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A note on the modified Crank-Nicolson difference schemes for Schrödinger equation. (English) [Zbl 1144.65313](#)

Aliyev Azeroglu, Tahir (ed.) et al., Complex analysis and potential theory. Proceedings of the conference satellite to ICM 2006, Gebze, Turkey, September 8–14, 2006. Hackensack, NJ: World Scientific (ISBN 978-981-270-598-3/hbk). 256-271 (2007).

MSC:

- [65M06](#) Finite difference methods for initial value and initial-boundary value problems involving PDEs
- [35Q40](#) PDEs in connection with quantum mechanics
- [81Q05](#) Closed and approximate solutions to the Schrödinger, Dirac, Klein-Gordon and other equations of quantum mechanics
- [65M12](#) Stability and convergence of numerical methods for initial value and initial-boundary value problems involving PDEs
- [34G10](#) Linear differential equations in abstract spaces
- [34L40](#) Particular ordinary differential operators (Dirac, one-dimensional Schrödinger, etc.)
- [65L12](#) Finite difference and finite volume methods for ordinary differential equations
- [65L20](#) Stability and convergence of numerical methods for ordinary differential equations

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