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Bounds on Coarsening Rates for the Diffusive Lifschitz–Slyozov–Wagner Equation

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This talk is concerned with the large time behaviour of the solutions of diffusive Lifschitz–Slyozov–Wagner equations which exhibit the property of coarsening. In order to study point-wise in time bounds on the rate of coarsening we look at a problem in stochastic control theory which turns up. We show the connection between these bounds and the convexity of the stochastic control theory problem. We show that the solution to the small noise stochastic problem converges uniformly to the corresponding solution of the classical control problem (Hamilton–Jacobi equation) as the strength of the noise goes to zero.

This is a joint work with Dr. Joseph Conlon.