NONREFLECTING CORNER CONDITIONS FOR 2D TIME-INDEPENDENT SCHRÖDINGER EQUATION

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ABSTRACT
When solving partial differential equations on unbounded domains numerically, we define a bounded computational domain where the solution exhibits meaningful behavior. This truncation requires the artificial boundary condition which should be appropriate for the physical phenomena. Undesired reflection could occur without suitable artificial boundary conditions. For the half plane, this situation is easily remedied. In case of rectangular domain, however, requires additional corner conditions to avoid reflections at the corner. We propose a corner condition to solve a 2D time-independent Schrodinger equation on a rectangular domain.

REFERENCES