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Coauthors: Amit Apte, Didier Auroux

VARIATIONAL METHOD FOR DATA ASSIMILATION PROBLEM

MYTHILY RAMASWAMY

The data assimilation problem of determining initial data from the model and the observations, is posed as an optimal control problem using 4d-var method. One dimensional viscous Burger's equation is taken as the pde model. Two different numerical schemes are used to solve the pde and its adjoint equation. The optimal control problem is solved numerically to recover the initial data and also for future prediction.

T.I.F.R CENTRE FOR APPLICABLE MATHEMATICS, BANGALORE, INDIA
E-mail address: `mythily@math.tifrbng.res.in`