## NUMERICAL METHODS FOR OPTIMAL CONTROL PROBLEM OF PARABOLIC EQUATION<sup>1</sup>

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We consider an optimal control problem of parabolic equation. Necessary optimality conditions are given for the optimal control problem. We construct methods of improvement of admissible control functions based on the optimality conditions. The numerical experiment is carried out.

## REFERENCES

1. A.G. Butkovsky Optimal control theory for distributed parameter systems. — M. Science, 1965. p. 474.

2. A.V. Fursikov Optimal control by distributed systems. Theory and applications. — Novosibirsk: Scientific book, 1999, p. 352.

3. O.V. Vasiliev Methods of optimizations and their applications. Part II. Optimal control. — Novosibirsk: Science, Siberian department, 1990, p. 151.

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