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Spectrum of MHD turbulence: theory, modeling, observations[1]

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Magnetohydrodynamic (MHD) turbulence plays an essential role in a variety of astrophysical systems, from intergalactic and interstellar media, to stars and planets. Despite more than 40 years of analytical, numerical and observational research, the MHD turbulent cascade is not completely understood. I will present a brief introduction to the theory, and discuss the new analytic and numerical results on the spectrum and structure of strong incompressible MHD turbulence.

In collaboration with Fausto Cattaneo and Joanne Mason (U. Chicago)

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