Optimal Control problems governed by Parabolic Equations: a nonlocal approximation

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The aim of this work is to provide an approximate solution for optimal control problems whose state equation is of parabolic type. The starting point is the existence of an optimal control for the corresponding sequence of nonlocal problems. Then, by using a $G^-$-convergence result on the nonlocal model we establish the existence of local optimal controls and suitable approximations for them. The obtained results suggest two regularizing methods that, in some situations, could be used to derive a minimizing sequence of controls.

References


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