

abstract

SPECIAL SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

Huygens' principle (in the narrow Hadamard's sense) for a second-order hyperbolic equation means that its fundamental solution is located on the characteristic conoid. Physically this implies that a localised disturbance will have an effect localised in time at any point. This remarkable property holds in particular for the wave equations in the Euclidean spaces of odd dimension starting from 3. The description of the hyperbolic equations satisfying Huygens' principle is known as Hadamard's problem, which still remains largely open.

The development of the theory of quantum integrable systems in the last two decades led to a substantial progress in this old problem, which turned out to be closely related to a new special class of hyperplane configurations, generalizing the Coxeter arrangements. I will discuss what is currently known about these configurations and some related geometric structures, appeared in the theory of Frobenius manifolds and WDVV equation.