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telegraph process -- Á. Rodríguez-Rozas et al., The PDD method for solving linear, nonlinear and fractional PDEs problems -- V.Sposini et al., Fractional diffusion and medium heterogeneity: the case of the continuous time random walk -- M. Yamamoto, On time fractional derivatives in fractional Sobolev spaces and applications to fractional ordinary differential equations. .

Sommario/riassunto

The purpose of this volume is to explore new bridges between different research areas involved in the theory and applications of the fractional calculus. In particular, it collects scientific and original contributions to the development of the theory of nonlocal and fractional operators. Special attention is given to the applications in mathematical physics, as well as in probability. Numerical methods aimed to the solution of problems with fractional differential equations are also treated in the book. The contributions have been presented during the international workshop "Nonlocal and Fractional Operators", held in Sapienza University of Rome, in April 2019, and dedicated to the retirement of Prof. Renato Spigler (University Roma Tre). Therefore we also wish to dedicate this volume to this occasion, in order to celebrate his scientific contributions in the field of numerical analysis and fractional calculus. The book is suitable for mathematicians, physicists and applied scientists interested in the various aspects of fractional calculus.