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Nonlinear Reconnection in Magnetized Turbulence¹ NUNO LOUREIRO, Massachusetts Institute of Technology, STANISLAV BOLDYREV, University of Wisconsin-Madison — Recent analytical works on strong magnetized plasma turbulence have hypothesized the existence of a range of scales where the tearing instability may govern the energy cascade. In this talk, we discuss the conditions under which such tearing may give rise to full nonlinear magnetic reconnection, thereby enabling significant energy conversion and dissipation. When those conditions are met, a new turbulence regime is accessed where reconnection-driven energy dissipation becomes the norm, rather than a sporadic event.

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Nuno Loureiro
Massachusetts Institute of Technology

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