

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

than some measure of output; (2) bonuses and paybacks are based on individual rather than group performance; and (3) when the HMO operates as a proprietary (for-profit) organization. Utilization is not significantly affected by incentives placed on the hospital. Finally, physician ownership of the HMO was found to lead to higher levels of utilization. *Quarterly Review of Economics and Finance*, Autumn 1992, 32(3): 31-53. (Reprinted with permission of the *Quarterly Review of Economics and Finance*.)

Economic Disability and Health Determinants of the Hazard of Nursing Home Entry, by Alvin E. Headen, Jr. (North Carolina State University and Duke University)

A Cox proportional hazards model was used to estimate economic determinants of the conditional probability of first nursing home entry during a 34-month period for a panel of disabled older persons who resided in the community at the initial survey. Allowing for death that competes with first entry and end-of-survey censoring produced the following results. Wealth significantly reduces the hazard of nursing home entry. The price elasticity of the hazard of nursing home entry is estimated to be -0.7. Also, nursing home entry is positively related to the opportunity cost of informal caregiver time faced by the family. *The Journal of Human Resources*, Winter 1993, 28(1): 80-110. (Reprinted with permission of *The Journal of Human Resources*.)

SOCIAL INSURANCE

Social Security: Does the Wartime Dream Have to Become a Peacetime Nightmare? by Alec L. Parrott

This year sees the fiftieth anniversary of the Beveridge Report and the fortieth of ILO Convention No. 102, two landmarks in the history of social security. In the author's view both documents represented a genuine attempt to give effect to the wartime aim of social security for all, but since then a combination of circumstances has obscured both the clarity of the objective and the range of policy choices available to governments in pursuing it. Primary responsibility for the welfare of the individual and the family has passed from the individual to the State, and today whatever is spent on social security is regarded as public expenditure. It is time for a rethink of what social security really means, and how it can best be attained. *International Labour Review*, 1992, 131(3): 367-386. (Reprinted with permission of the *International Labour Review*.)

An Evaluation of Alternative Methods of Taxing Social Security Benefits, by P. J. Harmelink and J. F. Speyrer

This article examines the advantages and disadvantages of various proposals to tax Social Security benefits, including their impact upon representative

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