

may vary from call to call. The average number of uniform deviates required is lower than for any of the known uniformly fast algorithms. Timings for a C implementation show that the algorithm needs only half of the code but is—for μ not too small—at least as fast as the current state-of-the-art algorithms. *Insurance: Mathematics and Economics*, February 1993, 12(1): 39-45. (Reprinted with permission of North-Holland Publishing Company.)

A Stochastic Interest Model with an Application to Insurance, by Hans M. Dietz (Humboldt-Universität, Berlin)

The paper presents a general model for valuating a (random) cash-flow subject to (random) interest payments in a semimartingale setting. In particular, the current value of an initial unit capital is expressed by means of the Doléans exponential of the underlying interest process. The results are discussed in a stochastic process model proposed for (one-claim) insurance contracts. *Insurance: Mathematics and Economics*, December 1992, 11(4): 301-310. (Reprinted with permission of North-Holland Publishing Company.)

RUIN THEORY

The Probability of Ruin for the Inverse Gaussian and Related Processes, by F. Dufresne (Laval University, Quebec, Canada) and H. U. Gerber (University of Lausanne, Switzerland)

We consider a family of aggregate claims processes that contains the gamma process, the Inverse Gaussian process, and the compound Poisson process with gamma or degenerate claim amount distribution as special cases. This is a one-parameter family of stochastic processes. It is shown how the probability of ruin can be calculated for this family. Extensive numerical results are given and the role of the parameter is discussed. *Insurance: Mathematics and Economics*, February 1993, 12(1): 9-22. (Reprinted with permission of North-Holland Publishing Company.)

HEALTH CARE AND INSURANCE

Utilization Control in HMOs, by Larry Debrock and Richard J. Arnould (University of Illinois at Urbana-Champaign)

Health Maintenance Organizations (HMOs) have emerged as a major vehicle to reduce transaction costs associated with defining the limits of health insurance coverage and to provide appropriate provider incentives. This article explains the heterogeneous set of incentives used by HMOs to reimburse providers and performs empirical tests of their effectiveness. The empirical analyses reveal that utilization of health care services is reduced when (1) physician compensation is based on salary or capitation arrangements rather

Copyright of Journal of Risk & Insurance is the property of Blackwell Publishing Limited. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.