## STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

	by 39 U.S С.	3685							
1A TITLE OF PUBLICATION		_	1B.	PUBLIC	ATIC	N NO.	_	2. DATE OF FILING	
ANNALS OF STATISTICS		0		9 0	5	3 6	4	28 September 1	
3. FREQUENCY OF ISSUE		3A.	NO. OI ANNU	F ISSUE ALI.Y	S PU	BLISHED	3В.	ANNUAL SUBSCRIPTIO	N
Quarterly (March, June, September, Dec					4			\$55.00	
4. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION (Street, City, County, State and ZIP Code) (Not printers)									
3401 Investment Blvd., #6, Hayward (Alameda County), California 94545									
5. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHER (Not printer)									
3401 Investment Blvd., #6, Hayward (Alameda County), California 94545									
6. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR (This item MUST NOT be blank) PUBLISHER (Name and Complete Mailing Address)									
Institute of Mathematical Statistics 3401 Investment Blvd., #6, Hayward, Ca	lifornia	94	545						
EDITOR (Name and Complete Mailing Address)									
Professor Michael D. Perlman Department of Statistics GN-22, University of Washington, Seattle, Washington 98195									
MANAGING EDITOR (Name and Complete Mailing Address) Professor Jagdish S. Rustagi									
Department of Statistics, Ohio State U									LΟ
7. OWNER (If owned by a corporation, its name and address must be sto owning or holding 1 percent or more of total amount of stock. If not be given. If owned y a partnership or other unincorporated firm, its iton is published b, a nonprofit organization, its name and address must be a compared to the control of t	owned by a co name and addr	rpora ess, a	tion, ti well a	he name. s that o	s and of	iddresses individua	of th	e individual owners must	
FULL NAME				СОМР	LETE	MAILIN	GAD	DRESS	_
Institute of Mathematical Statistics	340	L	vest	tment	دلق	'd#	6		
(An unincorporated nonprofit society)	- nay	Nail		945					
8. KNOWN BONDHOLDERS, MORTGAGES, AND OTHER SECURITAMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (If	Y HOLDERS	OWN	ING O	R HOLI	DING	1 PERCE	NT C	OR MORE OF TOTAL	
FULL NAME	inere are none	50 51	ate)			MAILIN			
None									
									$\dashv$
FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHOR The purpose, function, and nonprofit status of this organization and ti	IZED TO MAI he exempt stat	L AT	SPECI Feder	AL RA	TES (S	ection 42 purposes	3.12 (Che	DMM only) ck one)	_
(1)  HAS NOT CHANGED DURING PRECEDING 12 MONTHS  (2)  HAS CHANGE PRECEDING 1	2 MONTHS			ch	ange	with this s	taten	•	ĺ
10. EXTENT AND NATURE OF CIRCULATION	AVF (55)	AAG P D	, 1 , 1	COPIES PIRCO VERS	5AC	1 AC	SUE	L NO. COPIES OF SINGL PUBLISHED NEAREST T FILING DATE	ë
A. TOTAL NO. COPIES (Net Press Run)			687					5601	
B. PAID CIRCULATION 1. Sales through dealers and carriers, street vendors and counter sales			0					0	
2. Mail Subscription			1345					4352	
C. TOTAL PAID CIRCULATION (Sum of 10B1 and 10B2)			1345					4352	_
D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS SAMPLES, COMPLIMENTARY, AND OTHER FREE COPIES		13				15			
E. TOTAL DISTRIBUTION (Sum of C and D)			4358				4367		
F. COPIES NOT DISTRIBUTED  1. Office use, left over, unaccounted, spoiled after printing		1329				1234			
2. Return from News Agents		0				0			
G. TOTAL (Sum of E, F1 and 2-should equal net press run shown in A)			687				011	5601	
I certify that the statements made by me above are correct and complete	(/)	LEO		1 OR, PL ( (-)	JBLIS	В	ruc	ss manager, or owni e E. Trumbo surer	ER
See instr	uction on re	erse	,						

Institute of Mathematical Statistics is collaborating with JSTOR to digitize, preserve, and extend access to The Annals of Statistics.



# "If it weren't for IMS Members' Life Insurance, I'd be underinsured... by thousands of dollars!"

"...With the future I have planned—marriage, a home, a family—my company policy just wouldn't be enough. So I bought lowcost term life insurance through my membership."

Starting a personal insurance program when you're young and healthy is smart, because it's easier to qualify. For a low cash outlay, your program is off to a good start. And even though rates go up as you get older, they are still affordable because of our group's buying power.

Further, should you change jobs—as long

as you remain a member—your group term life insurance goes with you...everywhere.

Are <u>you</u> underinsured? Think about your future. Then, to build up your insurance program, call or write the Administrator.

UP TO \$195,000 IN TERM LIFE INSURANCE PROTECTION IS AVAILABLE TO IMS MEMBERS.

# Contact Administrator, IMS Group Insurance Program

Smith - Sternau Organization, Inc. 1707 L Street, N.W., Suite 700 Washington, D.G. 20036

800 424 9883 Toll Free

in Washington, D.C. area, 202 296-8030

**EDITOR, SHANTI S. GUPTA** 

# Essays on the Prediction Process by Frank Knight

This work concerns a new approach to continuous time random processes due originally to the author, but extended and consolidated by P. A. Meyer and others. It is a fluid and subjective approach, in distinction to the rigid and objective one prevalent in other treatments. This leads to a broad unification of method, and consequently to a setting of almost universal applicability. Each of the four essays contains a different aspect of the subject, without being exhaustive.

Es	ssay I. Introduction, Construction, and Fundamental Properties
1. 2.	Introduction The Prediction Process of a Right-Continuous Process with Left Limits Prediction Spaces and Ray Topologies A View Toward Applications
Es	References
1. 2.	The Process R <sub>t</sub> The Prediction Process of R <sub>t</sub> Connections With the General Prediction Process References
	say III. Construction of Stationary Strong-Markov Transition
	References
Es	say IV. Application of the Prediction Process to Martingales
1. 2.	Introduction The Martingale Prediction Spaces Transition to the Initial Setting: The Levy System of a Process On Continuous Local Martingales References
	List Price

Order Pre-paid from:

The Institute of Mathematical Statistics 3401 Investment Boulevard, Suite 6 Hayward, California 94545 (USA)

# THE ANNALS OF PROBABILITY

# Vol. 12

# February 1984

No. 1

# Articles

Large deviations for a general class of random vectors					
RICHARD F. BASS AND RONALD PYKE A note on the law of iterated logarithm for weighted sums of random variables					
Ulrich Stadtmüller Approximate local limit theorems for laws outside domains of attraction Philip S. Griffin, Naresch C. Jain and William E. Pruitt					
Asymptotic behavior of the local time of a recurrent random walk  NARESCH C. JAIN AND WILLIAM PRUITT					
A local time analysis of intersections of Brownian paths in the plane  DONALD GEMAN, JOSEPH HOROWITZ AND JAY ROSEN					
Self-intersections of random fields					
A functional central limit theorem for weakly dependent sequences of random variables					
On the influence of extremes on the face of convergence in the central limit theorem  Peter Hall  Gittins indices in the dynamic allocation problem for diffusion processes					
A non-clustering property of stationary sequences					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					
A note on the behavior of sample statistics when the population mean is infinite  JEESEN CHEN AND HERMAN RUBIN					
Characteristic functions of means of distribution chosen from a Dirichlet process HAJIME YAMATO					
Short Communications					
Functional law of the iterated logarithm and uniform central limit theorem for partial-sum processes indexed by sets					
Corrections and Acknowledgements					
Correction to "Sojourns and extremes of Gaussian processes" SIMEON M. BERMAN Acknowledgment of Priority THOMAS G. KURTZ					

## Series Editor, Shanti S. Gupta

# Survival Analysis edited by John Crowley and Richard A. Johnson

This volume contains invited papers from the Special Topics Meeting on Survival Analysis sponsored by the Institute of Mathematical Statistics, October 26–28, 1981 at the Ohio State University, Columbus, Ohio.

#### Table of Contents

#### **Counting Processes and Survival Analysis**

On the Application of the Theory of Counting Processes in the Statistical Analysis of Censored Survival Data by Per Kragh Andersen

### Nonparametric Inference for a Single Sample

Spline Smooth Estimates of Survival by Jerome Klotz

A Nonparametric Estimator of the Survival Function Under Progressive Censoring by Joseph C. Gardiner and V. Susarla

Fourier Integral Estimate of the Failure Rate and Its Mean Square Error Properties by Nozer D. Singpurwalla and Man-Yuen Wong

## **Proportional Hazards and Log-Linear Models**

Estimation of the Ratio of Hazard Functions by John Crowley, P.-Y. Liu, and Joseph G. Voelkel On the Performance of Estimates in Proportional Hazard and Log-Linear Models by Kjell A. Doksum

Multi-step Estimation of Regression Coefficients in a Linear Model with Censored Survival Data by Hira L. Koul, V. Susarla, and John Van Ryzin

#### **Regression Approaches**

Inverse Gaussian Regression and Accelerated Life Tests by Gouri K. Bhattacharyya and Arthur Fries

Transformation of Survival Data by Richard A. Johnson

Covariate Measurement Errors in the Analysis of Cohort and Case-Control Studies by Ross Prentice

#### **Problems in System Reliability**

Confidence Bounds for the Exponential Mean in Time-Truncated Life Tests by N.R. Mann, R.E. Schafer, and M.C. Han

Screen Testing and Conditional Probability of Survival by Janet Myhre and Sam Saunders Imperfect Maintenance by Mark Brown and Frank Proschan

A Limit Theorem for Testing with Randomly Censored Data by Hira L. Koul and V. Susarla

## **Multivariate Distributions and Competing Risks**

Negative Dependence by Henry W. Block, Thomas H. Savits, and Moshe Shaked Some Recent Results in Competing Risks Theory by Asit P. Basu and John P. Klein Freund's Bivariate Exponential Distribution and Censoring by Sue Leurgans, Wei-Yann Tsai, and John Crowley

Asymptotic Properties of Several Nonparametric Multivariate Distribution Function Estimators Under Random Censorship by Gregory Campbell

#### **Group Sequential Methods in Clinical Trials**

Group Sequential Methods for Survival Analysis with Staggered Entry by Anastasio A. Tsiatis Procedures for Serial Testing in Censored Survival Data by D.P. Harrington, T.R. Fleming, and S.J. Green

Sequential Studies on Increments of the Two-Sample Logrank Score Test for Survival Time Data, with Application to Group Sequential Boundaries by Mitchell H. Gail, David L. DeMets, and Eric V. Slud

# Order prepaid from:

List price	\$25.00	The Institute of Mathematical Statistics
IMS member price	\$15.00	3401 Investment Boulevard, Suite 6
		Hayward, California 94545 (USA)