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Nota di contenuto	Front matter -- Preface -- Contents -- 1 Reward approximations for autoregressive log-price processes (LPP) -- 2 Reward approximations for autoregressive stochastic volatility LPP -- 3 American-type options for continuous time Markov LPP -- 4 Upper bounds for option rewards for Markov LPP -- 5 Time-skeleton reward approximations for Markov LPP -- 6 Time-space-skeleton reward approximations for Markov LPP -- 7 Convergence of option rewards for continuous time Markov LPP -- 8 Convergence of option rewards for diffusion LPP -- 9 European, knockout, reselling and random pay-off options -- 10 Results of experimental studies -- Bibliographical Remarks -- Bibliography -- Index -- De Gruyter Studies in Mathematics
Sommario/riassunto	The book gives a systematical presentation of stochastic approximation methods for discrete time Markov price processes. Advanced methods combining backward recurrence algorithms for computing of option rewards and general results on convergence of stochastic space skeleton and tree approximations for option rewards are applied to a variety of models of multivariate modulated Markov price processes. The principal novelty of presented results is based on consideration of multivariate modulated Markov price processes and general pay-off

functions, which can depend not only on price but also an additional stochastic modulating index component, and use of minimal conditions of smoothness for transition probabilities and pay-off functions, compactness conditions for log-price processes and rate of growth conditions for pay-off functions. The volume presents results on structural studies of optimal stopping domains, Monte Carlo based approximation reward algorithms, and convergence of American-type options for autoregressive and continuous time models, as well as results of the corresponding experimental studies.