CORRECTION

LAPLACE'S METHOD FOR GAUSSIAN INTEGRALS WITH AN APPLICATION TO STATISTICAL MECHANICS¹

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Chii-Ruey Hwang and Tzuu-Shuh Chiang have found an error on page 62 of our paper, which invalidates our proof of the upper bound (1.12). However, a correct proof of (1.12) has been found recently. In fact, E. Bolthausen has proved a large deviations result for sums of i.i.d. random vectors which take values in a real separable Banach space and which are distributed by probability measures $\{\mu_n\}$ converging weakly to a probability measure μ ("On the Probability of Large Deviations in Banach Spaces", Technische Universität Berlin preprint, 1982). This result includes the Gaussian bounds (1.12) and (1.13) as special cases.

The Error. On page 62, we claim that $\cap_{i'}$, $\widetilde{\mathscr{A}}_{i'}$, $\subseteq \mathscr{A}$. This is wrong. Since $\widetilde{\mathscr{A}}_{\delta_i'}$ is defined in terms of an $L^2[0, 1]$ -neighborhood of \mathscr{A} , it is easy to find examples of proper closed subsets \mathscr{A} in C[0, 1] for which $\mathscr{A}_{\delta_i'}$ is all of C[0, 1] and $\bigcap_{i'}$, $\widetilde{\mathscr{A}}_{\delta_i'}$ is not a subset of \mathscr{A} . Hence (1.12) is not proved correctly.

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It has been pointed out to me that the results of my articles, "Distribution of symmetric stable laws of index 2^{-n} ", Ann. Probability 9 (1981) 710-711 and "Symmetric stable laws of index 2^{-n} ", Ann. Probability 10 (1982) 857-859, were also obtained by G. W. Brown and J. W. Tukey in "Some distributions of sample means", Ann. Math. Statist. 17 (1946) 1-12.

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