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## Sommario/riassunto

The goal of the 2019 conference on Stochastic Processes and Algebraic Structures held in SPAS2019, Västerås, Sweden, from September 30th to October 2nd 2019, was to showcase the frontiers of research in several important areas of mathematics, mathematical statistics, and its applications. The conference was organized around the following topics 1. Stochastic processes and modern statistical methods, 2. Engineering mathematics, 3. Algebraic structures and their applications. The conference brought together a select group of scientists, researchers, and practitioners from the industry who are actively contributing to the theory and applications of stochastic, and algebraic structures, methods, and models. The conference provided early stage researchers with the opportunity to learn from leaders in the field, to present their research, as well as to establish valuable research contacts in order to initiate collaborations in Sweden and abroad. New methods for pricing sophisticated financial derivatives, limit theorems for stochastic processes, advanced methods for statistical analysis of financial data, and modern computational methods in various areas of applied science can be found in this book. The principal reason for the growing interest in these questions comes from the fact that we are living in an extremely rapidly changing and challenging environment. This requires the quick introduction of new methods, coming from different areas of applied science. Advanced concepts in the book are illustrated in simple form with the help of tables and figures. Most of the papers are self-contained, and thus ideally suitable for self-study. Solutions to sophisticated problems located at the intersection of various theoretical and applied areas of the natural sciences are presented in these proceedings. .

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