

# Fast dispersion slow diffusion multi-scale dynamics: theory and computation

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Abstract: This talk outlines research done by Z. Artstein, C.W. Gear, Y. Kevrekedis, M. Slemrod, and E.Titi on the analysis and numerical solution of a discrete system of ordinary differential equations modeling a KdV-Burgers' equation with periodic boundary conditions.

The ideas are robust and will be applicable to larger classes of systems, e.g. slowly perturbations of fast completely integrable Hamiltonian systems.