Paper 376

Optimization of Framed Structures under Earthquake Load

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It is well known that the first order Taylor approximation

can be conveniently applied to a nonlinear problem of several

design variables. For the tall building design presented in this

paper, the required partial derivatives and computer programming

are quite tedious and time consuming. The writer wonders if the

authors have tried the nonlinear programming technique of panelty

function method* or the linear optimization by changing the

design variables one by one in the displacement matrix formulation.*

*Cheng, F.Y., "Computer Methods of Optimum Structural Design",
published by Extension Division, University of Missouri, 1971
and 1973.