

# ARTIFICIAL BOUNDARY METHOD FOR BURGERS' EQUATION USING NONLINEAR BOUNDARY CONDITIONS

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摘要

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# ARTIFICIAL BOUNDARY METHOD FOR BURGERS' EQUATION USING NONLINEAR BOUNDARY CONDITIONS

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**Abstract** This paper discusses the numerical solution of Burgers' equation on unbounded domains. Two artificial boundaries are introduced and boundary conditions are obtained on the artificial boundaries, which are in nonlinear forms. Then the original problem is reduced to an equivalent problem on a bounded domain. Finite difference method is applied to the reduced problem, and some numerical examples are given to show the effectiveness of the new approach.

**Key words** [Burgers' equation](#) [Unbounded domain](#) [Artificial boundary condition](#).

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