

Recent results on nonlocal diffuse-interface models for binary fluids

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Some recent results on diffuse-interface models with nonlocal interaction which consist in the coupling of the incompressible Navier-Stokes equations with a nonlocal Cahn-Hilliard equation will be presented. For this system mathematical results concerning existence of weak and strong solutions and asymptotic behavior have been established in [1], [2], [3], [4], [5] in different situations regarding the choice of mobility and double-well potential. The new results, jointly with C. Gal and M. Grasselli, in particular concern with the uniqueness of the weak solution, under different assumptions on the mobility and potential, and existence of the exponential attractor in 2D.

References

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