Wave-turbulence interaction

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Wave–turbulence interactions are widespread in environmental and engineering flows, yet the mechanisms by which waves and turbulence influence one another remain to be fully understood. Turbulence can scatter, distort and attenuate waves, while wave motions can reorganize turbulent structures and modify mixing and transport. These coupled processes are especially important near free surfaces, where waves, shear currents and turbulence jointly affect the exchange of momentum, heat and gases. This mini-symposium welcomes experimental, theoretical and numerical contributions addressing the mutual interactions of waves and turbulence, including wave propagation through turbulent flows, wave-driven mixing, wave breaking, the consequences for transport across and beneath fluid interfaces, and other related phenomena.

