

[Ikawa, Mitsuru](#)

**On scattering by obstacles.** (English) [Zbl 0757.35055](#)

Proc. Int. Congr. Math., Kyoto/Japan 1990, Vol. II, 1145-1154 (1991).

[For the entire collection see [Zbl 0741.00020](#).]

In this talk one presents a summary of different recent results in scattering theory related to the distribution of the scattering poles and the behaviour of the scattering phase. The Dirichlet problem for the wave equation in the exterior of several strictly convex disjoint obstacles is treated in more details. The link between the analytic prolongation of a function defined in terms of periodic rays and the existence of an infinite number of scattering poles with bounded imaginary parts is obtained. The so-called modified Lax-Phillips conjecture is proved for several small balls provided that some condition on their centers is satisfied.

Reviewer: V.Petkov (Bordeaux)

**MSC:**

[35P25](#) Scattering theory for PDEs  
[76Q05](#) Hydro- and aero-acoustics  
[78A45](#) Diffraction, scattering  
[35L05](#) Wave equation

Cited in **3** Documents

**Keywords:**

[scattering poles](#); [scattering phase](#); [Dirichlet problem for the wave equation](#); [modified Lax-Phillips conjecture](#)