



RECENT DEVELOPMENTS IN INVERSE SCATTERING THEORY

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In the first part of the talk we will present an introduction into the field of inverse scattering theory for acoustic and electromagnetic time-harmonic waves. We will comment on classical questions such as the problems of uniqueness and illposedness of the inverse problem.

The second part will be devoted to more recent developments. Here we will put particular emphasis on Sampling Methods which – in contrast to iterative methods – avoid the computation of the corresponding direct problems. As an example the Factorization Method will be discussed in more detail.