

# *The influence of imperfect maintenance on the Wiener process as a degradation model*

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We consider a Wiener process with (possible nonlinear) drift for degradation modeling. Regularly, inspections are carried out, and the level of degradation is measured. At each inspection point, a decision about preventive maintenance actions (replace the system by a new one, let it as it is, or make an incomplete repair with some degree) is possible. In the talk, we consider the influence of such maintenance actions to the further development of the degradation process and the resulting lifetime distribution. Our aim is to find optimal time points of inspection and optimal decisions about maintenance actions.

*Keywords:* Degradation process, imperfect preventive maintenance, optimal maintenance

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