Asymptotic solutions of Hamilton-Jacobi equations with non-periodic perturbations

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Abstract: We deal with the long time behavior of viscosity solutions of the Cauchy problem for Hamilton-Jacobi equations by using the generalized dynamical approach of Davini-Siconolfi. Contrary to the periodic situation they studied, we treat Hamilton-Jacobi equations that contain some non-periodic perturbations in the Hamiltonian and initial data. We also study the representation of corresponding asymptotic solutions and reveal the difference between the periodic case and ours. This talk is based on a joint work with Hitoshi Ishii.