A SECOND-ORDER ABSORBING BOUNDARY CONDITIONS FOR TWO-DIMENSIONAL PERIDYNAMICS

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ABSTRACT

The aim of this talk is to develop numerical analysis for the two-dimensional peridynamics which depicts nonlocal phenomena with accurate absorbing boundary conditions (ABCs) derived in [1]. To this end, the absorbing boundary conditions for the full discretized peridynamcis are proposed. Then, the numerical analysis of the fully discretized scheme is developed such that the absorbing boundary conditions solve the corner reflection problem with second-order accuracy. Finally numerical examples are given to verify theoretical results.

References

[1] G. Pang, S. Ji, X. Antoine, *Accurate absorbing boundary conditions for two-dimensional peridynamics*, Journal of Computational Physics, to appear.

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