

A control type method for solving an inverse problem

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In this work, we propose an approximate optimal control formulation of the Cauchy problem. The considered problem is converted into an optimization one. In order to handle the instability of the solution of this ill-posed problem, a regularization technique is developed. We add a term in the least square function which happens to vanish while the algorithm converges. The efficiency of the proposed method is illustrated by numerical experiments. Some applications in fluid flow and biomathematics are presented.