



P. B. BORNEMANN, U. GALVANETTO AND M. A. CRISFIELD 2002 Journal of Sound and Vibration 252, 935–944. Some remarks on the numerical time intergration of non-linear dynamical systems.

The publishers regret that the above paper has been errnoneously presented in the format of a Letter to the Editor, with the Abstract omitted. A footnote informing readers of the death of one of the authors, Professor M. A. Crisfield, has sadly also been omitted. We wish to apologize to the authors for these errors, and publish the Abstract below.

SOME REMARKS ON THE NUMERICAL TIME INTERGRATION OF NON-LINEAR DYNAMICAL SYSTEM

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Different time integration schemes are utilized to obtain the solution of a simple nonlinear dynamic problem. Even with a small time step (650 time steps per period), the higher order explicit Runge–Kutta schemes provide the worst solution. The implicit methods investigated in the paper, that are only second order accurate, calculate a much more accurate solution, particularly if they are energy conserving. Therefore, caution should be used whenever integrating non-linear non-linear systems with popular explicit Runge– Kutta algorithms.

[†]Deceased.