

On the longtime behavior of solutions of the KdV equation on the line: use of Riemann-Hilbert and d-bar methods for the analysis

Monday, May 23, 2022 3:15 PM (45 minutes)

This is intended to be part 2 of the previous talk (of Percy Deift), and the collaborations are as described by Percy in his abstract . The presentation was crafted together with Thomas Kriecherbauer. By way of introduction, we will consider the stationary phase analysis of an integral, when the steepest descent method doesn't immediately work. The basic d-bar operator will play a useful role. We will then carry out some analysis of the Riemann-Hilbert problem for the KdV equation in the longtime limit, explaining the use of the d-bar method.

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