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Autore	Georgiev Svetlin G
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Nota di contenuto	1. Elements of the Time Scale Calculus -- 2. The Laplace Transform on Time Scales -- 3. The Convolution on Time Scales -- 4. The Riemann-Liouville Fractional D-Integral and the Riemann-Liouville Fractional D-Derivative on Time Scales -- 5. Cauchy Type Problem with the Riemann-Liouville Fractional D-Derivative -- 6. Riemann-Liouville Fractional Dynamic Equations with Constant Coefficients -- 7. The Caputo Fractional D-Derivative on Time Scales -- 8. Cauchy Type Problem with the Caputo Fractional D-Derivative -- 9. Caputo Fractional Dynamic Equations with Constant Coefficients -- Appendix: The Gamma Function -- Appendix: The Gamma Function -- Index.
Sommario/riassunto	Pedagogically organized, this monograph introduces fractional calculus and fractional dynamic equations on time scales in relation to mathematical physics applications and problems. Beginning with the definitions of forward and backward jump operators, the book builds from Stefan Hilger's basic theories on time scales and examines recent

developments within the field of fractional calculus and fractional equations. Useful tools are provided for solving differential and integral equations as well as various problems involving special functions of mathematical physics and their extensions and generalizations in one and more variables. Much discussion is devoted to Riemann-Liouville fractional dynamic equations and Caputo fractional dynamic equations. Intended for use in the field and designed for students without an extensive mathematical background, this book is suitable for graduate courses and researchers looking for an introduction to fractional dynamic calculus and equations on time scales. .
