Well-posedness in Gevrey space for the Prandtl equation with non-degenerate critical points

Abstract: In the talk we study the Prandtl system with initial data admitting non-degenerate critical points. For all $\sigma \in [3/2, 2]$, we obtain the local well-posedness in the space of Gevrey class G^σ in tangential variable x and Sobolev class in normal variable y. The main tools are the energy method and the abstract Cauchy-Kovalevskaya theorem.

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