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On regularization and error estimates for the backward heat conduction problem with time-dependent thermal diffusivity factor

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Highlights

- A new regularization method based on the Meyer wavelet technique is developed to solve the backward heat conduction problem.
- The proposed technique is extendable to solve the broadest spectrum of the inverse and ill-posed parabolic partial differential equations.
- Some new stable estimates are proposed in the Holder and Logarithmic types.
- The proposed stable estimates are optimal in the Tautenhahn's sense.
- Numerical results confirm the efficiency of the proposed method.

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