

Quantum Stochastic Processes

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Problem set 1

to be discussed on Thursday, October 29th, 2009

see <http://tu-dresden.de/physik/tqo/lehre>

Einstein 1905 [*Ann. d. Phys.* **17**, 549, 1905]

Read the paper carefully. Try to follow Einstein's reasoning and in particular, try to understand his derivation of the diffusion equation.

Langevin 1908 [*C. R. Acad. Sci (Paris)* **146**, 5308, 1908]

[English version: *Am. J. Phys.* **65**, 1079, November 1997]

Read the paper carefully and follow all the steps leading to Langevin's expression for the diffusion constant.