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Dispersion managed NLS and Strichartz inequality

Dispersion managed NLS is a model for optical pulse propagation in a fiber with piecewise constant dispersion. In a certain parameter regime, this equation possesses approximately periodic solitary waves called dispersion managed solitons. They turn out to be minimizers of an averaged variational principle. This variational principle is closely related to the Strichartz inequality. We will describe some interplay between these objects and in particular, we will present an easy proof of the classical version of the Strichartz inequality.

This is joint work with Dirk Hundertmark.