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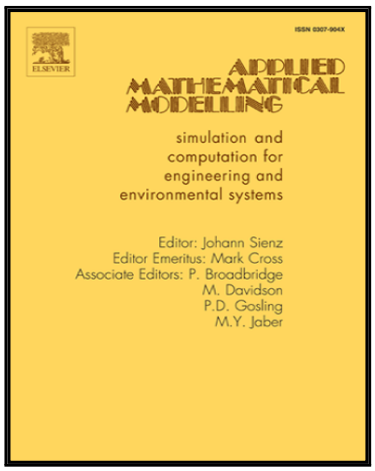

High order approximations using spline-based differential quadrature method: Implementation to the multi-dimensional PDEs

M. Ghasemi

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Highlights

- Two new algorithms based on DQM have been developed to the solution of BVPs.
- Some error bounds have been obtained for the first and second order differentiation
- By defining special end conditions for cubic spline the optimal convergence obtained
- Well-known problems like 2-D and 3-D coupled Burger's equations have been solved
- The methods have been compared with many other existing methods

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