

THE SUMMARY

ON THE NEW CONCLUSIONS OF THE DOCTORAL THESIS

Thesis title: On stability estimates and regularization of backward integer and fractional order parabolic equations

Speciality: Mathematical Analysis; Code: 9 46 01 02

Full name of PhD student: Nguyen Van Thang

Supervisors: 1. Assoc. Prof. Dr. Nguyen Van Duc

2. Assoc. Prof. Dr. Dinh Huy Hoang

Training Institution: Vinh University

The new contributions

- We have obtained the new results of stability estimates and Tikhonov regularization for semilinear parabolic equations backward in time.
- We have obtained the new results of stability estimates only with conditions of bounded solutions at $t=0$ for semilinear parabolic equations with time-independent coefficients backward in time.
- We have obtained the new stability estimates for type Burgers equations.
- Regularized the problems of fractional parabolic equations backward in time by mollification method with both a priori and a posteriori parameter choice rules. After that, we give a numerical example to illustrate our theory.

Nghe An, march 5, 2019

On behalf of the supervisors

PhD student

Assoc. Prof. Dr. Nguyen Van Duc

Nguyen Van Thang