September 28, 2001.

11. *Computational Experiments with IPMs based on Self-Regular Functions* INFORMS National Meeting, Miami, Florida, November 4-7, 2001.

Talks Given by Invitation in 2000

1. *Optimization at CAS: Algorithms, approximation, complexity, applications*, Meeting with the GENNUM Corporation. McMaster University, 14 February, 2000.

2. *Self-Regular Proximities: A new framework of Interior Point Methods.* MIT, Boston, April 28, 2000.

3. *Almost $O(\sqrt{n}\log\frac{n}{\epsilon})$ Large-Update Interior Point Methods.* INFORMS, Salt Lake City, May 7-10, 2000.

4. *Self-Regular Proximities in Interior Point Methods.* IPM-2000, Rotterdam, June 7-9, 2000.

5. *Almost $O(\sqrt{n}\log\frac{n}{\epsilon})$ Large-Update Interior Point Methods.* EURO-XVII, Budapest, July 16-20, 2000.

6. *Interior versus Simplex Methods: Pros and Cons.* EURO-XVII, Budapest, July 16-20, 2000. **Semiplenary talk, featured speaker.**

7. *Self-Regular Functions and Interior Point Methods* ISMP-2000 Atlanta, Georgia, August 6-11, 2000.

8. *Reloading Nuclear Reactor Fuel Using Mixed-Integer Nonlinear Optimization.* SIAM Confere Computational Science and Engineering, Washington, 24 September, 2000.

9. *Robust Optimization with a Real Case Application.* OHTA 2000, October 2000, Hong Kong.

10. *Improved complexity large-update IPMs.* Fist Sino-Japanese Conference on Optimization, October 2000, Hong Kong.

Talks Given by Invitation in 1999

1. *A New Analysis of Search Directions for Semidefinite Optimization* DIAMCS workshop on Semidefinite Programming and its Applications to Large Scale Discrete Optimization, Princeton University, 7–9 January, 1999.

2. On optimizing reloading patterns of nuclear reactors. McMaster University, Canada, 2 March, 1999.

3. *New Complexity Analysis of Primal-Dual Newtons Method for $P_*\kappa$ Linear Complementarity Problems.* International Mathematical Programming Symposium, Mátraháza, Hungary, 27–31 March, 1999.

4. *On convex reformulations of second-order cone programming problems.* SIAM Confrence of Optimization, May 10-12, Atlanta, Georgia.

5. *Cone Linear Optimization in Engineering.* Optimization in Industry, Banff, Alberta, Canada, June 6–11.

6. *Rounding to Srictly Complementary Solutions in IPMs for LCP.* IFORS World Conference, Beijing, China, 16–20 August 1999.

7. *Cone-Linear Optimization: Duality and IPMs* . Semi-infinite programming, Alicante, Spain, 20-23 September 1999.

Talks Given by Invitations in 1998

1. *On large update primal-dual interior point methods.* Department of Operations Research, Eötvös University, Budapest, 24 February, 1998.

2. *On two sandwich theorems.* Department of Operations Research, Eötvös University, Budapest, 24 February, 1998.

3. *IPM for Linear Programming: Duality and Complexity.* APMOD-98, Nycosia, Cyprus, 11–13 March, 1998. **Plenary talk.**

4. *On the existence of short admissible pivot sequences for the feasibility problem.* APMOD-98, Nycosia, Cyprus, 11–13 March, 1998.

5. On finding optimal core reload patterns of nuclear reactors. McMaster University, Canada, 24 April, 1998.

6. *Initialization in semidefinite programming via embedding.* INFORMS meeting Montreal, 26–29 April, 1998.

7. *On the existence of short admissible pivot sequences for the feasibility problem and LP.* INFORMS meeting Montreal, 26–29 April, 1998.

8. *Rounding to Srictly Complementary Solutions in IPMs for LCP.* Stockholm Optimization Days, Stockholm, June 25–26, 1998.

9. *IPM for Linear Programming: Duality and Complexity.* Southampton University, Southampton, GB, June 24, 1998.

10. *A strongly polynomial rounding procedure for $P_*(\kappa)$ Linear Complementary Problems.* IPM-Workshop, The University of Trier, Trier, Germany, July 6–7, 1998.

11. *A strongly polynomial rounding procedure for $P_*(\kappa)$ Linear Complementary Problems.* EURO-XVI, Brussels, July 12–15, 1998.

12. *Initialization in Semidefinite Optimization by Self–dual Embedding.* EURO-XVI, Brussels, July 12–15, 1998.

13. *An easy way to teach interior point methods.* EURO-XVI, Brussels, July 12–15, 1998. **Semiplenary talk, featured speaker.**

14. *Rounding to Srictly Complementary Solutions in IPMs for LCP*. INFORMS meeting Seattle, 25–28 October, 1998.

15. *On the existence of short admissible pivot sequences for LP and LCP*. INFORMS meeting Seattle, 25–28 October, 1998.

16. *Do we need second-order cone proamming? (Thoughts on duality and reformulations)*. Conference on Semidefinite Optimization, ZIB Berlin, 15–17 November, 1998.

17. *On large update primal-dual interior point methods*. Nonlinear Programming and Variational Inequalities, Hong-Kong, 16-19 December, 1998.

18. *On optimizing reloading patterns of nuclear reactors*. Nonlinear Programming and Variational Inequalities, Hong-Kong, 16-19 December, 1998.

19. *On identifying a maximally complementary solution for $P_*(\kappa)$ LCPs in polynomial time*, Hong-Kong, 15-18 December, 1998.

20. *On the existence of short admissible pivot sequences for LP*. South-East University, Nanjing, China, 19 December, 1998.

21. *An easy way to teach interior point methods.* Nanjing University, Nanjing, China, 21 December, 1998.

22. *Short admissible pivot sequences do exists for LP, but not for OM-LP*. Fudan University, Shanghai, China, 22 December, 1998.

Complete List of Talks Given in 1997

1. *A Simple IPM for Linear Programming Yielding an Exact Solution.* Waterloo University, Waterloo, March 20, 1997.

2. *Interior Point Methods: New Tools, New Perspectives.* Optimization in Industry, Palm Coast, Florida, March 24, 1997.

3. *An Easy Way to Teach Interior Point Methods.* The University of Florida, Gainswille, March 28, 1997.

4. *A Logarithmic-Barrier Cutting Plane Method for Semi-Infinite Programming.* INFORMS spring meeting San Diego, 6 May, 1997.

5. *Unsupervised neural network training via a potential reduction approach.* INFORMS spring meeting San Diego, 6 May, 1997.

6. *An Easy Way to Teach Interior Point Methods.* Stanford University, Stanford, May 8, 1997.

7. *A Course on Interior Point Methods for Linear Programming.* Two talks of a one day course. High Performance Optimization–II, Rotterdam, 21 August, 1997.

8. *The Criss-cross Method: A Fresh View on Pivot Algorithms.* International Symposium on Mathematical Programming, August 24–29, 1997, Lausanne Switzerland. **Semiplenary talk, featured speaker.**

9. *Initialization in Semidefinite Optimization by Self–dual Embedding, Central Path, Maximally Complementary Solution.* International Symposium on Mathematical Programming, August 24–29, 1997, Lausanne Switzerland.

10. *Resolving Duality Issues in Semidefinite Optimization by Using Self–dual Embedding.* Conference of the Hungarian Operations Research Society, October 20–22, 1997, Pécs, Hungary.

11. *The Role of the Analytic Center in Linear and Nonlinear Optimization – in memoriam György Sonnevend.* Conference of the Hungarian Operations Research Society, October 20–22, 1997, Pécs, Hungary. **Plenary talk.**

Complete List of Talks Given in 1996

1. *Introduction to IPMs for Linear Programming.* The University of Alicante, January 26, 1996.

2. *Cutting Plane Methods in Continuous Optimization.* The University of Alicante, January 26, 1996.

3. *Basis- and Tripartition Identification for Quadratic Programming and Linear Complementarity Problems: From an interior solution to an optimal basis and vice-versa.* Mathematical Programming Symposium, Mátraháza, 23 March, 1996.

4. *An Introduction to Interior Point Methods for LP and Semidefinite Programming.* Cyprus, 26 April 1996.

5. *Potential reduction algorithms for structured combinatorial optimization problems.* Fields workshop on Semidefinite Optimization, Toronto, 18 May, 1996.

6. *Basis- and Tripartition Identification for Quadratic Programming and Linear Complementarity Problems: From an interior solution to an optimal basis and viceversa.* SIAM Conference on Optimization, Victoria, 22 May, 1996.

7. *Target Following Methods: A Unifying View of Interior Point Methods.* IFORS World Conference, Vancuver Canada, July, 1996. National contribution of The Netherlands.

8. *Initialization in semidefinite programming via a self–dual skew–symmetric embedding.* SOR-96, Braunschweig, 6 September, 1996.

9. *Basis- and Tripartition Identification for Quadratic Programming and Linear Complementarity Problems: From an interior solution to an optimal basis and vice-versa.* SOR-96, Braunschweig, 6 September, 1996.

10. *Initialization in semidefinite programming via embedding.* Symposium on Optimization and Computation, Hayama, Japan, 14 August, 1996.

11. *Initialization in semidefinite programming via embedding.* High Performance Optimization, Delft, 19 September, 1996.

12. *Basis- and Tripartition Identification for Quadratic Programming and Linear Complementarity Problems: From an interior solution to an optimal basis and vice-versa.* INFORMS annual meeting Atlanta, 5 November, 1996.

13. *Potential reduction algorithms for structured combinatorial optimization problems.* INFORMS annual meeting Atlanta, 5 November, 1996.

14. *Introduction to Interior Point Methods: Target following and self-dual embedding* The University of Oklahoma, Normann, November 10, 1996

Complete List of Talks Given in 1995

1. *Constrained Optimization, Statistical Estimation and Interior Point Methods*, APMOD–95, Brunel University, London, England, April 3–6.

2. *Interior Point Methods: 10 years after Karmarkar*, Hungarian Academy of Sciences, Budapest, Hungary, May 10.

3. *Interior Point Methods and its Applications*, University of Zürich, Zürich, Switzerland, May 22.

4. *Complementarity Problems and Interior Point Methods*, Zürich University of Technology, Zürich, Switzerland, May 23.

5. *A Logarithmic Barrier Cutting Plane Method for Semi–Infinite Programming*, PARAOPT-95, Enschede, Twente, June 6–9.

6. *Sensitivity Analysis for LP: Old Traps, New Solutions*, EURO XIV conference, Jerusalem, Israel, July 3–7.

7. *An $O\sqrt{n}$ Quadratically Convergent Algorithm for the Smallest Eigenvalue Problem*, AMS–SIAM Summer Seminar: Mathematics of Numerical Analysis: Real Number Algorithms, Park City, USA, July 24–29.

8. *Target Following: A Unifying View at Interior Point Methods*, SOR-95, Passau Germany, September 5–9.

9. *Unifying View of Interior Point Methods*, Universiteit Twente, Enschede, September 25.

10. *Optimal Basis Identification and Balinski-Tucker Tableaus in Quadratic programming and Linear Complementarity Problems*, CORE, Louvain-la-Neuve, December 19.

Complete List of Talks Given in 1994

1. *A Family of Polynomial Affine Scaling Algorithms for Linear Complementarity Problems*, International Symposium on Mathematical Programming, Mátrafüred, Hungary, January 22–27.

2. *Pivot Rules, Recursions for Linear Programming*, University of Padova, Department of Mathematics, Padova, Italy, April 26.

3. *Oriented Matroids: An Abstraction of Linear Programming*, University of Padova, Department of Mathematics, Padova, Italy, April 27.

4. *Linear Programming and Linear Complementarity on Oriented Matroids*, University of Padova, Department of Mathematics, Padova, Italy, April 28.

5. *On Skew–Symmetric Self–Dual Approach to Linear Programming Problems*, University of Padova, Department of Mathematics, Padova, Italy, April 29.

6. *Polynomial Target Following Algorithms for Linear Programming Problems*, University of Padova, Department of Mathematics, Padova, Italy, April 29.

7. *On Skew–Symmetric Self–Dual Approach to Linear Programming Problems*, University of Geneva, Department of Management Studies, Geneva, Switzerland, May 24–29.

8. *Polynomial Affine Scaling Algorithms for Linear Complementarity Problems*, TIMS XXXII, Anchorage, Alaska, USA, June 11–15.

9. *A New and Polynomial–Time Dikin–Type Primal–Dual Interior Point Method for Linear Programming*, TIMS XXXII, Anchorage, Alaska, USA, June 11–15.

10. *A Family of Polynomial Affine Scaling Algorithms for Linear Complementarity Problems*, EURO XIII/OR36, Glasgow, United Kingdom, July 18–22.

11. *Polynomial Affine Scaling Algorithms for Linear and Monotone Nonlinear Complementarity Problems*, 1994 faculty seminar: "Optimization in Theory and Practice", Center of Advanced Studies, The University of Iowa, Iowa City, USA, August 1–12.

12. *A Family of Polynomial Affine Scaling Algorithms for Linear Complementarity Problems*, Mathematical Programming Symposium, Ann Arbor, Michigan, USA, August 14–19.

13. *Degeneracy in Interior Point Methods*, Mathematical Programming Symposium, Ann Arbor, Michigan, USA, August 14–19.

14. *Pivot Rules for Linear Programming: A Survey on Recent Theoretical Developments*, Mathematical Programming Symposium, Ann Arbor, Michigan, USA, August 14–19.

15. *A Unifying View at Interior Point Methods for Linear Programming: the Target–Following Approach*, Workshop: Optimization in Engineering Design, Louvain-la-Neuve, Belgium, November 8.

16. *A Logarithmic Barrier Cutting Plane Method for Convex Programming*, Workshop: A Non-Linear Symphony, CWI, Amsterdam, The Netherlands, December 16.[1]

[1] No details are given about the talks in the years 1980-1993.