

## **Plane wave basis boundary elements and finite elements for wave scattering problems**

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Work carried out in the School of Engineering, University of Durham, on the development of boundary elements and finite elements for wave scattering problems over the past four years by the authors will be summarised.

Issues considered include:

Plane wave boundary elements: 2D Helmholtz equation, conditioning and Singular Value Decomposition, 3D Helmholtz equation, 2D Elastodynamics, adaptivity, error indicators;

Plane Wave Finite Elements: Formulation, parallel computation, heterogeneous media, element matrix integration;

Selection of plane wave directions in 3D