EFFICIENT NUMERICAL SOLUTION OF INVERSE HEAT CONDUCTION PROBLEMS [1]

H.-J. Reinhardt
Dinh Nho Hào

Abstract

In this contribution we propose new numerical methods for solving inverse heat conduction problems. The methods are constructed by considering the desired heat flux at the boundary as piecewise constant (in time) and then deriving an explicit expression for the solution of the equation for a stationary point of the minimizing functional. In a very special case the well–known Beck method is obtained.

[1] In: Wang, K.-W. et al. (Eds.) Design Engineering Techn. Conferences (Boston, 1995), Vol. **3** - Part C, 917-922. ASME, New York, 1995.