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## 无穷维Hamilton算子的辛自伴性

吴德玉, 阿拉坦仓

内蒙古大学数学科学学院, 呼和浩特 010021

## Symplectic Self-adjointness of Infinite Dimensional Hamiltonian Operator

WU Deyu, Alatancang

School of mathematics science, Inner Mongolia University, Hohhot 010021

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**摘要** 本文运用算子扰动理论研究了无穷维Hamilton算子的共轭算子, 进而得到了无穷维Hamilton算子为辛自伴算子的若干充分条件.

**关键词:** 无穷维Hamilton算子 辛自伴算子 相对界

**Abstract:** In this paper, the adjoint operator of infinite dimensional Hamiltonian operator is studied by method of perturbation theory and the sufficient conditions under which the infinite dimensional Hamiltonian operator is symplectic self-adjoint are given.

**Key words:** infinite dimensional Hamiltonian operator symplectic self-adjoint operator relative bound

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- [1] Azizov T Ya, Dijksma A, Gridneva I V. On the Boundedness of Hamiltonian Operators. Proc. Amer.Math. Soc., 2002, 131(2): 563-576
- [2] Kurina G A. Invertibility of Nonnegatively Hamiltonian Operators in a Hilbert Space. DifferentialEquations, 2001, 37(6): 880-882
- [3] Langer H, Ran A C M. Invariant Subspace of Infinite Dimensional Hamiltonians and Solutions of the Corresponding Riccati Equations. Operator Theory: Advances and Applications, 2001, 1(130):220-221
- [4] Zhong W X. A New Systematic Methodology for Theory of Elasticity. Dalian: Dalian University of Technology Press, 1995
- [5] Zhang H Q, Alatancang, Zhong W X. The Hamiltonian System and Completeness of Symplectic Orthogonal System. Applied Mathematics and Mechanics, 1997, 18(3): 237-242
- [6] Hess P, Kato T. Perturbation of Closed Operators and Their Adjoints. Comment. Math. Helv. 1970, 45: 524-529
- [7] Kato T. Perturbation Theory for Linear Operators (Second Corrected Printing of the Second Edition). Berlin, Heidelberg, New York, Tokyo: Springer-Verlag, 1984

- [8] Huang J J, Alatancang, Chen Aruna. Completeness for the Eigenfunction System of a Class of InfiniteDimensional Hamiltonian Operators. *Acta Mathematcae Applicatae Sinica*, 2008, 31(3): 457-466
- [9] Zhang L, Alatancang. Perturbation of Spectrums of a Class of Operator Matrices. *Acta MathematcaeApplicatae Sinica*, 2010, 33(1): 59-65
- [10] Alatancang, Hou G L. Matrix Solving Process of Characteristic Series for Polynomial Systems. *ActaMathematcae Applicatae Sinica*, 2008, 31(6): 981-986

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