

Lipschitz Stability for the Hunter–Saxton Equation

Matthew Tandy *

We present the construction of a Lipschitz metric for α -dissipative solutions to the Hunter-Saxton equation [1]. These solutions lose an α proportion of the concentrated energy at wave-breaking. Using a generalised method of characteristics, we transform to Lagrangian variables, and define a metric that renders solutions Lipschitz continuous with respect to the initial data. Then, we define a metric in Eulerian coordinates, which inherits the Lipschitz stability. This is a joint work with Katrin Grunert.

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References

- [1] Katrin Grunert and Matthew Tandy. Lipschitz Stability for the Hunter-Saxton Equation. arXiv.2103.10227, 2021.

*Department of Mathematical Sciences, NTNU Norwegian University of Science and Technology, Trondheim, NO-7491, Norway. Email: matthew.tandy@ntnu.no