

# Asymptotic solutions of the Helmholtz equation for pseudoperiodic structures

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## Abstract:

This work is devoted to solving the scalar wave equation for the case when the size of the region is several hundred wavelengths. An asymptotic method is developed for solving the problem of diffraction of an arbitrary scalar wave on a three-dimensional layer with a pseudo-periodic band structure.

**Keywords:** Helmholtz equation, pseudoperiodic structure, scalar wave equation, pseudo-periodic band structure

**Acknowledgments:** This work was supported by the Russian – American program “Basic Research and Higher Education” (“BRHE”), as well as grants of the Russian Federal Property Fund No. 03-01-00109, 04-07-90149, and 04-01-96517.

**Citation:** Doskolovich LL, Kharitonov SI, Kazanskiy NL, Tulupova EA, Skuratov SA. Asymptotic solutions of the Helmholtz equation for pseudoperiodic structures. *Computer Optics* 2005; 27: 50-55.

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