

# Abstract

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“Construction of KdV flow by Schrödinger spectrum”

The theme of this talk is to construct solutions to the KdV equation starting from oscillating initial functions. For decaying or periodic initial functions it is well known that there exist unique solutions to the KdV equation, however, for oscillating functions like almost periodic functions it is not well understood the existence of the solutions. We would like to remark in the talk that the algebraic approach employed by the Sato's school makes it possible to construct the solutions starting from a certain class of oscillating functions. We mention about an interesting by-product of this construction relating to a new asymptotic behavior of the solutions when the time tends to infinity. Several open questions will be presented.