Numerical Techniques in Finance

Simon Benninga

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Michèle Breton,Hatem Ben-Ameur

Numerical Techniques In Finance:

Numerical Methods in Finance Michèle Breton,Hatem Ben-Ameur,2005-12-05 GERAD celebrates this year its 25th anniversary The Center was created in 1980 by a small group of professors and researchers of HEC Montreal McGill University and of the Ecole Polytechnique de Montreal GERAD s activities achieved sufficient scope to justify its conversion in June 1988 into a Joint Research Centre of HEC Montreal the Ecole Polytechnique de Montreal and McGill University In 1996 the U versite du Quebec a Montreal joined these three institutions GERAD has fifty members professors more than twenty research associates and post doctoral students and more than two hundreds master and Ph D students GERAD is a multi university center and a vital forum for the devel ment of operations research Its mission is defined around the following four complementarily objectives The original and expert contribution to all research fields in GERAD s area of expertise The dissemination of research results in the best scientific outlets as well as in the society in general The training of graduate students and post doctoral researchers The contribution to the economic community by solving important problems and providing transferable tools **Numerical Techniques in Finance** Simon Benninga,1989 Deals with corporate finance and portfolio problems *Numerical Methods in Finance and Economics* Paolo Brandimarte,2013-06-06 A state of the art introduction to the powerful mathematical and statistical tools used in the field of finance The use of mathematical models and numerical techniques is a practice employed by a growing number of applied mathematicians working on applications in finance Reflecting this development Numerical Methods in Finance and Economics A MATLAB Based Introduction Second Edition bridges the gap between financial theory and computational practice while showing readers how to utilize MATLAB the powerful numerical computing environment for financial applications The author provides an essential foundation in finance and numerical analysis in addition to background material for students from both engineering and economics perspectives A wide range of topics is covered including standard numerical analysis methods Monte Carlo methods to simulate systems affected by significant uncertainty and optimization methods to find an optimal set of decisions Among this book s most outstanding features is the integration of MATLAB which helps students and practitioners solve relevant problems in finance such as portfolio management and derivatives pricing This tutorial is useful in connecting theory with practice in the application of classical numerical methods and advanced methods while illustrating underlying algorithmic concepts in concrete terms Newly featured in the Second Edition In depth treatment of Monte Carlo methods with due attention paid to variance reduction strategies New appendix on AMPL in order to better illustrate the optimization models in Chapters 11 and 12 New chapter on binomial and trinomial lattices Additional treatment of partial differential equations with two space dimensions Expanded treatment within the chapter on financial theory to provide a more thorough background for engineers not familiar with finance New coverage of advanced optimization methods and applications later in the text Numerical Methods in Finance and Economics A MATLAB Based Introduction Second Edition presents basic treatments and

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