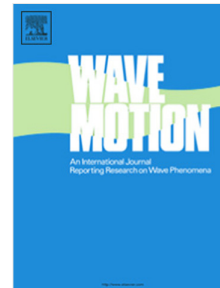


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Extraordinary acoustic transmission, symmetry, blaschke products and resonators

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- 1) We show that a Helmholtz resonator with symmetry and a single mode of propagation leads to extraordinary acoustic transmission in a wave guide.
- 2) We show how the solution from mode matching can be extended to complex frequencies analytically.
- 3) We show how the behaviour in the complex plane controls the solution for real frequencies and how it changes with geometry.
- 4) We show that symmetry plays a critical role in extraordinary transmission.

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