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AC and DC voltage driven magnetization dynamics in magnetic nanostructures OLEG TRETIAKOV, ADITI MITRA, NYU — We study a geometry involving a thin ferromagnetic (F) layer sandwiched between two normal metal (N) leads. The system is driven out of equilibrium by the simultaneous application of an external dc and ac voltage across the N-F-N structure. The Keldysh diagrammatic approach is used to study the system which reveals that one of the effects of the external drive is to produce noise with a non-trivial frequency dependence. We determine the effect of the noise on the magnetization dynamics, and also present results for how the current-voltage characteristics of the structure is affected by the nonequilibrium dynamics of the ferromagnetic layer.

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