Abstract Submitted
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Untangling Superfluid Vortices DUSTIN KLECKNER, UC Merced — Previous work has shown that simple knotted vortices will untie in both viscous fluids and superfluids. Does the same behavior hold for complexly tangled vortices, irrespective or shape and topology? By simulating large numbers of vortex configurations in the Gross-Pitaevskii equation, I will show that the spontaneous unknotting of vortices is a universal feature of undriven fluids. I will also discuss the connection to conservation of helicity and topological features of the unknotting process.

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