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Branching Processes and Their Applications

This volume gathers papers originally presented at the 3rd Workshop on Branching Processes and their Applications (WBPA15), which was held from 7 to 10 April 2015 in Badajoz, Spain (<http://branching.unex.es/wbpa15/index.htm>). The papers address a broad range of theoretical and practical aspects of branching process theory. Further, they amply demonstrate that the theoretical research in this area remains vital and topical, as well as the relevance of branching concepts in the development of theoretical approaches to solving new problems in applied fields such as Epidemiology, Biology, Genetics, and, of course, Population Dynamics.

The topics covered can broadly be classified into the following areas:

1. Coalescent Branching Processes
2. Branching Random Walks
3. Population Growth Models in Varying and Random Environments
4. Size/Density/Resource-Dependent Branching Models
5. Age-Dependent Branching Models
6. Special Branching Models
7. Applications in Epidemiology
8. Applications in Biology and Genetics

Offering a valuable reference guide to contemporary branching process theory, the book also explores many open problems, paving the way for future research.

Statistics

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