

References

1. Abel JS, Chaffee JW (1991) Existence and uniqueness of GPS solutions. *IEEE Transactions on Aerospace and Electronic Systems* 27: 952–956
2. Abd-Elmotaal H, El-Tokhey M (1995) Effect of spherical approximation on datum transformation. *Manuscripta Geodaetica* 20: 469–474
3. Abusali PAM, Schutz BE, Tapley BD (1994) Transformation between SLR/VLBI and WGS-84 frames. *Bulletin Geodesique* 69: 61–72
4. Aduol FWO (1987) Detection of outliers in geodetic networks using principal component analysis and bias parameter estimation. Institute of Geodesy, University of Stuttgart, Technical Report No. 2, Stuttgart
5. Aduol FWO (1994) Robust geodetic parameter estimation through iterative weighting. *Survey Review* 32: 359–367
6. Aduol FWO, Gacoki TG (2002) Transformation between GPS coordinates and local plane UTM coordinates using the excel spreadsheet. *Survey Review* 36: 449–462
7. Aduol FWO, Schaffrin B (1986) On outlier identification in geodetic networks using principal component analysis. Conference on Influential Data Analysis, University of Sheffield
8. Ansermet A (1910) Eine Auflösung des Rückwärtseinschneidens. *Zeitschrift des Vereins Schweiz. Konkordatsgeometer*, Jahrgang 8, pp. 88–91
9. Anthes R (2003): The Constellation Observing system for Meteorology Ionosphere and Climate (COSMIC). International Workshop on GPS Meteorology, 14th-17th January 2003, Tsukuba, Japan
10. Anthes RA (2004) Application of GPS Remote Sensing to Meteorology and Related Fields, *Journal of Meteorological Society of Japan*, Vol. 82, No. 1B
11. Awange JL (2002a) Groebner bases, multipolynomial resultants and the Gauss-Jacobi combinatorial algorithms-adjustment of nonlinear GPS/LPS observations. Ph.D. thesis, Department of Geodesy and GeoInformatics, Stuttgart University, Germany. Technical Reports, Report Nr. 2002 (1)
12. Awange JL (2002b) Groebner basis solution of planar resection. *Survey Review* 36: 528–543
13. Awange JL (2003a): Partial procrustes solution of the threedimensional orientation problem from GPS/LPS observations. In: Grafarend EW, Krumm FW, Schwarze VS (eds) *Geodesy - the Challenge of the 3rd Millennium*. Springer, Heidelberg pp.277–286

14. Awange JL (2003b) Buchberger algorithm applied to planar lateration and intersection problems. *Survey Review* 37: 319–329
15. Awange JL (2004): Diagnosis of Outlier of type Multipath in GPS Pseudo-range observations. *Survey Review* in press
16. Awange JL, Aduol FWO (1999) An evaluation of some robust estimation techniques in the estimation of geodetic parameters. *Survey Review* 35: 146–162
17. Awange JL, Aduol FWO (2002) An evaluation of some robust estimation techniques in the estimation of geodetic parameters-part II. *Survey Review* 36: 380–389
18. Awange JL, Fukuda Y (2003) On possible use of GPS-LEO satellite for flood forecasting. Accepted to the International Civil Engineering Conference on Sustainable Development in the 21st Century “The Civil Engineer in Development” 12 - 16 August 2003 Nairobi, Kenya
19. Awange JL, Grafarend EW (2002a) Sylvester resultant solution of planar ranging problem. *Allgemeine Vermessungs-Nachrichten* 108: 143–146
20. Awange JL, Grafarend EW (2002b) Linearized least squares and nonlinear Gauss-Jacobi combinatorial algorithm applied to 7-parameter datum transformation. *Zeitschrift für Vermessungswesen* 127: 109–117
21. Awange JL, Grafarend EW (2002c) Algebraic solution of GPS pseudo-ranging equations. *Journal of GPS Solutions* 4: 20–32
22. Awange JL, Grafarend EW (2002d) Nonlinear adjustment of GPS observations of type pseudo-range. *Journal of GPS Solutions* 4: 80–93
23. Awange JL, Grafarend EW (2003a) Closed form solution of the overdetermined nonlinear 7-parameter datum transformation. *Allgemeine Vermessungs Nachrichten* 109: 130–148
24. Awange JL, Grafarend EW (2003b) Groebner basis solution of the three-dimensional resection problem (P4P). *Journal of Geodesy*, 77: 327–337
25. Awange JL, Grafarend EW (2003c) Multipolynomial resultant solution of the threedimensional resection problem (P4P). *Bollettino di Geodesia e Science Affini* 62: 79–102
26. Awange JL, Grafarend EW (2003d) Explicit solution of the overdetermined three-dimensional resection problem. *Journal of Geodesy* 76: 605–616
27. Awange JL, Grafarend EW (in press) From space angles to point position using Sylvester resultant. *Allgemeine Vermessungs-Nachrichten*, in press
28. Awange JL, Fukuda Y, Takemoto S, Grafarend EW (2003a) Direct Polynomial approach to nonlinear distance (ranging) problems. *Earth, Planets and Space* 55: 231–241
29. Awange JL, Fukuda Y, Takemoto S, Ateya I, Grafarend EW (2003b): Ranging algebraically with more observations than unknowns. *Earth, Planets and Space* 55 (2003) 387-394.
30. Awange JL, Grafarend EW, Fukuda Y (2003c) Closed form solution of the triple three-dimensional intersection problem. *Zeitschrift für Geodäsie, Geoinformation und Landmanagement* 128: 395–402
31. Awange JL, Fukuda Y, Takemoto S, Grafarend EW (2003d) Resultants approach to the triple three-dimensional intersection problem. *Journal of Geodetic Society of Japan* 49: 243–256
32. Awange JL, Fukuda Y, Takemoto S (2004a) B. Strumfel's resultant solution of planar resection problem. *Allgemeine Vermessungs-Nachrichten* 111(6): 214–219

33. Awange JL, Fukuda Y, Takemoto S, Wickert J, Aoyama Y (2004) Analytic solution of GPS atmospheric sounding refraction angles. *Earth, Planets and Space* 56: 573–587
34. Awange JL, Grafarend EW, Fukuda Y (in press a) Exact solution of the nonlinear 7-parameter datum transformation by Groebner basis. *Bollettino di Geodesia e Scienze Affini*, to appear on the issue no. 2/2004
35. Awange JL, Grafarend EW, Fukuda Y, Takemoto S (in press b) The role of algebra in Modern day Geodesy. In press Springer
36. Awange JL, Grafarend EW, Fukuda Y, Takemoto S (in press d) Application of commutative algebra to Geodesy. *Journal of Geodesy*, in press
37. Awange JL, Grafarend EW, Fukuda Y (in press e): A combinatorial scatter approach to the overdetermined three-dimensional intersection problem. *Bollettino di Geodesia e Scienze Affini*, in press to appear on the issue no.3/2004 or no.4/2004
38. Baarda W (1967a) A generalization of the concept strength of the figure. *Publications on Geodesy, New Series* 2(4), Delft
39. Baarda W (1967b) Statistical concepts in geodesy. The Netherlands geodetic commission, Publication in geodesy, New Series 2, No. 4 , Delft
40. Baarda W (1968a) Statistics - A compass for the land surveyor. Computing centre of the Delft Geodetic Institute, Delft
41. Baarda W (1968b) A testing procedure for use in geodetic networks. *Publication in geodesy, New Series* 2, No. 5 , Delft
42. Baarda W (1973) S-transformation and criterion matrices. Netherlands Geodetic Commission. *Publications on Geodesy, New Series* 5(1), Delft
43. Bajaj C, Garity T, Waren J (1988) On the applications of multi-equational resultants. Department of Computer Science, Purdue University, Technical Report CSD-TR-826, pp. 1-22
44. Baker HC, Dodson AH, Penna NT, Higgins M, Offiler D (2001) Ground-based GPS water vapour estimation: Potential for meteorological forecasting, *Journal of Atmospheric and Solar-Terrestrial Physics* 63(12): 1305–1314.
45. Baki IzH, Chen YQ (1999) Tailored datum transformation model for locally distributed data. *Journal of Surveying Engineering* 125: 25–35
46. Balodimos DD, Korakitis R, Lambrou E, Pantazis G. (2003) Fast and accurate determination of astronomical coordinates Θ , Λ and azimuth using total station and GPS receiver. *Survey Review* 37: 269–275
47. Bancroft S (1985) An algebraic solution of the GPS equations. *IEEE Transaction on Aerospace and Electronic Systems AES-21*: 56–59.
48. Bancroft S (1985) An algebraic solution of the GPS equations. *IEEE Transaction on Aerospace and Electronic Systems AES-21*: 56–59
49. Barbeau EJ (2003) Polynomials. Problem books in mathematics. Springer, New York, Berlin
50. Barsi A (2001) Performing coordinate transformation by artificial neural network. *Allgemeine Vermessungs-Nachrichten* 108: 134–137
51. Bartelme N, Meissl P (1975) Ein einfaches, rasches und numerisch stabiles Verfahren zur Bestimmung des kürzesten Abstandes eines Punktes von einem sphäroidischen Rotationsellipsoid. *Allgemeine Vermessungs-Nachrichten* 82: 436–439
52. Bazlov YA, Galazin VF, Kaplan BL, Maksimov VG, Rogozin VP (1999) Propagating PZ 90 and WGS 94 transformation parameters. *GPS Solutions* 3: 13–16

53. Bähr HG (1988) A quadratic approach to the non-linear treatment of non-redundant observations. *Manuscripta Geodaetica* 13: 191–197
54. Bähr HG (1991) Einfach überbestimmtes ebenes Einschneiden, differentialgeometrisch analysiert. *Zeitschrift für Vermessungswesen* 116: 545–552
55. Becker T, Weispfenning V (1993) Gröbner bases. A computational approach to commutative algebra. Graduate Text in Mathematics 141, Springer, New York
56. Becker T, Weispfenning V (1998) Gröbner bases. A computational approach to commutative algebra. Graduate Text in Mathematics 141, 2nd Edition, Springer, New York
57. Beinat A, Crosilla F (2001) Generalised Procrustes analysis for size and shape 3-D object reconstructions. Optical 3-D measurement techniques, Wien 1-4 October, V, pp. 345–353
58. Beinat A, Crosilla F (2003) Generalised Procrustes algorithm for the conformal updating of a cadastral map. *Zeitschrift für Geodäsie, Geoinformation und Landmanagement* 128: 341–349
59. Bevis M, Businger S, Chiswell S, Herring TA, Anthes RA, Rocken C, Ware RH (1994) GPS Meteorology: Mapping zenith wet delays onto precipitable water. *Journal of Applied Meteorology*. 33: 379–386
60. Benning W (1974) Der kürzeste Abstand eines in rechtwinkligen Koordinaten gegebenen Außenpunktes vom Ellipsoid. *Allgemeine Vermessungs-Nachrichten* 81: 429–433
61. Benning W (1987) Iterative ellipsoidische Lotfußpunktberechnung. *Allgemeine Vermessungs-Nachrichten* 94: 256–260
62. Beranek M (1997) Überlegungen zur Normalverteilung und theoretische Analyse der 3- und 4-Parameter-Transformation. *Allgemeine Vermessungs-Nachrichten* 104: 137–141
63. Biagi L, Sanso F (2004) Sistemi di riferimento in geodesia: algebra e geometria dei minimi quadrati per un modello con deficienza di rango (parte seconda). *Bollettino di Geodesia e Scienze Affini* 63: 29–52
64. Bil WL (1992) Sectie en Projectie. NGT (Dutch Geodetic Magazine) *Geodesia* 92-10: 405–411
65. Bingham C, Chang T, Richards D (1992) Approximating the matrix fischer and Bingham distributions: Applications to spherical regression and procrustes analysis. *Journal of Multivariate Analysis* 41:314–337
66. Birardi G (1996) The future global geodetic network and the transformation of local onto WGS coordinates. *Bollettino di Geodesia e Scienze Affini* 55: 49–56
67. Blaha G, Besette RP (1989) Nonlinear least squares method via an isomorphic geometrical setup. *Bulletin Geodesique* 63: 115–138
68. Bock W (1959) Mathematische und geschichtliche Betrachtungen zum Einschneiden. Schriftenreihe Niedersächsisches Landesvermessungsamt. Report 9, Hannover
69. Bojanczyk AW, Lutoborski A (2003) The procrustes problem for orthogonal Kronecker products. *SIAM Journal of Scientific Computation* 25: 148–163
70. Borg I, Groenen P (1997) Modern multidimensional scaling. Springer, New York
71. Borkowski KM (1987) Transformation of geocentric to geodetic coordinates without approximation. *Astrophys. Space. Sci.* 139: 1–4
72. Borkowski KM (1989) Accurate algorithm to transform geocentric to geodetic coordinates. *Bull. Geod.* 63: 50–56

73. Bowring BR (1976) Transformation from spatial to geographical coordinates. *Survey Review* 23: 323–327
74. Bowring BR (1985) The accuracy of geodetic latitude and height equations. *Survey Review* 28: 202–206
75. Brandstätter G (1974) Notiz zur analytischen Lösung des ebenen Rückwärtsschnittes. *Österreichische Zeitschrift für Vermessungswesen* 61: 34–136
76. Brokken FB (1983) Orthogonal Procrustes rotation maximizing congruence. *Psychometrika* 48: 343–352
77. Brunner FK (1979) On the analysis of geodetic networks for the determination of the incremental strain tensor. *Survey Review* 25: 146–162
78. Buchberger B (1965) An algorithm for finding a basis for the residue class ring of a zero dimensional polynomial ideal (German). Ph.D. thesis, Institute of Mathematics, University of Innsbruck
79. Buchberger B (1970) Ein algorithmisches Kriterium für die Lösbarkeit eines algebraischen Gleichungssystems. *Aequationes Mathematicae* 4: 374–383
80. Buchberger B (1979) A criterion for detecting unnecessary reductions in the construction of Groebner bases. Proceedings of the 1979 European Symposium on Symbolic and Algebraic computation, Springer lecture notes in Computer Science 72, pp. 3-21, Springer, Berlin-Heidelberg-New York
81. Buchberger B (2001) Gröbner bases. A short introduction for system theorists. In: Moreno-Diaz R et al. (eds): *EUROCAST 2001*, LNCS 2178, pp. 1–19
82. Buchberger B, Winkler F (1998) Groebner bases and applications. London mathematical society lecture note series 251, Cambridge university press
83. Canny JF (1988) The complexity of robot motion planning. ACM doctoral dissertation award, MIT Press
84. Canny JF, Kaltofen E, Yagati L (1989) Solving systems of nonlinear polynomial equations faster. Proceedings of the International Symposium on Symbolic and Algebraic Computations ISSAC, July 17-19, Portland, Oregon, pp.121–128
85. Cattani E, Dickenstein A, Sturmfels B (1998) Residues and resultants. *J. Math. Sci. University of Tokyo* 5: 119–148
86. Chaffee JW, Abel JS (1994) On the exact solutions of the pseudorange equations. *IEEE Transactions on Aerospace and Electronic Systems* 30: 1021–1030
87. Chen G, Herring TA (1997) Effects of atmospheric azimuthal asymmetry on the analysis of space geodetic data. *Journal of Geophysical Research* 102(B9): 20489–20502
88. Cheng C-L, Van Ness JW (1999) Statistical regression with measurement error. Oxford University Press, 198 Madison Avenue, New York
89. Chu MT, Driessel R (1990) The projected gradient method for least squares matrix approximations with spectral constraints. *SIAM J. Numer. Anal.* 27(4): 1050–1060
90. Chu MT, Trendafilov NT (1998) Orthomax rotation problem. A differential equation approach. *Behaviormetrika* 25(1): 13–23
91. Chrystal G (1964) Textbook of Algebra (Vol. 1). Chelsea, New York
92. Cox DA (1998) Introduction to Gröbner bases. *Proceedings of Symposia in Applied Mathematics* 53: 1–24
93. Cox TF, Cox MA (1994) Multidimensional scaling. St. Edmundsbury Press, St. Edmunds, Suffolk

94. Cox D, Little J, O'Shea D (1997) Ideals, Varieties, and Algorithms. An introduction to computational algebraic geometry and commutative algebra, Springer, New York
95. Cox D, Little J, O'Shea D (1998) Using algebraic geometry. Graduate Text in Mathematics 185. Springer, New York
96. Croceto N (1993) Point projection of topographic surface onto the reference ellipsoid of revolution in geocentric Cartesian coordinates. Survey Review 32: 233–238
97. Crosilla F (1983a) A criterion matrix for a second order design of control networks. Bull. Geod. 57: 226–239
98. Crosilla F (1983b) Procrustean transformation as a tool for the construction of a criterion matrix for control networks. Manuscripta Geodetica 8: 343–370
99. Crosilla F, Beinat A (2003) Procrustes analysis and geodetic sciences. In: Grafarend EW, Krumm FW, Schwarze VS (eds) Geodesy - the Challenge of the 3rd Millennium. Springer, Heidelberg pp. 277–286
100. Crosilla F (2003) Use of generalised Procrustes analysis for the photogrammetric block adjustment by independent models. Journal of Photogrammetric & Remote sensing 56: 195–209
101. Dach R (2000) Einfluß von Auflasteffekten auf Präzise GPS-Messungen, DGK, Reihe C, Heft Nr. 519
102. Davenport JH, Siret Y, Tournier E (1988) Computer algebra. Systems and algorithms for algebraic computation. Academic Press Ltd., St. Edmundsbury, London
103. Davis JL, Herring TA, Shapiro II, Rogers AE, Elgered G (1985) Geodesy by radio interferometry: Effects of atmospheric modeling errors on estimates of baseline length. Radio Sci 20: 1593–1607
104. Dixon AL (1908) The elimination of three quantics in two independent variables. Proc. London Mathematical Society series 2 6: 468–478
105. Dryden IL (1998) General shape and registration analysis. In: Barndorff-Nielsen O, Kendall WS, van Lieshout MNM (eds) Stochastic Geometry: likelihood and computation. Chapman and Hall, London pp: 333–364
106. Featherstone WE (1997) A comparison of existing co-ordinate transformation models and parameters in Australia. Cartography 26: 13–25
107. Finsterwalder S, Scheufele W (1937) Das Rückwärtseinschneiden im Raum. Sebastian Finsterwalder zum 75 Geburtstage, pp. 86–100, Verlag Hebert Wichmann, Berlin
108. Fischbach FF (1965) A satellite method for pressure and temperature below 24km. Bull. Am. Meteorol. 46: 528–532
109. Fischler MA, Bolles RC (1981) Random sample consensus: A paradigm for modell fitting with application to image analysis and automated cartography. Communications of the ACM 24: 381–395
110. Fitzgibbon A, Pilu M, Fisher RB (1999) Direct least squares fitting of ellipses. IEEE Transactions on Pattern Analysis and Machine Intelligence 21: 476–480
111. Flores A, Ruffini G, Rius A (2000) 4D Tropospheric Tomography Using GPS Slant Wet Delay. Ann. Geophys. 18: 223–234
112. Fotiou A (1998) A pair of closed expressions to transform geocentric to geodetic coordinates. Zeitschrift für Vermessungswesen 123: 133–135
113. Foulds LR (1984) Combinatorial optimization for undergraduates. Springer, New York

114. Francesco D, Mathien PP, Senechal D (1997) Conformal field theory. Springer, Heidelberg, New York
115. Fröhlich H, Hansen HH (1976) Zur Lotfußpunktrechnung bei rotationsellipsoidischer Bezugsfläche. Allgemeine Vermessungs-Nachrichten 83: 175–179
116. Fukushima T (1999) Fast transform from geocentric to geodetic coordinates. Journal of Geodesy 73: 603–610
117. Gander W, Golub GH, Strelbel R (1994) Least-Squares fitting of circles and ellipses. BIT No. 43: 558–578
118. Gelfand IM, Kapranov MM, Zelevinsky AV (1990) Generalized Euler Integrals and A-Hypergeometric Functions. Advances in Mathematics 84: 255–271
119. Gelfand IM, Kapranov MM, Zelevinsky AV (1994) Discriminants, resultants and multidimensional determinants. Birkhäuser, Boston
120. Gelfand MS, Mironor AA, Perzner PA (1996) Gene recognition via spliced sequence alignment. Proc. Natl. Acad. Sci. USA 93: 9061–9066
121. Golub GH (1987) Least squares, singular values and matrix approximation. Aplikace matematiky 13: 44–51
122. Goodall C (1991) Procrustes methods in statistical analysis of shape. J. Royal Statistical Soc. B53: 285–339
123. Gordon SJ, Lichten DD (2004) Terrestrial laser scanners with a narrow field of view: the effect on 3D resection solutions. Survey Review 37:448–468
124. Gotthardt E (1940) Zur Unbestimmtheit des räumlichen Rückwärtseinschnittes, Mitteilungen der Ges. f. Photogrammetry e.V., Jänner 1940, Heft 5
125. Gotthardt E (1974) Ein neuer gefährlicher Ort zum räumlichen Rückwärtseinschneiden, Bildm. u. Luftbildw.
126. Gower JC (1975) Generalized procrustes analysis. Psychometrika 40(1): 33–51
127. Grafarend EW (1975) Three dimensional Geodesy 1. The holonomy problem. Zeitschrift für Vermessungswesen 100: 269–280
128. Grafarend EW (1981) Die Beobachtungsgleichungen der dreidimensionalen Geodäsie im Geometrie- und Schwereraum. Ein Beitrag zur operationellen Geodäsie. Zeitschrift für Vermessungswesen 106: 411–429
129. Grafarend EW (1985) Variance-Covariance component estimation; theoretical results and geodetic applications. Statistics & Decisions, Supplement Issue No. 2, 407–441
130. Grafarend EW (1988) Azimuth transport and the problem of orientation within geodetic traverses and geodetic networks. Vermessung, Photogrammetrie, Kultertechnik 86: 132–150
131. Grafarend EW (1989) Photogrammetrische Positionierung. Festschrift für Prof. Dr.-Ing. Dr. h.c Friedrich Ackermann zum 60. Geburtstag, Institut für Photogrammetrie, Universität Stuttgart, Heft 14, pp.44-55, Stuttgart
132. Grafarend EW (1990) Dreidimensionaler Vorwaertschnitt. Zeitschrift für Vermessungswesen 115: 414–419
133. Grafarend EW (1991) Application of Geodesy to Engineering. In: Eds. Linkwitz K, Eisele V, Mönicke HJ, IAG-Symposium No. 108, Springer, Berlin-Heidelberg-New York
134. Grafarend EW (2000) Gaußsche flächennormale Koordinaten im Geometrie- und Schwereraum. Erste Teil: Flächennormale Ellipsoidkoordinaten. Zeitschrift für Vermessungswesen 125: 136–139

135. Grafarend EW (2000) Gaußsche flächennormale Koordinaten im Geometrie- und Schwereraum. Erste Teil: Flächennormale Ellipsoidkoordinaten. *Zeitschrift für Vermessungswesen* 125: 136–139
136. Grafarend EW, Ardalani A (1999) World geodetic datum 2000. *Journal of Geodesy* 73: 611–623
137. Grafarend EW, Awange JL (2000) Determination of vertical deflections by GPS/LPS measurements. *Zeitschrift für Vermessungswesen* 125: 279–288
138. Grafarend EW, Awange JL (2003) Nonlinear analysis of the three-dimensional datum transformation (conformal group $C_7(3)$). *Journal of Geodesy* 77: 66–76
139. Grafarend EW, Keller W (1995) Setup of observational functionals in gravity space as well as in geometry space. *Manuscripta Geodetica* 20: 301–325
140. Grafarend EW, Kunz J (1965) Der Rückwärtseinschnitt mit dem Vermessungskreisel. *Bergbauwissenschaften* 12: 285–297
141. Grafarend EW, Lohse P (1991) The minimal distance mapping of the topographic surface onto the (reference) ellipsoid of revolution. *Manuscripta Geodaetica* 16: 92–110
142. Grafarend EW, Mader A (1993) Robot vision based on an exact solution of the threedimensional resection-intersection. *Applications of Geodesy to Engineering*. In K. Linkwitz, V. Eisele and H-J Moenckie, Symposium No. 108, Springer Berlin-Heidelberg-Newyork-London-Paris-Tokyo-HongKong-Barcelona-Budapest.
143. Grafarend EW, Okeke F (1998) Transformation of conformal coordinates of type Mercator from global datum (WGS 84) to local datum (regional, national). *Marine Geodesy* 21: 169–180
144. Grafarend EW, Richter B (1977) Generalized Laplace condition. *Bull. Geod.* 51: 287–293
145. Grafarend EW, Sanso F (1985) Optimization and design of geodetic networks. Springer, Berlin-Heidelberg-New York-Tokyo
146. Grafarend EW, Schaffrin B (1974) Unbiased Freenet adjustment. *Survey Review* 22: 200–218
147. Grafarend EW, Schaffrin B (1989) The geometry of nonlinear adjustment—the planar trisection problem-. In: Kejlso E, Poder K, Tscherning CC (eds) *Festschrift to T. Krarup*, pp. 149-172, Denmark
148. Grafarend EW, Schaffrin B (1991) The planar trisection problem and the impact of curvature on non-linear least -squares estimation. *Computational statistics & data analysis* 12: 187–199
149. Grafarend EW, Schaffrin B (1993) Ausgleichungsrechnung in Linearen Modellen. B. I. Wissenschaftsverlag, Mannheim
150. Grafarend EW, Shan J (1996) Closed-form solution of the nonlinear pseudo-ranging equations (GPS). *ARTIFICIAL SATELLITES, Planetary Geodesy* 31: 133–147
151. Grafarend EW, Shan J (1997a) Closed-form solution of P4P or the three-dimensional resection problem in terms of Möbius barycentric coordinates. *Journal of Geodesy* 71: 217–231
152. Grafarend EW, Shan J (1997b) Closed form solution of the twin P4P or the combined three dimensional resection-intersection problem in terms of Möbius barycentric coordinates. *Journal of Geodesy* 71: 232–239
153. Grafarend EW, Syffus R (1997) Strip transformation of conformal coordinates of type Gauss-Kruger and UTM. *Allgemeine Vermessungs-Nachrichten* 104: 184–190

154. Grafarend EW, Syffus R (1998) Transformation of conformal coordinates of type Gauss-Krüger or UTM from local datum (regional, national, European) to global datum (WGS 84) part 1: The transformation equations. Allgemeine Vermessungs-Nachrichten 105: 134–141
155. Grafarend EW, Hendricks A, Gilbert A (2000) Transformation of conformal coordinates of type Gauss-Kruger or UTM from a local datum (Regional, National, European) to a global datum (WGS 84, ITRF 96). Allgemeine Vermessungs-Nachrichten 107: 218–222
156. Grafarend EW, Lohse P, Schaffrin B (1989) Dreidimensionaler Rückwärtsschnitt. Zeitschrift für Vermessungswesen 114: 61–67, 127–137, 172–175, 225–234, 278–287
157. Grafarend EW, Knickmeyer EH, Schaffrin B (1982) Geodätische Datumtransformationen. Zeitschrift für Vermessungswesen 107: 15–25
158. Grafarend EW, Krumm F, Okeke F (1995) Curvilinear geodetic datum transformation. Zeitschrift für Vermessungswesen 120: 334–350
159. Grafarend EW, Syffus R, You RJ (1995) Projective heights in geometry and gravity space. Allgemeine Vermessungs-Nachrichten 102: 382–402
160. Green B (1952) The orthogonal approximation of an oblique structure in factor analysis. Psychometrika 17: 429–440
161. Grewal MS, Weill LR, Andrews AP (2001) Global Positioning Systems, Inertial Navigation and Integration, John Wiley & Sons, New York
162. Grunert JA (1841) Das Pothenotsche Problem in erweiterter Gestalt; nebst Bemerkungen über seine Anwendungen in der Geodäsie. Grunerts Archiv für Mathematik und Physik 1 pp. 238–241
163. Guckenheimer J, Myers M, Sturmfels B (1997) Computing Hopf bifurcations. SIAM J. Numerical Analysis 34: 1–21
164. Gui Q, Zhang J (1998) Robust biased estimation and its applications in geodetic adjustments. Journal of Geodesy 72: 430–435
165. Gulliksson M (1995a) The partial Procrustes problem - A first look. Department of Computing Science, Umea University, Report UMINF-95.11, Sweden
166. Gulliksson M (1995b) Algorithms for the partial Procrustes problem. Department of Industrial Technology, Mid Sweden University s-891 18, Report 1995:27, Örnsköldsvik, Sweden
167. Gulliksson M, Söderkvist I (1995) Surface fitting and parameter estimation with nonlinear least squares. Zeitschrift für Vermessungswesen 25: 611–636
168. Guolin L (2000) Nonlinear curvature measures of strength and nonlinear diagnosis. Allgemeine Vermessungs-Nachrichten 107: 109–111
169. Guo J, Jin F (2001) A new model of digitizing coordinate transformation and its nonlinear solution. Allgemeine Vermessungs-Nachrichten 108: 311–317
170. Gurbunov ME, Gurvich AS, Bengtsson L (1996) Advanced algorithms of inversion of GPS/MET satellite data and their application to the reconstruction of temperature and humidity, Rep. No. 211, Max-Plank-Institut für Meteorologie, Hamburg, Germany
171. Han SC, Kwon JH, Jekeli C (2001) Accurate absolute GPS positioning through satellite clock error estimation. Journal of Geodesy 75: 33–43
172. Hampel FR, Ronchetti EM, Rousseeuw P, Stahel WA (1986) Robust Statistic - the approach based non influence Functions. John Wiley & Sons, New York
173. Hammer E (1896) Zur graphischen Ausgleichung beim trigonometrischen Einschneiden von Punkten. Optimization methods and softwares 5: 247–269

174. Hanselman D, Littlefield B (1997) The student edition of Matlab. Prentice-Hall, New Jersey
175. Hanssen RF, Weckwerth TM, Zebker HA, Klees R (1999) High-Resolution Water Vapor Mapping from Interferometric Radar Measurements. *Science* 283: 1297–1299
176. Haralick RM, Lee C, Ottenberg K, Nölle M (1991) Analysis and solution of the three point perspective pose estimation problem. *Proc. IEEE Org. on Computer Vision and Pattern Recognition*, pp. 592–598
177. Haralick RM, Lee C, Ottenberg K, Nölle M (1994) Review and analysis of solution of the three point perspective pose estimation problem. *International Journal of Computer Vision* 13 3: 331–356
178. Harper D, Wooff C, Hodgkinson D (1991) A guide to computer algebra system. John Wiley & Sons, New York
179. Harvey BR (1986) Transformation of 3D coordinates. *The Australian Surveyor* 33: 105–125
180. Healey S, Jupp A, Offiler D, Eyre J (2003) The assimilation of radio occultation measurements. In Reigber C, Lühr H, Schwintzer P (eds), First CHAMP mission results for gravity, magnetic and atmospheric studies, Springer, Heidelberg
181. Heck B (1987) Rechenverfahren und Auswertemodelle der Landesvermessung. Wichmann Verlag, Karlsruhe, Germany
182. Heikkinen M (1982) Geschlossene Formeln zur Berechnung räumlicher geodätischer Koordinaten aus rechtwinkligen Koordinaten. *Zeitschrift für Vermessungswesen* 107: 207–211
183. Heindl G (1982) Experiences with non-statistical method of detecting outliers. International symposium on geodetic network and computations of the I. A. G. Munich, Aug. 30th to Sept. 5, 5: 19–28
184. Heiskanen WA, Moritz H (1967) Physical Geodesy, Freeman and Company, London
185. Hirvonen R, Moritz H (1963) Practical computation of gravity at high altitudes, Institute of Geodesy, Photogrammetry and Cartography. Ohio State University, Report No. 27, Ohio
186. Hofman-Wellenhof B, Lichtenegger H, Collins J (2001) Global Positioning System: Theory and practice, 5th Edition, Springer, Wien
187. Horaud R, Conio B, Leboulleux O (1989) An analytical solution for the perspective 4-point problem. *Computer Vision, Graphics and Image Processing* 47: 33–44
188. Hornoch AT (1950) Über die Zurückführung der Methode der kleinsten Quadrate auf das Prinzip des arithmetischen Mittels. *Zeitschrift für Vermessungswesen* 38: 13–18
189. Huber PJ (1964) Robust estimation of a location parameter. *Annals of Mathematical Statistics* 35: 73–101
190. Huber PJ (1972) Robust Statistics; A review. *Annals of Mathematical Statistics* 43: 1041–1067
191. Huber PJ (1981) Robust Statistics. John Wiley & Sons, New York
192. Ireland K, Rosen M (1990) A classical introduction to modern number theory. Springer, New York
193. Irving RS (2004) Integers, polynomials, and rings. Springer, New York
194. Jacobi CGI (1841) Deformatione et proprietatibus determinantum, Crelle's Journal für die reine und angewandte Mathematik, Bd. 22

195. Kahmen H, Faig W (1988) Surveying. Walter de Gruyter, Berlin
196. Kampmann G (1996) New adjustment techniques for the determination of transformation parameters for Cadastral and Engineering purposes. *Geomatica* 50: 27–34
197. Killian K (1990) Der gefährliche Ort des überbestimmten räumlichen Rückwärtseinschneidens. *Öst. Zeitschrift für Vermessungswesen und Photogrammetry* 78: 1–12
198. Kleusberg A (1994) Die direkte Lösung des räumlichen Hyperbelschnitts. *Zeitschrift für Vermessungswesen* 119: 188–192
199. Kleusberg A (2003) Analytical GPS navigation solution. In: Grafarend EW, Krumm FW, Schwarze VS (eds) *Geodesy - the Challenge of the 3rd Millennium*. Springer, Heidelberg pp.93–96
200. Koch KR (1999) Parameter estimation and hypothesis testing in linear models. Springer, Berlin, Heidelberg
201. Koch KR (2001) Bemerkung zu der Veröffentlichung “Zur Bestimmung eindeutiger transformationparameter”. *Zeitschrift für Vermessungswesen* 126: 297
202. Koch KR, Yang Y (1998a) Konfidenzbereiche und Hypothesenteste für robuste Parameterschätzungen. *ZfV* 123: 20–26
203. Koch KR, Yang Y (1998b) Robust Kalman filter for rank deficient observation models. *Journal of Geodesy* 72: 436–441
204. Koch KR, Fröhlich H, Bröker G (2000) Transformation rumlicher variabler Koordinaten. *Allgemeine Vermessungs-Nachrichten* 107: 293–295
205. Kuo Y.-H, Sokolovski SV, Anthens RA, Vandenberghe F (2000) Assimilation of the GPS radio occultation data for numerical weather prediction. *Terrestrial, Atmospheric and Oceanic Science*, 11: 157–186
206. Krarup T (1979) S transformation or how to live without the generalized inverse - almost. Geodetic Institute, Charlottenlund, Denmark
207. Krarup T (1982) Nonlinear adjustment and curvature. In: *Forty years of thought*, Delft, pp. 145–159
208. Krause LO (1987) A direct solution of GPS-type navigation equations. *IEEE Transactions on Aerospace and Electronic Systems* 23: 225–232
209. Krishna S, Manocha D (1995) Numerical algorithms for evaluating one-dimensional algebraic sets. Proceedings of the International Symposium on Symbolic and Algebraic Computation ISSAC, July 10-12, pp. 59–67, Montreal, Canada
210. Kubik KK (1967) Iterative Methoden zur Lösung des nichtlinearen Ausgleichungsproblems. *Zeitschrift für Vermessungswesen* 91: 145–159
211. Kursinski ER, Hajj GA, Schofield JT, Linfield RP, Hardy KR (1997) Observing Earth's atmosphere with radio occultation measurements using Global Positioning System. *J. Geophys. Res.* 102: 23429–23465
212. Kurz S (1996) Positionierung mittels Rückwärtsschnitt in drei Dimensionen. Studienarbeit, Geodätisches Institut, University of Stuttgart, Stuttgart
213. Lam TY (2003) Exercises in classical ring theory. Springer, New York, Tokyo
214. Lannes A, Durand S (2003) Dual algebraic formulation of differential GPS. *Journal of Geodesy* 77: 22–29
215. Lapaine M (1990) A new direct solution of the transformation problem of Cartesian into ellipsoidal coordinates. In: Rapp RH, Sanso F, Determination of the geoid: Present and future. pp. 395–404. Springer, New York
216. Larson LW (1996) Destructive water: Water-caused natural disasters, their abatement and control. IAHS conference, Anaheim California, June 24–28

217. Lauritzen N (2003) Concrete abstract algebra. From numbers to Gröbner bases. Cambridge University Press, UK
218. Leick A (2003) GPS satellite surveying, 3rd Edition, John Wiley & Sons, New York
219. Lenzmann E, Lenzmann L (2001a) Zur Bestimmung eindeutiger transformationparameter. Zeitschrift für Vermessungswesen 126: 138–142
220. Lenzmann E, Lenzmann L (2001b) Erwiderung auf die Anmerkung von Jörg Reinking und die Bemerkungen von Karl-Rudolf Koch zu unserem Beitrag "Zur Bestimmung eindeutiger transformationparameter". Zeitschrift für Vermessungswesen 126: 298–299
221. Lichtenegger H (1995) Eine direkte Lösung des räumlichen Bogenschnitts. Österreichische Zeitschrift für Vermessung und Geoinformation 83: 224–226
222. Lidl R, Pilz G (1998) Applied abstract algebra. 2nd edition, Springer, New York
223. Lin KC, Wang J (1995) Transformation from geocentric to geodetic coordinates using Newton's iteration. Bulletin Geodesique 69: 300–303
224. Linnainmaa S, Harwood D, Davis LS (1988) Pose determination of a three-dimensional object using triangle pairs. IEEE transaction on pattern analysis and Machine intelligence 105: 634–647
225. Lohse P (1990) Dreidimensionaler Rückwärtsschnitt. Ein Algorithmus zur Streckenberechnung ohne Hauptachsentransformation. Zeitschrift für Vermessungswesen 115: 162–167
226. Lohse P (1994) Ausgleichungsrechnung in nichtlinearen Modellen. DGK, Reihe C, Heft Nr. 429
227. Loskowski P (1991) Is Newton's iteration faster than simple iteration for transformation between geocentric and geodetic coordinates? Bulletin Geodesique 65: 14–17
228. Lyubeznik G (1995) Minimal resultant system. Journal of Algebra 177: 612–616
229. Macaulay F (1902) On some formulae in elimination. Proceeding in London Mathematical Society, pp. 3-27
230. Macaulay F (1916) The algebraic theory of modular systems. Cambridge Tracts in Mathematics 19, Cambridge University Press, Cambridge
231. Macaulay F (1921) Note on the resultant of a number of polynomials of the same degree. Proceeding in London Mathematical Society 21: 14–21
232. Mackenzie FT (2003) Our changing planet; an introduction to Earth system science and global environmental change. 3rd edition, Prentice Hall, New Jersey
233. Manocha D (1992) Algebraic and numeric techniques for modeling and robotics. Ph.D. thesis, Computer Science Division, Department of Electrical Engineering and Computer Science, University of California, Berkeley
234. Manocha D (1993) Efficient algorithms for multipolynomial resultant. The Computer Journal 36: 485–496
235. Manocha D (1994a) Algorithms for computing selected solutions of polynomial equations. Extended abstract appearing in the proceedings of the ACM ISSAC 94.
236. Manocha D (1994b) Computing selected solutions of polynomial equations. Proceedings of the International Symposium on Symbolic and Algebraic Computations ISSAC, July 20-22, pp.1-8, Oxford
237. Manocha D (1994c) Solving systems of polynomial equations. IEEE Computer Graphics and application 14: 46–55

238. Manocha D (1998) Numerical methods for solving polynomial equations. Proceedings of Symposia in Applied Mathematics 53: 41–66
239. Manocha D, Canny J (1991) Efficient techniques for multipolynomial resultant algorithms. Proceedings of the International Symposium on Symbolic Computations, July 15-17, 1991, pp. 86–95, Bonn
240. Manocha D, Canny J (1992) Multipolynomial resultant and linear algebra. Proceedings of the International Symposium on Symbolic and Algebraic Computations ISSAC, July 27-29, pp. 158-167, Berkeley
241. Manocha D, Canny J (1993) Multipolynomial resultant algorithms. Journal of Symbolic Computations 15: 99–122
242. Mardia K (1978) Some properties of classical multidimensional scaling. Commun. Statist.-Theory Meth. A7(13): 1233–1241
243. Mathar R (1997) Multidimensionale Skalierung. B. G. Teubner Verlag, Stuttgart
244. Mathes A (1998) GPS und GLONASS als Teil eines hybrid Meßsystems in der Geodäsie am Beispiel des Systems HIGGINS, Dissertationen, DGK, Reihe C, Nr. 500
245. Mautz R (2001) Zur Lösung nichtlinearer Ausgleichungsprobleme bei der Bestimmung von Frequenzen in Zeitreihen. DGK, Reihe C, Nr. 532
246. McCoy NH, Janusz GJ (2001) Introduction to abstract algebra. Harcourt Academic Press, San Diego
247. Meissl P (1982) Least squares adjustment. A modern approach, Mitteilungen der geodätischen Institut der Technischen Universität Craz, Folge 43. 17
248. Melbourne WG, Davis ES, Duncan CB, Hajj GA, Hardy K, Kursinski R, Mechan TK, Young LE, Yunck TP (1994) The application of spaceborne GPS to atmospheric limb sounding and global change monitoring. JPL Publication 94-18
249. Merritt EL (1949) Explicit Three-point resection in space. Phot. Eng. 15: 649–665
250. Mittermayer E (1972) A generalization of least squares adjustment of free networks. Bull. Geod. 104: 139–155
251. Monhor D (2001) The real linear algebra and linear programming. Müszaki Könyvkiadó, Budapest
252. Monhor D (2002) Clarification of and complements to the concept of outlier. Geodezia es Kartografia 12: 21–27
253. Morgan AP (1992) Polynomial continuation and its relationship to the symbolic reduction of polynomial systems. In Symbolic and Numerical Computations for Artificial Intelligence, pp. 23–45
254. Mukherjee K (1996) Robust estimation in nonlinear regression via minimum distance method. Mathematical methods of statistics, Vol 5, No. 1, Allerton Press. Inc., New York
255. Müller FJ (1925) Direkte (Exakte) Lösungen des einfachen Rückwärtschnittseinschneidens im Raum. 1 Teil. Zeitschrift für Vermessungswesen 37: 249–255, 265–272, 349–353, 365–370, 569–580
256. Nicholson WK (1999) Introduction to abstract algebra. Second Edition, John Wiley & Sons, New York-Chichester-weinheim-Brisbane-Singapore
257. Niell AE (1996) Global Mapping Functions for the Atmosphere Delay at Radio Wavelengths. Journal of Geophysical Research 101(B2): 3227–3246
258. Newsome G, Harvey BR (2003) GPS coordinate transformation parameters for Jamaica. Survey Review 37: 218–233

259. Nitschke M, Knickmeyer EH (2000): Rotation parameters - a survey of techniques. *Journal of Surveying Engineering* 126: 83–105
260. Okeke FI (1998) The curvilinear datum transformation model, DGK, Reihe C, Heft Nr. 481
261. Ozone MI (1985) Non-iterative solution of the ϕ equations. *Surveying and Mapping* 45: 169–171
262. Paul MK (1973) A note on computation of geodetic coordinates from geocentric (Cartesian) coordinates. *Bull. Geod.* No. 108: 135–139
263. Penev P (1978) The transformation of rectangular coordinates into geographical by closed formulas. *Geo. Map. Photo* 20: 175–177
264. Perelmutter A (1979) Adjustment of free networks. *Bull. Geod.* 53: 291–295
265. Pick M (1985) Closed formulae for transformation of Cartesian coordinates into a system of geodetic coordinates. *Studia geoph. et geod.* 29: 653–666
266. Pistone G, Wynn HP (1996) Generalized confounding with Gröbner bases. *Biometrika* 83: 112–119
267. Pope A (1982) Two approaches to non-linear least squares adjustments. *The Canadian Surveyor* 28: 663–669
268. Preparata FP, Shamos MI (1985) Computational geometry. An Introduction. Springer, New York-Berlin-Heidelberg-London-Paris-Tokyo-Hong Kong-Barcelona-Budapest
269. Press WH, Teukolsky SA, Vetterling WT, Flannery BP (1992) Numerical recipes in Fortran 77: The art of scientific computing, 2nd edition, Cambridge University Press
270. Prestel A, Delzell CN (2001) Positive polynomials: from Hilbert's 17th problem to real algebra. Springer, Berlin
271. Rao CR (1967) Least squares theory using an estimated dispersion matrix and its application to measurement of signals. *Proceedings of the Fifth Berkeley Symposium*, Berkeley
272. Rao CR (1971) Estimation of variance and covariance components - MINQUE theory. *Journal of Multivariate Analysis* 1: 257–275
273. Rao CR (1973) Representation of the best linear unbiased estimators in the Gauss-Markov model with singular dispersion matrix. *Journal of multivariate analysis* 3: 276–292
274. Rao CR (1978) Choice of the best linear estimators in the Gauss-Markov model with singular dispersion matrix. *Comm. Stat. Theory Meth.* A7 (13): 1199–1208
275. Rao CR, Kleffe J (1979) Variance and covariance components estimation and applications. Technical Report No. 181, Ohio State University, Dept. of Statistics, Columbus, Ohio
276. Reigber C, Lühr H, Schwintzer P (2003) First CHAMP mission results for gravity, magnetic and atmospheric studies, Springer, Heidelberg
277. Reinking J (2001) Anmerkung zu "Zur Bestimmung eindeutiger transformationparameter". *Zeitschrift für Vermessungswesen* 126: 295–296
278. Richter B (1986) Entwurf eines nichtrelativistischen geodätisch-astronomischen Bezugssystems, DGK, Reihe C, Heft Nr. 322
279. Rinner K (1962) Über die Genauigkeit des räumlichen Bogenschnittes. *Zeitschrift für Vermessungswesen* 87: 361–374
280. Ritt JF (1950) Differential algebra. AMS colloquium publications 18
281. Rocken C, Anthes R, Exner M, Hunt D, Sokolovski S, Ware R, Gorbunov M, Schreiner S, Feng D, Hermann B, Kuo Y.-H, Zou X (1997) Analysis and

- validation of GPS/MET data in the neutral atmosphere. *J. Geophys. Res.* 102: 29849–29860
282. Runge C (1900) Graphische Ausgleichung beim Rückwärtseinchniden. *Zeitschrift für Vermessungswesen* 29: 581–588
 283. Saito T (1973) The non-linear least squares of condition equations. *Bull. Geod.* 110: 367–395
 284. Saleh J (2000) Robust estimation based on energy minimization principles. *Journal of Geodesy* 74: 291–305
 285. Salmon G (1876) Lessons Introductory to modern higher algebra. Hodges, Foster and Co., Dublin
 286. Schaffrin B (1983) Varianz-Kovarianz-Komponenten-Schätzung bei der Ausgleichung heterogener Wiederholungsmessungen, DGK, Reihe C, Heft Nr.282
 287. Schek HJ, Maier P (1976) Nichtlineare Normalgleichungen zur Bestimmung der Unbekannten und deren Kovarianzmatrix. *Zeitschrift für Vermessungswesen* 101: 140–159
 288. Schönemann PH (1966) Generalized solution of the orthogonal Procrustes problem. *Psychometrika* 31: 1–10
 289. Schönemann PH, Carroll RM (1970) Fitting one matrix to another under choice of a certain dilatation and rigid motion. *Psychometrika* 35(2): 245–255
 290. Schottenloher M (1997) A mathematical introduction to conformal field theory. Springer, Berlin, Heidelberg, New York
 291. Schram TG (1988) Properties of gravitational lens mapping. In: Kaiser N, Lasenby AN (eds) *The post-recombination universe*. Kluwer Academic Publishers pp. 319–321
 292. Schram TG (1998) Computer algebra system in engineering education. *Global Journal of Engng. Educ.* 2: 187–194
 293. Shut GH (1958/59) Construction of orthogonal matrices and their application in analytical Photogrammetrie. *Photogrammetria* XV: 149–162
 294. Schwarze VS (1995) Satellitengeodätische Positionierung in der relativistischen Raum-Zeit, DGK, Reihe C, Heft Nr.449
 295. Shut GH (1958/59) Construction of orthogonal matrices and their application in analytical Photogrammetrie. *Photogrammetria* XV: 149–162
 296. Singer P, Ströbel D, Hördt R, Bahndorf J, Linkwitz K (1993) Direkte Lösung des räumlichen Bogenschnitts. *Zeitschrift für Vermessungswesen* 118: 20–24
 297. Sjöberg LE (1999) An efficient iterative solution to transform rectangular geocentric coordinates to geodetic coordinates. *Zeitschrift für Vermessungswesen* 124: 295–297
 298. Soler T, Hothem LD (1989) Important parameters used in geodetic transformations. *Journal of Surveying Engineering* 115: 414–417
 299. Steiner AK (1998) High resolution sounding of key climate variables using the radio occultation technique. Dissertation, Institute for Meteorology and Geophysics, University of Graz, No. 3
 300. Steiner AK, Kirchengast G, Foelsche U, Kornblueh L, Manzini E, Bengtsson L (2001) GNSS occultation sounding for climate monitoring. *Phys. Chem. Earth (A)* 26: 113–124
 301. Stillwell J (2003) Elements of number theory, Springer, New York
 302. Strang G, Borre K (1997) Linear Algebra, Geodesy and GPS, Wellesley Cambridge Press, Wellesley
 303. Sturmfels B (1994) Multigraded resultant of Sylvester type. *Journal of Algebra* 163: 115–127

304. Sturmfels B (1996) Gröbner bases and convex polytopes. American Mathematical Society, Providence
305. Sturmfels B (1998) Introduction to resultants. Proceedings of Symposia in Applied Mathematics 53: 25–39
306. Sünkel H (1999) Ein nicht-iteratives Verfahren zur Transformation geodätischer Koordinaten. Öster. Zeitschrift für Vermessungswesen 64: 29–33
307. Ten Berge, JMF (1977) Orthogonal procrustes rotation for two or more matrices. Psychometrika 42: 267–276
308. Teunissen PJG (1990) Nonlinear least squares. Manuscripta Geodaetica 15: 137–150
309. Teunissen PJG (1988) The non-linear 2d symmetric Helmert transformation: an exact nonlinear least squares solution. Bull. Geod. 62: 1–15
310. Teunissen PJG, Knickmeyer EH (1988) Non-linearity and least squares. CISM Journal ASCGC 42: 321–330
311. Thompson EH (1959a) A method for the construction of orthogonal matrices. Photogrammetria III: 55–59
312. Thompson EH (1959b) An exact linear solution of the absolute orientation. Photogrammetria XV: 163–179
313. Torge W (1991) Geodesy. 2nd Edition. Walter de Gruyter, Berlin
314. Trefethen LN, Bau D (1997) Numerical linear algebra. SIAM, Philadelphia
315. Tsuda T, Heki K, Miyazaki S, Aonashi K, Hirahara K, Tobita M, Kimata F, Tabei T, Matsushima T, Kimura F, Satomura M, Kato T, Naito I (1998) GPS meteorology project of Japan-Exploring frontiers of geodesy-. Earth Planets Space, 50(10): i–v
316. Tsuda T, Hocke K (2004) Application of GPS occultation for studies of atmospheric waves in the Middle Atmosphere and Ionosphere. In Anthens et al. (eds). Application of GPS Remote Sensing to Meteorology and Related Fields, Journal of Meteorological Society of Japan, Vol. 82, No. 1B, pp. 419–426
317. Van Mierlo J (1988) Rückwärtschnitt mit Streckenverhältnissen. Algemanie Vermessungs Nachrichten 95: 310–314
318. Vanicek P, Krakiwski EJ (1982) Geodesy: The concepts. North-Holland Publishing Company. Amsterdam. New York-Oxford
319. Vanicek P, Steeves RR (1996) Transformation of coordinates between two horizontal geodetic datums. Journal of Geodesy 70: 740–745
320. Vasconcelos WV (1998) Computational methods in commutative algebra and algebraic geometry, Springer, Berlin-Heidelberg
321. Vincenty T (1978) Vergleich zweier Verfahren zur Berechnung der geodätischen Breite und Höhe aus rechtwinkligen koordinaten. Allgemeine Vermessungs-Nachrichten 85: 269–270
322. Vincenty T (1980) Zur räumlich-ellipsoidischen Koordinaten-Transformation. Zeitschrift für Vermessungswesen 105: 519–521
323. Voigt C (1998) Prokrustes Transformationen. Geodätisches Institut, Stuttgart
324. Von zur Gathen J, Gerhard J (2003) Modern computer algebra. 2nd edition, Cambridge University Press, UK
325. Vorob'ev, VV, Krasil'nikova TG (1994) Estimation of the accuracy of atmospheric refractive index recovery from Doppler shift measurements at frequencies used in the NAVSTAR system. Phys. of Atmos. and Oceans 29: 602–609
326. Van Der Waerden BL (1950) Modern Algebra. 3rd Edition, F. Ungar Publishing Co., New York

327. Weiss J (1993) Resultant methods for the inverse kinematics problem. In: Angeles et al. (eds.) Computational Kinematics, Kluwer Academic Publishers, Netherlands
328. Wellisch S (1910) Theorie und Praxis der Ausgleichsrechnung. Bd. II: Probleme der Ausgleichsrechnung
329. Welsch WM (1993) A general 7-parameter transformation for the combination, comparison and accuracy control of the terrestrial and satellite network observations. *Manuscripta Geodaetica* 18: 295–305
330. Ware H, Fulker D, Stein S, Anderson D, Avery S, Clerk R, Droegmeier K, Kuettner J, Minster B, Sorooshian S (2000) SuomiNet: A real time national GPS network for atmospheric research and education. *Bull. Am. Meteorol. Soc.* 81: 677–694
331. Werkmeister P (1916) Trigonometrische Punktbestimmung durch einfaches Einschneiden mit Hilfe von Vertikalwinkeln. *Zeitschrift für Vermessungswesen* 45: 248–251
332. Werkmeister P (1920) Über die Genauigkeit trigonometrischer Punktbestimmungen. *Zeitschrift für Vermessungswesen* 49: 401–412, 433–456
333. Werner D (1913) Punktbestimmung durch Vertikalwinkelmessung. *Zeitschrift für Vermessungswesen* 42: 241–253
334. Wester MJ (1999) Computer algebra system- a practical guide. John Wiley & Sons, Chichester, United Kingdom
335. Wickert J (2002) Das CHAMP-Radiookkultationsexperiment: Algorithmen, Prozessierungssystem und erste Ergebnisse. Dissertation. Scientific Technical Report STR02/07, GFZ Potsdam
336. Wild F (2001) Test an der Geschlossenen Lösung des “Twin P4P-Problems”: Dreidimensionaler Vorwärts- und Rückwärtsschnitt. Studienarbeit, Geodetic Institute, Stuttgart University
337. Winkler F (1996) A polynomial algorithm in computer algebra. Springer, Wien
338. Wieser A, Brunner FK, 2002 Short static GPS sessions: Robust estimation results. *Journal of GPS Solutions* 5: 70–79
339. Wolfrum O (1992) Merging terrestrial and satellite networks by a ten-parameter transformation model. *Manuscripta Geodaetica* 17: 210–214
340. Wu W (1984) On the decision problem and mechanization of the theorem proving elementary geometry. *Scientia Sinica* 21: 150–172
341. Xu G (2003) GPS. Theory, algorithms and applications, Springer, Berlin Heidelberg
342. Xu P (1987) A test method for many outliers. I. T. C. Journal 4: 314–317
343. Xu P (1989a) Statistical criteria for robust methods. I. T. C. Journal 1: 37–40
344. Xu P (1989b) On robust estimation with correlated observations. *Bull. Geod.* 63: 237–252
345. Xu P (2002) A hybrid global optimization method: the one-dimensional case. *Journal of Computation and Applied mathematics* 147: 301–314
346. Xu P (2003) A hybrid global optimization method: the multi-dimensional case. *Journal of Computation and Applied mathematics* 155: 423–446
347. Yang Y (1999) Robust estimation of geodetic datum transformation. *Journal of Geodesy* 73: 268–274
348. Yang Y, Cheng MK, Shum CK, Tapley BD (1999) Robust estimation of systematic errors of satellite laser range. *Journal of Geodesy* 73: 345–349
349. You RJ (2000) Transformation of Cartesian to geodetic coordinates without iterations. *Journal of Surveying Engineering* 126: 1–7

350. Youcai H, Mertikas SP (1995) On the design of robust regression estimators. *Man. Geod.* 20: 145–160
351. Yunck TP (2003): The promise of spaceborne GPS for Earth remote sensing. International Workshop on GPS Meteorology, 14th-17th January 2003, Tsukuba, Japan
352. Zhang S (1994) Anwendung der Drehmatrix in Hamilton normierten Quaternionen bei der Bündelblock Ausgleichung. *Zeitschrift für Vermessungswesen* 119: 203-211
353. Zippel R (1993) Effective polynomial computation, Kluwer Academic Publications, Boston 1993