

Adding smooth resamplings to particle codes

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In this talk I will describe a method to denoise existing particle codes by adding a resampling module based on the Forward-Backward Lagrangian (FBL) scheme.

The FBL method relies on a backward representation of the density based on a forward description of the flow provided by the particles. I will recall the theoretical properties of this approximation method, and describe how it can be implemented in an existing particle code. Numerical examples will be provided with the Selalib library.

This is a joint work with Pierre-Henri Tournier and the Selalib group.