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Numerical Study of Davey-Stewartson systems

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We present a detailed numerical study of solutions to Davey-Stewartson (DS) systems, nonlocal nonlinear Schrödinger equations in two spatial dimensions. A possible blow-up of solutions is studied, a conjecture for a selfsimilar blow-up is formulated. In the integrable cases, numerical and hybrid approaches for the inverse scattering are presented. We comment on DS II and DS I systems.

Primary author: Prof. KLEIN, Christian (Université de Bourgogne)

Presenter: Prof. KLEIN, Christian (Université de Bourgogne)