

Preface to the Second Edition

Since the first edition of the book “Randomized Algorithms for Analysis and Control of Uncertain Systems” appeared in print in 2005, many new significant developments have been obtained in the area of probabilistic and randomized methods for control, in particular on the topics of sequential methods, the scenario approach and statistical learning techniques. Therefore, Chaps. 9, 10, 11, 12 and 13 have been rewritten to describe the most recent results and achievements in these areas.

Furthermore, in 2005 the development of randomized algorithms for systems and control applications was in its infancy. This area has now reached a mature stage and several new applications in very diverse areas within and outside engineering are described in Chap. 19, including the computation of PageRank in the Google search engine and control design of UAVs (unmanned aerial vehicles). The revised title of the book reflects this important addition. We believe that in the future many further applications will be successfully handled by means of probabilistic methods and randomized algorithms.

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With Applications

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