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References

Craig: On the frequency function of xy **Craig-1936**

Cecil C. Craig. "On the frequency function of xy". In: *The Annals of Mathematical Statistics* 7.1 (Mar. 1936), pp. 1–15. DOI: 10.1214/aoms/1177732541.

Johnson et al.: Tests of certain linear hypotheses and their application to some educational problems **Johnson-Neyman-1936**

Palmer O. Johnson and Jerzy Neyman. "Tests of certain linear hypotheses and their application to some educational problems". In: *Statistical Research Memoirs* 1 (1936), pp. 57–93.

Abstract: Beginning with the general ideas of testing hypotheses developed by Neyman and Pearson and using certain recent results of S. Kolodziejczyk, the problem of matched groups is discussed and a numerical illustration given. It is shown that the problem of matched groups may be generalized so that both a more detailed analysis of the experimental data and a greater accuracy of results is obtained. In treating this problem the idea of "region of significance"' is introduced to educational and psychological investigations. The methods proposed, however, are quite general and not limited to problems in these fields.

Uhlenbeck et al.: On the Theory of the Brownian Motion **Uhlenbeck-Ornstein-1930**

G. E. Uhlenbeck and L. S. Ornstein. "On the Theory of the Brownian Motion". In: *Physical Review* 36.5 (Sept. 1930), pp. 823–841. DOI: 10.1103/physrev.36.823.

Abstract: With a method first indicated by Ornstein the mean values of all the powers of the velocity u and the displacement s of a free particle in Brownian motion are calculated. It is shown that $u - u_0 \exp(-\beta t)$ and $s - u_0\beta[1 - \exp(-\beta t)]$ where u_0 is the initial velocity and β the friction coefficient divided by the mass of the particle, follow the normal Gaussian distribution law. For s this gives the exact frequency distribution corresponding to the exact formula for s^2 of Ornstein and Fürth. Discussion is given of the connection with the Fokker-Planck partial differential equation. By the same method exact expressions are obtained for the square of the deviation of a harmonically bound particle in Brownian motion as a function of the time and the initial deviation. Here the periodic, aperiodic and overdamped cases have to be treated separately. In the last case, when β is much larger than the frequency and for values of $t >> \beta^{-1}$, the formula takes the form of that previously given by Smoluchowski.

Wright: The method of path coefficients **Wright-1934**

Sewall Wright. "The method of path coefficients". In: *The Annals of Mathematical Statistics* 5.3 (Sept. 1934), pp. 161–215. DOI: 10.1214/aoms/1177732676.