

## PETER LAKNER

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and Management Sciences  
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### EDUCATION:

Feb. 1989: Ph.D., Columbia University, Dept. of Statistics.

Sept. 1978 – May 1980: M.A., Probability and Statistics, Eötvös Lorand University, Budapest.

Sept. 1975 – May 1978: B.A., Mathematics, Eötvös Lorand University, Budapest.

### EXPERIENCE:

Sept. 1996 – Present: Associate Professor, New York University, Stern School of Business.

Sept. 1989 – 1996: Associate Professor, New York University, Stern School of Business.

Sept. 1988 – May 1989: Assistant Professor, University of Maryland, Dept. of Mathematics.

Sept. 1986 – May 1988: Lecturer of Statistics, Hunter College, CUNY.

Sept. 1984 – May 1988: Teaching Assistant, Columbia University, Department of Statistics.

Summer 1985: Quality control research at IBM Thomas Watson Research Center. Received a fellowship from IBM for the following academic year.

Dec. 1982 – Sept. 1984: Computer programmer and consultant, Microclear, Inc., New York.

Sept. 1980 – Sept. 1982: Designed digital picture processing software, Hungarian National Computer Science Inst., Budapest.

Sept. 1979 – June 1980: Instructor of probability and statistics, University of Engi-

neering, Budapest.

## GRANTS:

National Science Foundation research grant, 1992.

## PUBLICATIONS:

### Reviewed articles:

“Optimal Bankruptcy Time and Consumption/Investment Policies on an Infinite Horizon with a Continuous Debt Repayment until Bankruptcy”, with Monique Jeanblanc and Ashay Kadam, *Mathematics of Operations Research*, accepted for publication.

“Maximum Likelihood Estimation of Hidden Diffusions”, with Halina Frydman, *The Annals of Applied Probability*, accepted for publication.

“Optimal Trading Strategy for an Investor: the Case of Partial Information” *Stochastic Processes and their Applications* 76(1998), 77–97.

“Utility Maximization with Partial Information”, *Stochastic Processes and their Applications* 56 (1995), 247–249.

“Almost Sure Characterization of Martingales”, with Marco Frittelli, *Stochastics*, Vol. 49, No.3+4, 1994, pp. 181–190.

“Martingale Measures for a Class of Right–Continuous Processes”, *Mathematical Finance*, Vol. 3/1, January 1993, pp.43–53.

“Optimal Consumption by a Bond Investor: The Case of Random Interest Rate Adapted to a Point Process”, with E. Slud, *SIAM J. of Control and Optimization*, 29, May, 1991, pp.638–655. Research supported by the Office of Naval Research, #N00014–89–J–1051.

“Equilibrium in a Simplified Dynamic, Stochastic Economy with Heterogeneous Agents”, with I. Karatzas, J.P. Lehoczky and S.E. Shreve, In: *Stochastic Analysis: Liber Amicorum for Moshe Zakai*, edited by E. Mayer–Wolf, E. Merzbach, and A. Schwartz, Academic Press, 1991, pp.245–272. Articles in this book were refereed. Research supported by NSF under grant DMS–87–02537.

“Arbitrage and Free Lunch in a General Financial Market Model; The Fundamental Theorem of Asset Pricing”, with Marco Frittelli, in *IMA Volumes of Mathematics and its Applications, Mathematical Finance*, Springer Verlag, N.Y., 1995, pp.89–92. Editors: M.H. Davis, D. Duffie, W. Fleming, S. Shreve.

“Optimal Consumption and Investment on a Finite Horizon with Stochastic Commodity Prices”, in *Linear Circuits, Systems and Signal Processing: Theory and Application*, edited by C.I. Byrnes, C.F. Martin, and R.E. Saeks, Elsevier Science Publishers B.V. (North Holland), 1988, pp. 457–464. Research supported by NSF under grant DMS-84-16736.

### **Submitted articles:**

“Valuing Perpetual American Options in Imperfect Markets”, with Ashay Kadam and Anand Srinivasan, submitted to *Optimal Control Applications and Methods*.

“Executive Stock Options: Value to the Executive and Cost to the Firm”, with Ashay Kadam and Anand Srinivasan, submitted to *Review of Financial Studies*.

### **Other work**

“Martingale Measures for Right-Continuous Processes which are Bounded Below”, abstract appeared in the refereed proceedings *Stochastic Processes: Applications in Mathematical Economics-Finance*, Applied Mathematics Monographs 5, edited by W. Runggaldier, 1992, p.43.

“Optimal Consumption by a Bond Investor”, with Eric Slud, *Proceedings of the 29th IEEE Conference on Decision and Control*, 1990, pp.2333–2334.

“Equivalent Local Martingale Measures and Free Lunch in a Stochastic Model of Continuous Trading”, working paper.

“*Consumption / Investment and Equilibrium in the Presence of Several Commodities*”, Doctoral Dissertation, 1989.

“dBASE II Programming Techniques”, with Doug Sherman, *PC Tech. Journal*, June 1984.

“Recognition of Contiguous Domains in a Digital Picture”, with L. Fero, SZKI Technical Report, 1981, in Hungarian.

### **TEACHING EXPERIENCE:**

MBA core courses: Data Analysis and Modeling, Mathematics and Calculus Workshop.

MBA elective courses: Applied Stochastic Processes for Financial Models.

Ph.D. core courses: Mathematics for Business Research I and II.

Ph.D. and M.S. elective courses: Advanced Theory of Probability, Advanced Topics in

Stochastic Processes, Models in Stochastic Processes, Stochastic Processes in Finance,  
Stochastic Processes II.

Undergraduate core courses: Statistics for Business and Government.

## PROFESSIONAL ACTIVITIES:

Contributed papers at many conferences.

Organized the following workshops:

“Fixed income and Credit Risk Modeling and Management” (jointly with Tomasz Bielecki), New York University, May 2000.

“Statistical Aspects of Financial Models” (jointly with Halina Frydman), New York University, May 1977.

Invited participant at several conferences and workshops, including the following:

American Mathematical Society, session on Stochastic Modeling in Financial Mathematics, Ann Arbor, Michigan, March 2002.

13th International Conference in Finance, French Finance Association, Geneva, June 1996.

AMS Session on Stochastic Models in Mathematical Finance, NYU Courant Institute, April 1996.

Financial Mathematics program, Isaac Newton Institute for Mathematical Sciences, Cambridge, England, 1995.

Mathematical Economics and Mathematical Finance Workshop, Tunis, 1994, organized by the French Finance Association.

Mathematical Finance Workshop, University of Minnesota, 1993.

Stochastic Processes: Applications to Mathematical Economics, Erice, Italy, 1992.

Session discussant at the Eastern Economic Association Meetings, New York, 1992.

Symposium on Derivative Securities, Queens Univ., 1992.

Mathematical Theory of Modern Financial Markets, Cornell Univ., 1989.

Session chairman for the TIMS XXXII International Meeting on “Stochastic Models for Finance”, Anchorage, Alaska, 1994.

Referee for the National Science Foundation, the *Mathematical Finance*, the *Journal of Applied Probability*, the *SIAM Journal of Control and Optimization*, the Open Society Institute (Soros Foundation), Blackwell Publishers.

Memberships: Bernoulli Society for Mathematical Statistics and Probability, Ameri-

can Statistical Association.

**PERSONAL:**

US citizen, native of Hungary.