

Publications

Prof. i.R. Dr. Diethard Klatte
Institut für Betriebswirtschaftslehre
Universität Zürich
Plattenstrasse 14
CH-8032 Zürich
e-mail: diethard.klatte@uzh.ch

22 November 2022

Monographs

1. D. Klatte and B. Kummer. *Nonsmooth Equations in Optimization: Regularity, Calculus, Methods and Applications*. Kluwer, Dordrecht-Boston-London, 2002.
2. B. Bank, J. Guddat, D. Klatte, B. Kummer, and K. Tammer. *Non-Linear Parametric Optimization*. Mathematische Lehrbücher und Monographien, II. Abteilung: Mathematische Monographien, Band 58. Akademie-Verlag, Berlin, 1982. published also by Birkhäuser, Basel-Boston, 1983.

Edited books

3. D. Klatte, H.-J. Lüthi, K. Schmedders, editors. *Operations Research Proceedings 2011*. Springer, Berlin-Heidelberg, 2012.
4. D. Ward, D. Klatte, and J. Rückmann, editors. *Optimization with Data Perturbations II*. Annals of Operations Research, (Complete) Volume 101. Kluwer, 2001.
5. D. Klatte (co-editor). *Advances in Mathematical Optimization* (J. Guddat et al., editors). Akademie-Verlag, Berlin, 1988.

Original papers (refereed)

6. M.J. Cánovas, M.J. Gisbert, D. Klatte, J. Parra. Projection-based local and global Lipschitz moduli of the optimal value in linear programming, *Journal of Optimization Theory and Applications*, 193:280–299, 2022. Published online 17 October 2021, DOI: 10.1007/s10957-021-01948-2. Open access.
7. D. Klatte and B. Kummer. On Hölder calmness of minimizing sets. *Optimization*, 71(4): 1055–1072, 2022. Published online 24 April 2021, DOI 10.1080/02331934.2021.1914038. Open access.
8. D. Klatte and B. Kummer. Nonsmooth Kantorovich–Newton methods: Hypotheses and auxiliary problems. *Vietnam Journal of Mathematics*, 47: 639–657, 2019. Published online 27 April 2019, DOI 10.1007/s10013-019-00348-4.
9. D. Klatte. On a Frank-Wolfe type theorem in cubic optimization. *Optimization*, 68(2-3): 539–547, 2019. Published online 13 January 2019, DOI: 10.1080/02331934.2019.1566327.
10. D. Klatte and B. Kummer. Approximations and generalized Newton methods. *Mathematical Programming, Ser. B*, 168: 673–716, 2018. Published online 11 September 2017, DOI 10.1007/s10107-017-1194-8. Correction to: Approximations and generalized Newton methods. *Mathematical Programming, Ser. A*, published online 25 October 2019, DOI 10.1007/s10107-019-01436-6.
11. H. Gfrerer and D. Klatte. Lipschitz and Hölder stability of optimization problems and generalized equations. *Mathematical Programming, Ser. A*, 158: 35–75, 2016. Published online 29 May 2015, DOI 10.1007/s10107-015-0914-1.

12. D. Klatte and B. Kummer. Calmness of the argmin mapping in parametric optimization problems. *Journal of Optimization Theory and Application*, 165: 708-719, 2015.
13. D. Klatte and B. Kummer. Aubin property and uniqueness of solutions to cone constrained optimization. *Mathematical Methods of Operations Research*, 77(3): 291-304, 2013.
14. D. Klatte, A. Kruger and B. Kummer. From convergence principles to stability and optimality conditions. *Journal of Convex Analysis* 19(4):1043-1072, 2012.
15. D. Klatte. Comments on: M.A. López, Stability in linear optimization and related topics. A personal tour. *TOP. An Official Journal of the Spanish Society of Statistics and Operations Research* 20(2):250-254, 2012.
16. S. Bütikofer, D. Klatte and B. Kummer. On second-order Taylor expansion of critical values. *Kybernetika*, 46:472-487, 2010.
17. S. Bütikofer and D. Klatte. A nonsmooth Newton method with path search and its use in solving $C^{1,1}$ programs and semi-infinite problems. *SIAM Journal on Optimization*, 20:2381-2412, 2010.
18. D. Klatte and B. Kummer. Optimization methods and stability of inclusions in Banach spaces. *Mathematical Programming*, 117:305-330, 2009.
19. M.J. Cánovas, D. Klatte, M.A. López, and J. Parra. Metric regularity in convex semi-infinite optimization under canonical perturbations. *SIAM Journal on Optimization*, 18:717-732, 2007.
20. D. Klatte and B. Kummer. Newton methods for stationary points: an elementary view of regularity conditions and solution schemes. *Optimization*, 56:441-462, 2007.
21. D. Klatte and B. Kummer. Stability of inclusions: Characterization via suitable Lipschitz functions and algorithms. *Optimization*, 55:627-660, 2006.
22. D. Klatte. Discussion: J.-J. Rückmann, J.A. Gómez, On generalized semi-infinite programming. *TOP. An Official Journal of the Spanish Society of Statistics and Operations Research* 14(1):32-39, 2006.
23. D. Klatte and B. Kummer. Strong Lipschitz stability of stationary solutions for nonlinear programs and variational inequalities. *SIAM Journal on Optimization*, 16:96-119, 2005.
24. C. Grossmann, D. Klatte, and B. Kummer. Convergence of primal-dual solutions for the nonconvex log-barrier method without LICQ. *Kybernetika*, 40:571-584, 2004.
25. D. Klatte and B. Kummer. Second-order characterizations of Lipschitz stability in nonlinear programming. *Journal of Mathematical Sciences*, 116:3231-3252, 2003.
26. P. Fusek, D. Klatte, and B. Kummer. Examples and counterexamples in Lipschitz analysis. *Control and Cybernetics*, 31:471-492, 2002.
27. D. Klatte and B. Kummer. Constrained minima and Lipschitzian penalties in metric spaces. *SIAM Journal on Optimization*, 13:619-633, 2002.
28. E.G. Belousov and D. Klatte. A Frank-Wolfe type theorem for convex polynomial programs. *Computational Optimization and Applications*, 22:37-48, 2002.
29. D. Klatte and B. Kummer. Contingent derivatives of implicit (multi-) functions and stationary points. *Annals of Operations Research*, 101:313-331, 2001.
30. D. Klatte. Upper Lipschitz behavior of solutions to perturbed $C^{1,1}$ programs. *Mathematical Programming*, 88:285-311, 2000.

31. D. Klatte and W. Li. Asymptotic constraint qualifications and global error bounds for convex inequalities. *Mathematical Programming*, 84:137–160, 1999.
32. D. Klatte and B. Kummer. Strong stability in nonlinear programming revisited. *Journal of the Australian Mathematical Society, Series B*, 40:336–352, 1999.
33. D. Klatte and B. Kummer. Generalized Kojima–functions and Lipschitz stability of critical points. *Computational Optimization and Applications*, 13:61–85, 1999.
34. D. Klatte and R. Henrion. Regularity and stability in nonlinear semi–infinite optimization. In R. Reemtsen and J. Rückmann, editors, *Semi-Infinite Programming*, pages 69–102. Kluwer, Dordrecht, 1998.
35. D. Klatte. Hoffman’s error bound for systems of convex inequalities. In A.V. Fiacco, editor, *Mathematical Programming with Data Perturbations*, pages 185–199. Marcel Dekker Publisher, New York, 1998.
36. D. Klatte. Lower semicontinuity of the minimum in parametric convex programs. *Journal of Optimization Theory and Applications* **94** (1997) 511–517.
37. D. Klatte. Lipschitz stability and Hoffman’s error bounds for convex inequality systems. In J. Guddat, H. Th. Jongen, F. Nožička, G. Still, and F. Twilt, editors, *Parametric Optimization and Related Topics IV*, pages 214–230. Verlag Peter Lang, Frankfurt/Main, 1996.
38. D. Klatte and G. Thiere. A note on Lipschitz constants for solutions of linear inequalities and equations. *Linear Algebra and its Applications* **244** (1996) 365–374.
39. D. Klatte and G. Thiere. Error bounds for solutions of linear equations and inequalities. *ZOR – Mathematical Methods of Operations Research* **41** (1995) 191–214.
40. D. Klatte. On regularity and stability in semi-infinite optimization. *Set-Valued Analysis*, **3** (1995) 101–111.
41. D. Klatte. On quantitative stability for $C^{1,1}$ programs. In R. Durier and C. Michelot, editors, *Recent Developments in Optimization*, pages 214–230, LNEMS 429, Springer, Berlin, 1995.
42. D. Klatte. Stable local minimizers in semi-infinite optimization: Regularity and second-order conditions. *Journal of Computational and Applied Mathematics*, **56** (1994) 137–154.
43. D. Klatte. On quantitative stability for non-isolated minima. *Control and Cybernetics*, **23** No. 1/2 (1994) 183–200.
44. R. Henrion and D. Klatte. Metric regularity of the feasible set mapping in semi-infinite optimization. *Applied Mathematics and Optimization*, **30** (1994) 103–109.
45. D. Klatte. Perturbation of stationary solutions in semi-infinite optimization. In J. Henry and J.-P. Yvon, editors, *System Modelling and Optimization*, pages 167–176. Springer, Berlin, 1994.
46. D. Klatte. Nonlinear optimization under data perturbations. In W. Krabs and J. Zowe, editors, *Modern Methods of Optimization*, pages 204–235. Springer, Berlin, 1992.
47. D. Klatte. Stability of stationary solutions in semi-infinite optimization via the reduction approach. In W. Oettli and D. Pallaschke, editors, *Advances in Optimization*, pages 155–170. Springer, Berlin, 1992.
48. D. Klatte. Strong stability of stationary solutions and iterated local minimization. In J. Guddat, H. Th. Jongen, B. Kummer, and F. Nožička, editors, *Parametric Optimization and Related Topics II*, pages 119–136. Akademie-Verlag, Berlin, 1991.

49. D. Klatte. Sensitivity analysis in nonlinear optimization. *Methods of Operations Research* **64** (1991) 81–90.
50. H.Th. Jongen, D. Klatte, and K. Tammer. Implicit functions and sensitivity of stationary points. *Mathematical Programming* **49** (1990) 123–138.
51. D. Klatte and K. Tammer. Strong stability of stationary solutions and Karush-Kuhn-Tucker points in nonlinear optimization. *Annals of Operations Research* **27** (1990) 285–308.
52. D. Klatte and K. Tammer. On second-order sufficient optimality conditions for $C^{1,1}$ -optimization problems. *optimization* **19** (1988) 169–179.
53. D. Klatte. On strongly stable local minimizers in nonlinear programs. In J. Guddat et al., editors, *Advances in Mathematical Optimization*, pages 102–111. Akademie-Verlag, Berlin, 1988.
54. D. Klatte. Zur Lipschitz-Stetigkeit bei parametrischen konvexen Optimierungsproblemen. *Seminarbericht Nr. 94*, S. 104–112. Sektion Mathematik, Humboldt-Universität zu Berlin, Berlin, 1988.
55. D. Klatte. Lipschitz continuity of infima and optimal solutions in parametric optimization: The polyhedral case. In J. Guddat, H. Th. Jongen, B. Kummer, and F. Nožička, editors, *Parametric Optimization and Related Topics*, pages 229–248. Akademie-Verlag, Berlin, 1987.
56. D. Klatte. A note on quantitative stability results in nonlinear optimization. *Seminarbericht Nr. 90*, pages 77–86. Sektion Mathematik, Humboldt-Universität zu Berlin, Berlin, 1987.
57. D. Klatte. On persistence and continuity of local minimizers of nonlinear optimization problems under perturbations. *Seminarbericht Nr. 80*, pages 32–42. Sektion Mathematik, Humboldt-Universität zu Berlin, Berlin, 1986.
58. D. Klatte. On the stability of local and global optimal solutions in parametric problems of nonlinear programming. Part I and Part II. *Seminarbericht Nr. 75*, pages 1–39. Sektion Mathematik, Humboldt-Universität zu Berlin, Berlin, 1985.
59. D. Klatte. On the Lipschitz behavior of optimal solutions in parametric problems of quadratic optimization and linear complementarity. *optimization* **16** (1985) 819–831. (also as Working Paper WP-83-121, IIASA Laxenburg/Austria, December 1983).
60. D. Klatte and B. Kummer. Stability properties of infima and optimal solutions of parametric optimization problems. In V. Demyanov and D. Pallaschke, editors, *Nondifferentiable Optimization: Motivations and Applications*, pages 215–229. Springer, Berlin, 1985.
61. D. Klatte. A sufficient condition for lower semicontinuity of solution sets of systems of convex inequalities. *Mathematical Programming Study* **21** (1984) 139–149.
62. D. Klatte and B. Kummer. On (Lipschitz-) continuity of solutions of parametric optimization problems. *Seminarbericht Nr. 64*, pages 50–61. Sektion Mathematik, Humboldt-Universität zu Berlin, Berlin, 1984.
63. D. Klatte. Eine Bemerkung zur parametrischen quadratischen Optimierung. *Seminarbericht Nr. 50*, S. 174–185. Sektion Mathematik, Humboldt-Universität zu Berlin, Berlin, 1983.
64. J. Guddat and D. Klatte. Qualitative stability in nonlinear parametric optimization and some applications. In A. Prekopa, editor, *Survey of Mathematical Programming, Part I*, pages 217–230. North Holland, Amsterdam, 1979.
65. D. Klatte. On the lower semicontinuity of optimal sets in convex parametric optimization. *Mathematical Programming Study* **10** (1979) 104–109. Errata correction: *Mathematical Programming* **17** (1979) p. 400.

66. D. Klatte. Über lokale Stabilitätsmengen in der parametrischen quadratischen Optimierung. *Mathematische Operationsforschung und Statistik. Series Optimization* **10** (1979) 511–521.
67. D. Klatte. Lineare Optimierungsprobleme mit Parametern in der Koeffizientenmatrix der Restriktionen. In K. Lommatzsch, editor, *Anwendungen der linearen parametrischen Optimierung*, S. 23–53. Akademie-Verlag, Berlin, 1979.
68. D. Klatte, F. Nožička, and K. Wendler. Ein lineares parametrisches Optimierungsmodell für die teilmechanisierte Gemüseernte. In K. Lommatzsch, editor, *Anwendungen der linearen parametrischen Optimierung*, S. 175–189. Akademie-Verlag, Berlin, 1979.
69. D. Klatte. Über lineare Optimierungsprobleme mit Parametern in allen Koeffizienten der Zielfunktion und der Restriktionen. *Wissenschaftliche Zeitschrift der Humboldt-Universität zu Berlin, Mathematisch-Naturwissenschaftliche Reihe* **XXVI** (1977) 555–560.

Theses

70. D. Klatte. Beiträge zur Stabilitätsanalyse nichtlinearer Optimierungsprobleme, *Habilitationsschrift (Dr.sc.nat.)*, Humboldt-Universität zu Berlin, 1984.
Reprint: *Habilitationsschrift zur Erlangung der venia legendi der Wirtschaftswissenschaftlichen Fakultät der Universität Zürich*, Zürich, Dezember 1995.
71. D. Klatte. Untersuchungen zur lokalen Stabilität konvexer parametrischer Optimierungsaufgaben, *Doktorarbeit (Dr.rer.nat.)*, Humboldt-Universität zu Berlin, 1977.
72. D. Klatte. Mengen konvexer Polyeder und linearer Optimierungsprobleme mit Metrik und algebraischer Struktur, *Diplomarbeit (Dipl.-Math.)*, Humboldt-Universität zu Berlin, 1974.

Invited contributions (selected)

73. D. Klatte. In: *Encyclopedia of Optimization* (C.A. Floudas and P.M. Pardalos, editors). Kluwer, 2001.
74. D. Klatte. In: *Optimierung und optimale Steuerung - Lexikon der Optimierung* (A. Göpfert et al., editors). Akademie-Verlag, Berlin, 1986.

Papers for Undergraduate, Graduate and Doctoral Students

75. D. Klatte. Selected topics of existence theory and perturbation analysis in nonlinear optimization. In M. Cervinka, editor, *Variational Analysis and its Applications*, pp. 145–179. Lecture Notes Spring School in Variational Analysis VII, Paseky and Jizerou 2019. matfyzpress, nakladelstvi Matematicko-fyzikalni fakulty Univerzity Karlovy, Praha 2019.
76. D. Klatte and B. Kummer. Variational Analysis: Constructions, examples and counterexamples. Electronic script for students July 2015, permanently completed.
Online available (22 November 2022) via www.researchgate.net/publication/258993187_Variational_AnalysisConstructions_examples_and_counterexamples.
77. D. Klatte and B. Luderer. Parametrische Optimierungsprobleme mit Nebenbedingungen. *WISU - Das Wirtschaftsstudium*, 42. Jahrgang, Nr. 2, Februar 2013, S. 241-246.
78. D. Klatte and B. Luderer. Optimalwertfunktion und Einhüllendensätze. *WISU - Das Wirtschaftsstudium*, 40. Jahrgang, Nr. 1, Januar 2011, S. 131-137.