

Ten lectures on the probabilistic method

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20442949&lokasi=lokal>

Abstrak

This update of the 1987 title of the same name is an examination of what is currently known about the probabilistic method, written by one of its principal developers. Based on the notes from Spencer's 1986 series of ten lectures, this new edition contains an additional lecture: The Janson Inequalities. These inequalities allow accurate approximation of extremely small probabilities. A new algorithmic approach to the Lovasz Local Lemma, attributed to Jozsef Beck, has been added to Lecture 8, as well.

Throughout the monograph, Spencer retains the informal style of his original lecture notes and emphasizes the methodology, shunning the more technical "best possible" results in favor of clearer exposition. The book is not encyclopedic--it contains only those examples that clearly display the methodology.

The probabilistic method is a powerful tool in graph theory, combinatorics, and theoretical computer science. It allows one to prove the existence of objects with certain properties (e.g., colorings) by showing that an appropriately defined random object has positive probability of having those properties.