

The inverse scattering transform for the Korteweg–de Vries equation with steplike finite-gap backgrounds

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In this talk I will present some recent results on the inverse scattering transform for the Korteweg–de Vries equation with steplike finite-gap backgrounds. In particular, I will discuss how to solve the Cauchy problem in this class and prove some unique continuation results. In addition, I also will consider long-time asymptotics in the case where there is only one background.

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