1.00 pm Wednesday, October 16th
Room 345, Building 28, Clayton campus

Prof. R. Khasminskii
Wayne State University

On averaging Principle for diffusion Processes with Null-recurrent Fast Component.

The limiting behavior of the process with the fast component $X_\varepsilon(t)$ and slow component $Y_\varepsilon(t)$ is studied in the situation when the fast component is not ergodic for the fixed value of slow component, but is null-recurrent. We prove that under appropriate conditions the porocess $(\varepsilon X_\varepsilon(t), Y_\varepsilon(t)$ converges weakly to a limit as $\varepsilon \to 0$. This process is diffusion one with discontinuous coefficients at $x = 0$.

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