

# Non-local effects and degenerate Cahn-Hilliard equation

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## **Abstract**

I will discuss several situations when one has to perform limit passage from non-local to local operators in the context of the degenerate Cahn-Hilliard equation. This includes kinetic derivation of the equation (arXiv:2208.01026, with C. Elbar, M. Mason, B. Perthame), fairly classical problem of passage to the limit from non-local to local equation (arXiv:2208.08955, with C. Elbar) and the same problem for aggregation-diffusion system (in progress, together with J. A. Carrillo, C. Elbar). Not all of these problems are fully understood; for some, solutions are available only on the torus.