

LIST OF MATHEMATICAL PUBLICATIONS

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Research Articles

1. H. X. Phu, *Zur Stetigkeit der Lösung der adjungierten Gleichung bei Aufgaben der optimalen Steuerung mit Zustandsbeschränkungen*, Zeitschrift für Analysis und ihre Anwendungen, Vol. 3, No. 6, pp. 527–539, 1984.
2. H. X. Phu, *Lineare Steuerungsprobleme mit engen Zustandsbereichen*, Optimization, Vol. 16, No. 2, pp. 273–284, 1985.
3. H. X. Phu, *Lösung einer eindimensionalen regulären Aufgaben der optimalen Steuerung mit engen Zustandsbereichen anhand der Methode der Bereichsanalyse*, Optimization, Vol. 16, No. 3, pp. 431–438, 1985.
4. H. X. Phu, *Einige notwendige Optimalitätsbedingungen für einfache reguläre Aufgaben der optimalen Steuerung*, Zeitschrift für Analysis und ihre Anwendungen, Vol. 5, No. 5, pp. 465–475, 1986.
5. H. X. Phu, *Zur Lösung des Knickstab-Problems mit beschränkter Ausbiegung*, Zeitschrift für Analysis und ihre Anwendungen, Vol. 6, No. 4, pp. 371–384, 1987.
6. H. X. Phu, *Zur Lösung einer regulären Aufgabenklasse der optimalen Steuerung im Großen mittels Orientierungskurven*, Optimization, Vol. 18, No. 1, pp. 65–81, 1987.
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8. H. X. Phu, *Ein konstruktives Lösungsverfahren für das Problem des Inpolygons kleinsten Umfangs von J. Steiner*, Optimization, Vol. 18, No. 3, pp. 349–359, 1987.
9. H. X. Phu, *Some necessary conditions for optimality for a class of optimal control problems which are linear in the control variable*, Systems & Control Letters, Vol. 8, No. 3, pp. 261–271, 1987.
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11. H. X. Phu, *On the optimal control of a hydroelectric power plant*, Systems & Control Letters, Vol. 8, No. 3, pp. 281–288, 1987.

12. H. X. Phu, *Solution of some high-dimensional linear optimal control problems by the method of region analysis*, International Journal of Control, Vol. 47, No. 2, pp. 493–518, 1988.
13. H. X. Phu, *Linear optimal control problem of a system with circuit-free graph structure*, International Journal of Control, Vol. 48, No. 5, pp. 1867–1882, 1988.
14. H. X. Phu, *Investigation of some inventory problems with linear replenishment cost by the method of region analysis*, in Optimal Control Theory and Economic Analysis 3, Editor: G. Feichtinger, North-Holland, Amsterdam, pp. 195–221, 1988.
15. H. X. Phu, *Reguläre Aufgaben der optimalen Steuerung mit linearen Zustandsrestriktionen*, Zeitschrift für Analysis und ihre Anwendungen, Vol. 7, No. 5, pp. 431–440, 1988.
16. H. X. Phu, *Optimal control of a hydroelectric power plant with unregulated spilling water*, Systems & Control Letters, Vol. 10, No. 1, pp. 131–139, 1988.
17. H. X. Phu, *A solution method for regular optimal control problems with state constraints*, Journal of Optimization Theory and Applications, Vol. 62, No. 3, pp. 489–513, 1989.
18. H. X. Phu, *The Method of region analysis and its application for optimal control problems of hydroelectric power plants*, Proceedings of the Fourth European Consortium for Mathematics in Industry, pp. 309–313, B.G. Teubner Stuttgart and Kluwer Academic Publishers, the Netherlands, 1991.
19. H. X. Phu, *Investigation of a macroeconomic model by the method of region analysis*, Journal of Optimization Theory and Applications, Vol. 72, No. 2, pp. 319–332, 1992.
20. H. X. Phu, *Method of orienting curves for solving optimal control problems with state constraints*, Numerical Functional Analysis and Optimization, Vol. 12, No. 1&2, pp. 173–211, 1991.
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22. N. Dinh and H. X. Phu, *Solving a class of optimal control problems which are linear in the control variable by the method of orienting curves*, Acta Mathematica Vietnamica, Vol. 17, No. 2, pp. 115–134, 1992.
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24. H. X. Phu, *γ -subdifferential and γ -convexity of functions on the real line*, Applied Mathematics and Optimization, Vol. 27, No. 2, pp. 145–160, 1993.

25. H. X. Phu, *Representation of bounded convex sets by rational convex hull of its γ -extreme points*, Numerical Functional Analysis and Optimization, Vol. 15, No. 7&8, pp. 915–920, 1994.
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28. H. X. Phu, *Some properties of globally δ -convex functions*, Optimization, Vol. 35, No. 1, pp. 23–41, 1995.
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74. N.-D. Hoang, N. K. Linh, and H. X. Phu, *Octagonal and hexadecagonal cut algorithms for finding the convex hull of finite sets with linear time complexity*, Applied Mathematics and Computation, Vol. 481, Paper No. 128931, 19 pp., 2024.
75. N.-D. Hoang, N. K. Linh, and H. X. Phu, *Inner δ -approximation of the convex hull of finite sets*, Computational Optimization and Applications, Vol. 91, No. 3, pp. 1373–1413, 2025.

Other Journal Articles

1. J. Jost and H. X. Phu, *In memory of Eberhard Zeidler*, Vietnam Journal of Mathematics, Vol. 47, No. 1, pp. 1–3, 2019.
2. H. V. Ngai, H. X. Phu, R. T. Rockafellar, and M. Théra, *Alexander Davidovich Ioffe: a life of contributions*, Vietnam Journal of Mathematics, Vol. 47, No. 3, pp. 511–516, 2019.
3. M. J. Cánovas, A. Kruger, H. X. Phu, and M. Théra, *Marco A. López, a pioneer of continuous optimization in Spain*, Vietnam Journal of Mathematics, Vol. 48, No. 2, pp. 211–219, 2020.
4. P. Benner, D. Kressner, and H. X. Phu, *Numerical mathematics and control. Preface to a special issue dedicated to Volker Mehrmann on the occasion of his 65th birthday*, Vietnam Journal of Mathematics, Vol. 48, No. 4, pp. 615–620, 2020.
5. J.-M. Coron, S. Micu, and H. X. Phu, *Partial differential equations, control, and numerics. Preface to a special issue dedicated to Enrique Zuazua on the occasion of his 60th birthday*, Vietnam Journal of Mathematics, Vol. 49, No. 3, pp. 615–618, 2021.

6. A. Dickenstein, L. T. Hoa, G. Ottaviani, and H. X. Phu, *Nonlinear algebra: preface to two special issues dedicated to Bernd Sturmfels on the occasion of his 60th birthday*, Vietnam Journal of Mathematics, Vol. 50 (2022), No. 2, pp. 319–321.
7. L. Formaggia, P. Gervasio, Y. Maday, and H. X. Phu, *Mathematical modelling and scientific computing: an effective way to understand reality. Preface to two special issues dedicated to Alfio Quarteroni on the occasion of his 70th birthday*, Vietnam Journal of Mathematics, Vol. 50, No. 4, pp. 829–832, 2022.
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9. H. Holden, H. X. Phu, G. Ponce, and L. Vega, *A master in harmony and differential equations: a tribute to Carlos E. Kenig on his 70th birthday*, Vietnam Journal of Mathematics, Vol. 51, No. 4, pp. 755–757, 2023.
10. T. Illés, B. Mordukhovich, H. X. Phu, Ch. Tammer, and L. F. Zuluaga, *Multiple faces of optimization—a tribute to Tamás Terlaky on his 70th birthday*, Vietnam Journal of Mathematics, Vol. 53, No. 3, pp. 485–493, 2025.

Edited Books

1. H. G. Bock, E. Kostina, H. X. Phu, and R. Rannacher (Eds), *Modeling, Simulation and Optimization of Complex Processes*, Proceedings of the 2nd International Conference on High Performance Scientific Computing, March 10–14, 2003, Hanoi, Vietnam. Springer, Berlin Heidelberg, 2005.
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Theses

1. H. X. Phu, *Optimale Bilanzierung der Produktion am Fließband*, Diplomarbeit, Universität Leipzig, 1979.
2. H. X. Phu, *Methoden zur Lösung von Aufgaben der optimalen Steuerung mit engen Zustandsbereichen*, Dissertation, Universität Leipzig, 1983.
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