

SYMBOLIC INTEGRATION FOR FOURIER BOUNDARY ELEMENT METHOD

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ABSTRACT *The traditional Boundary Element Method (BEM) allows for the solution of the problem, but only if there is a known fundamental solution. A more universal approach the Fourier BEM offers. It implements, under certain assumptions, calculations without knowing the fundamental solution. The equivalence of both methods is shown in. Coefficients of the final system of linear equations are determined in the Fourier space. The paper presents the implementation of the symbolic integration in MATLAB to determine the singular integrals in Fourier BEM.*

Keywords: *Fourier Boundary Element Method, Galerkin Boundary Element Method, symbolic integration*