

Brownian Motion: the Quantum Perspective

Bassano Vacchini

Dipartimento di Fisica dell'Università di Milano and Istituto Nazionale di Fisica Nucleare, Sezione di Milano, Via Celoria 16, I-20133 Milano

Reprint requests to Dr. B. V. E-mail: bassano.vacchini@mi.infn.it

Z. Naturforsch. **56 a**, 230–233 (2001); received February 6, 2001

Presented at the 3rd Workshop on Mysteries, Puzzles and Paradoxes in Quantum Mechanics, Gargnano, Italy, September 17 - 23, 2000.

We briefly go through the problem of the quantum description of Brownian motion, concentrating on recent results about the connection between the dynamics of the particle and dynamic structure factor of the medium. – 05.40.Jc, 05.30.Fk, 05.30.Jp, 03.65.Yz

Key words: Quantum Brownian Motion; Dynamic Structure Factor; Fokker-Planck; Lindblad.