

Engineering problems

Mathematical model

BEM/BIEM

Ill-posed

Deficient bases

Degenerate scale
(21 SCI papers, since 2001)

Fictitious frequencies
(15 SCI papers, since 1999)

Spurious eigenvalues
(34 SCI papers, since 1998)

Domain type

Eigensystems
 (λ, u)

Boundary type

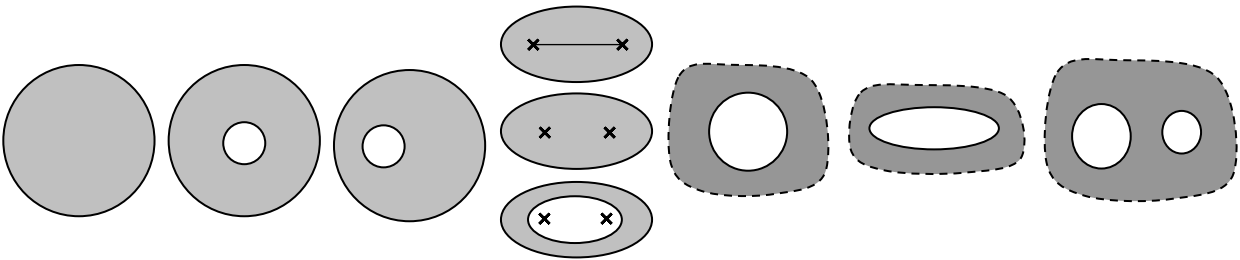
The eigenvalue in the governing equation
 $(\nabla^2 + k^2)u(\mathbf{x}) = 0$

The eigenvalue in the boundary condition
 $t(\mathbf{x}) = \frac{\partial u(\mathbf{x})}{\partial n} = \lambda \alpha(\mathbf{x})u(\mathbf{x})$

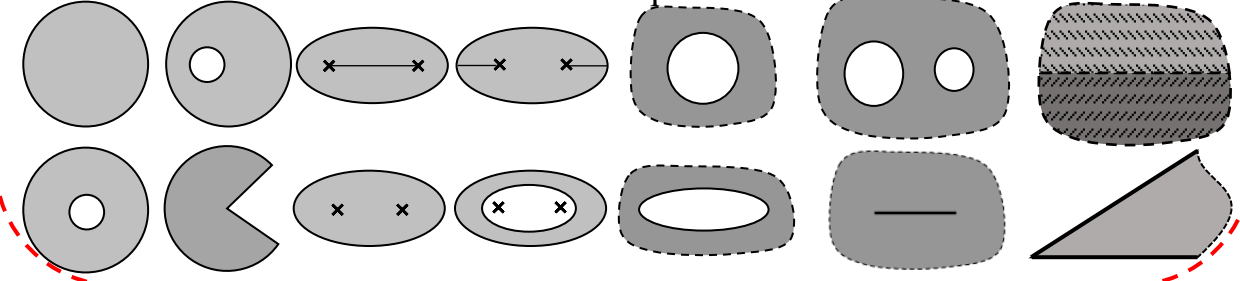
Add bases to be complete

Complete solution base (the present proposal)

Analytical derivation



Numerical experiments



Well-posed

— well-done researches

- - - proposed researches