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Vortex Knots in Non-Ideal Fluids DUSTIN KLECKNER, UC Merced, WILLIAM T. M. IRVINE, MARTIN SCHEELER, University of Chicago — In ideal fluid flows, vortex lines tied into knots may never untie, resulting in a conserved quantity known as helicity. Although the conservation of helicity in 'perfect' fluids has a long history, far less is known about the behavior of knotted structures in non-ideal fluids, e.g. those with viscosity. I will discuss the first experiments to generate vortex knot in viscous fluids, as well as our more recent efforts to study knots in simulated superfluids.

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