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Rudi Weikard* (rudi@math.uab.edu), Department of Mathematics, University of Alabama at Birmingham, Birmingham, AL 35294-1170. *Solving the Camassa-Holm Equation by Inverse Scattering.*

The Camassa-Holm equation is an integrable system with an associated Lax pair. Therefore it is possible to solve it by an inverse scattering transform. However, the scattering problem is for the left-definite equation $-y'' + 1/4y = \lambda wy$ where w may be of varying sign. The emphasis of the talk lies on the corresponding scattering and inverse scattering problem.

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