ANNOUNCEMENT

A BIBLIOGRAPHY ON RANDOM WALKS

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Amongst scientists and engineers there is an increasing awareness in both the value and necessity of probabilistic modeling. In all aspects of science and engineering, randomness and variability occur to a greater or lesser extent. For example in soil mechanics there are enormous variations in, say, experimentally determined moduli, which cannot be accounted for by deterministic theories, no matter how elaborate or contrived. In modeling inherently random phenomena one of the most useful concepts devised is that of the random walk. The purpose of this bibliography is twofold. Firstly it gathers together papers which have successfully employed the random walk model in specific applications. Secondly it contains papers of a theoretical or general nature which give results which may be useful in hitherto unexploited application areas.

For example, the bibliography contains applications of the random walk concept in such diverse areas as physics, chemistry, optics, plant physiology, biology, electrical engineering, computer science and water resource research; this list is by no means exhaustive. Clearly more phenomena might be modeled in this way. It is hoped that this bibliography may give readers some idea of the versatility of the random walk approach as well as the availability of theoretical results in this area, so that the modeling process becomes easier.

Every attempt has been made to ensure that the bibliography is as complete as possible, but, since the literature on the subject is vast, some omissions are likely. It was compiled mainly on the basis of attempting to include all those papers which have either 'walk' or 'random walk' in the title. We have not searched for papers which may relate to random walks but do not explicitly mention this in the title. Moreover we have made no attempt to include papers dealing with diffusion. Thus, while our list cannot be considered a comprehensive bibliography on random walks it does at least provide a first check list to the subject.

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