



Аналитический семинар лаборатории Чебышева

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The L^2 gradient flow of the double well potential

We study the behavior of solutions of forward-backward type parabolic equations, in particular those which can be described as a gradient flow of a non-convex energy. Such equations are *a priori* ill-posed and there is no classical solution theory, apart from some partial results.

In this talk we will show how an approximation by discrete-in-space equations can be used to prove existence of solutions of the equation under a smallness assumption on the initial data. Our approach is general enough to deal with initial data whose derivative takes values also in the concave region of the potential, where the backward character of the equation manifests. For a special class of initial data, more stronger statements, also on the long-time behavior, can be achieved. This is joint work with Matteo Novaga (Pisa) and Giovanni Bellettini (Siena).

Приглашаются все желающие!