

## NEWS AND NOTICES

*Readers are invited to submit to the Treasurer of the Institute items of interest*

### Personal Items

Murray Aitkin, formerly Visiting Assistant Professor at the Psychometric Laboratory, University of North Carolina, is now Lecturer in Statistics at the University of New South Wales, Kensington, N.S.W., Australia.

Theodore W. Anderson, Jr., Professor of Mathematical Statistics at Columbia University, has accepted a position at Stanford University as Professor of Statistics and Economics. He will be on leave at the Imperial College of Science and Technology in London during the academic year 1967-68.

Klaus Daniel, formerly of the University of Munster, has been promoted from Assistant Professor to Associate Professor at the University of Maryland.

Dr. H. P. Edmundson, University of California, Los Angeles, has been appointed Professor of Computer Science, Computer Science Center, and Professor of Mathematics, Department of Mathematics, University of Maryland.

K. R. Gabriel has completed a year's work at the Department of Biostatistics, University of North Carolina and will be spending the fall semester at the Department of Statistics, Princeton University, before returning to his permanent position as Associate Professor of Statistics at the Hebrew University, Jerusalem.

Dr. B. K. Kale has been appointed as Associate Professor of Statistics in the newly formed Department of Statistics at University of Manitoba, Winnipeg.

Melville R. Klauber has joined the faculty of the University of Utah, College of Medicine, as an Assistant Professor and Chief, Division of Biostatistics in the Department of Preventive Medicine September 1967.

Ingram Olkin, on sabbatical leave from Stanford University, will be at the Statistical Laboratory, Cambridge, England from August 1967 to August 1968.

Dr. Lawrence D. Stone of Purdue University has joined Daniel H. Wagner, Associates, Paoli, Pennsylvania.

### New Members

**de Acosta, Alejandro Daniel**, Licenciado en Ciencias Matematicas, (Universidad de Buenos Aires); Graduate Student, Department of Statistics, University of California, Berkeley.

**Ahmed, Nasiruddin**, Ph.D., (Ottawa University); Head of Electronics Division, Pakistan Atomic Energy Commission, Ramna, Dacca.

**Andrews, David**, M.Sc., (University of Toronto); Graduate Student, Department of Mathematics, University of Toronto.

**Antoniak, Charles Edward**, M.S., (San Diego State College); Graduate Student/Mathematician, University of California, Los Angeles/U. S. Navy Electronics Laboratory, Los Angeles; 3832 Basilone St., Apt. 4, San Diego, California.

**Arreola, Raoul A.**, B.A.Ed., (Arizona State University); Graduate Student, Arizona State University.

**Barron, Austin M.**, M.S., (Purdue University); Graduate Student, Purdue University.

**Bishnoi, Bharat B.**, M.Sc., (Agra University); Graduate Student, Department of Statistics, University of California, Berkeley.

- Bondar, James V.**, Ph.D., (University of Toronto); Assistant Professor, Department of Statistics, University of Wisconsin.
- Brewster, John F.**, M.Sc., (University of Toronto); Graduate Student, Department of Mathematics, University of British Columbia.
- Brown, Mark**, M.S., (Stanford University); Graduate Student, Department of Statistics, Stanford University.
- Chase, Gary A.**, A.B., (Harvard University); Graduate Student, Department of Statistics, Johns Hopkins University.
- Chu, Poo-sen**, M.S., (Virginia Polytechnic Institute); Graduate Student, Department of Statistics, Virginia Polytechnic Institute.
- Coffey, Jerry L.**, B.A., (University of Virginia); Graduate Student, Department of Statistics, George Washington University.
- D'Abrera, Howard Joseph Michael**, B.S., (University of Sydney); Graduate Student, Department of Mathematical Statistics, University of Sydney.
- Darnell, Gerald E.**, M.B.A.D., (Louisiana State University); Graduate Student, Louisiana State University.
- Dorr, Albert E.**, B.A., (Oklahoma City University); Graduate Student, University of Oklahoma Medical Center.
- Duff, William S.**, M.B.A., (University of Pennsylvania); Graduate Student, Stanford University.
- Ehlers, Mary Burswick**, M.A., (Washington State University); Graduate Student, Department of Mathematics, Washington State University.
- Epstein, Mark D.**, B.S., (Massachusetts Institute of Technology); Data Processing Advisory Analyst, Research Applications, Inc., Flushing, New York.
- Fontaine, Richard M.**, B.A., (Sacramento State College); Associate Statistician, IBM Product Test, San Jose, California.
- Fox, Richard J.**, M.S., (Michigan State University); Graduate Student, Department of Statistics, Michigan State University.
- Gilliam, Gary E.**, M.A., (Arizona State University); Mathematician, National Security Agency, Fort Meade, Maryland.
- Gupta, Radhey Shyam**, M.Sc., (Agra University); Graduate Student, Department of Mathematics, Ohio State University.
- Halperin, Silas**, Ph.D., (State University of New York at Buffalo); Assistant Professor, Department of Psychology, Syracuse University.
- Hatta, Masaaki**, B.S., (Oklahoma State University); Assistant System Analyst, Burroughs Corporation, Detroit, Michigan.
- Hensel, Jean D.**, M.Sc., (Ohio State University); Graduate Student, Department of Mathematics, Ohio State University.
- Hou, Tien-fang**, M.S., (Tulane University); Graduate Student, Department of Statistics, University of California, Berkeley.
- Huynh, Huynh**, M.S., (George Peabody College for Teachers); Graduate Student, Department of Statistics, University of Iowa.
- Isaki, Cary T.**, B.A., (University of Hawaii); Graduate Student, Iowa State University.
- Kalbfleisch, John Howard**, M.A., (Western Michigan University); Graduate Student, The University of Oklahoma Medical Center.
- Katz, Murray**, M.S., (New York University); Graduate Student, Department of Industrial Engineering, New York University.
- King, Louis A.**, M.S., (University of Connecticut); Graduate Student, Pennsylvania State University.
- Kozub, Gerald Clarence**, B.Sc., (University of Alberta); Graduate Student, University of Alberta.

- Lin, Chi-Yuan**, S.M., (Massachusetts Institute of Technology); Graduate Student, Massachusetts Institute of Technology.
- Lip, N. G. Kok**, M.A., (University of California, Berkeley); Assistant Lecturer, Department of Mathematics, University of Singapore.
- Lundh, Lennart**, Fil. Kand. vid. Matematisk, (Lunds Universitet); Assistant, Department of Mathematical Statistics, Lund Institute of Technology.
- Miller, Michael F.**, B.Sc., (Oregon State University); Graduate Student, Division of Mathematical Sciences, University of Iowa.
- Monroe, William L.**; Student, George Washington University.
- Noreiko, Gary V.**, B.A., (San Fernando Valley State College); Graduate Student, California State College at Los Angeles.
- Obenchain, Robert L.**, B.S., (Northwestern Technical Institute); Graduate Student, Department of Statistics, University of North Carolina.
- Oosterhoff, Jacobus**, Doctorandus, (University of Amsterdam); Research Staff Member, Mathematisch Centrum, Amsterdam.
- Pabuwal, Satya Narain**, M.Sc., (University of Rajasthan); Graduate Student, Department of Statistics, University of Chicago.
- Penkov, Boyan I.**, Ph.D.; Assistant Professor, Department of Mathematics, University of Sofia/Head of Section of Probability and Statistics, Mathematical Institute of Bulgarian Academy of Sciences.
- Rand, William M.**, M.A., (Brandeis University); Graduate Student, University of California, Los Angeles.
- Rennie, Robert Richard**, M.S., (Brigham Young University); Instructor, Department of Mathematics, Simon Fraser University.
- Reynolds, David S.**, M.S., (Florida State University); Graduate Student, Department of Statistics, Florida State University.
- Robinson, Don R.**, M.B.A., (University of Texas); Graduate Student, Louisiana State University.
- Schaafsma, Willem**, Dr., (University of Groningen); Wet. Ambt., Mathematical Institute, University of Groningen.
- Scott, Edwin D.**; Student, Carleton College.
- Seheult, Allan H.**, B.Sc., (University of London); Graduate Student, Department of Statistics, North Carolina State University.
- Sheu, Jin J.**, M.S., (Rutgers-The State University); Graduate Student, Department of Statistics, University of Wisconsin.
- Sidik, Steven Michael**, B.S., (Kent State University); Mathematician—Data Analyst, NASA Lewis Research Center, Cleveland, Ohio.
- Siskin, Bernard R.**, B.S., (University of Pittsburgh); Graduate Student, University of Pennsylvania.
- Smith, Ruth Guyton**, M.A., (University of Mississippi); Associate Professor, West Virginia Technical Institute.
- Stoline, Michael R.**, M.S., (University of Iowa); Graduate Student, Department of Statistics, University of Iowa.
- Suryanarayana, Kuchibhotla Venkata**, M.Sc., (Andhra University); Graduate Student, Department of Statistics, University of North Carolina.
- Wanamaker, Neil T.**, B.S., (California State College, Hayward); Graduate Student, Department of Statistics, University of California, Berkeley.
- Witte, Paul de**, Ph.D., (University of Brussels); Associate Professor of Foundations of Mathematics, University of Waterloo, Ontario, Canada/Fellow of the Belgian Centre for Algebra and Topology, University of Brussels.

## NEW FELLOWS

The Council of the Institute of Mathematical Statistics, following the recommendation of the Committee on Fellows, has elected eleven new fellows. Their names are

C. G. Esseen	L. Moses
W. J. Hall	D. B. Owen
D. L. Hanson	J. Sacks
L. H. Koopmans	R. A. Wijsman
H. O. Lancaster	M. Zelen
M. Masuyama	

## SYMPOSIUM ON CODING THEORY

The Mathematics Research Center, U. S. Army, University of Wisconsin, will hold a symposium on coding theory May 6–8, 1968, in Madison, Wisconsin. The emphasis will be in recent advances on algebraic and combinatorial problems of coding theory. Professor H. B. Mann is chairman of the program committee.

REPORT OF THE MISSOULA MEETING OF THE INSTITUTE  
OF MATHEMATICAL STATISTICS

The Western Regional Meeting, the 115th meeting of the Institute of Mathematical Statistics, was held at the University of Montana (Missoula, Montana) on June 15–17, 1967. It took place jointly with regional meetings of the American Mathematical Society, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics.

Attendance figures for the combined meetings showed 140 individuals registered, of whom 39 were members of the Institute.

## Program

Thursday, June 15

## 1:30 P.M.—Contributed Papers I

Chairman: E. L. CROW, Environmental Science Services Administration, Boulder

1. *Estimation of a Probability Density Function and its Derivatives*, P. K. BHATTACHARYA, University of Arizona.
2. *Characterizations of Independence in Certain Families of Bivariate and Multivariate Distributions*, KUMAR JOGDEO, Courant Institute of Mathematical Sciences.
3. *On Finite Mixtures*, SIDNEY J. YAKOWITZ, University of Arizona.
4. *Markovianization of a Single State of a Stationary Process* (Preliminary Report), S. W. DHARMADHIKARI, University of Arizona.
5. *A Moment Inequality and Applications*, GOVIND MUDHOLKAR, University of Rochester.

## 4:00 P.M.—Invited Papers I

Chairman: PAUL L. MEYER, Washington State University

1. *Robust Estimation of Location*, E. L. CROW, Environmental Science Services Adminis-

tration (Boulder), and M. M. SIDDIQUI, Environmental Science Services Administration and Colorado State University.

2. *Edited Sample Means from Symmetric Densities*, J. S. WILLIAMS and WADE HALVORSON, Colorado State University.

#### Friday, June 16

##### 8:30 A.M.-10:10 A.M.—Contributed Papers II

Chairman: D. GUTHRIE, Oregon State University

1. *Estimation of the Parameters of a Power Function Distribution*, H. J. MALIK, Canadian Services College, Victoria.
2. *Asymptotic Normalities Under Contiguity in a Dependence Case*, K. L. MEHRA, University of Alberta.
3. *A Chernoff-Savage Theorem for Random Sample Sizes*, RONALD PYKE and GALEN SHORACK, University of Washington (Paper to be presented by Shorack).
4. *Confidence Intervals for Difference of Frequencies in Matched Samples*, JOHN E. WALSH, System Development Corporation.

##### 10:30 A.M.-12:15 P.M.—Invited Papers II

Chairman: J. VAN RYZIN, Argonne National Laboratory and Stanford University

1. *Association of Random Variables*, J. D. ESARY, F. PROSCHAN, D. W. WALKUP, Boeing Scientific Research Laboratories.
2. *Weak Convergence of a Two-Sample Empirical Process; and a New Approach to Chernoff-Savage Theorems*, RONALD PYKE and GALEN SHORACK, University of Washington (Paper to be presented by Pyke).
3. *Total Variation of the Continuous Singular Component of Infinitely Divisible Processes*, H. H. STRATTON, University of California (Irvine).

##### 3:15 P.M.-5:00 P.M.—Invited Papers III

Chairman: RONALD PYKE, University of Washington

1. *Power Approximations in Multivariate Exponential Families*, BRADLEY EFRON, Stanford University and DONALD TRUAX, University of Oregon and Stanford University.
2. *Convergence Rates for Empirical Bayes Two-Action Problems*, M. V. JOHNS, JR., Stanford University, and J. VAN RYZIN, Argonne National Laboratory.
3. *Some Methods for Statistical Testing and Analysis in Practical Metric Spaces*, JAMES MACQUEEN, University of California (Los Angeles) and Stanford University.

#### Saturday, June 17

##### 10:00 A.M.-11:55 A.M.—Invited Papers IV

Chairman: J. S. WILLIAMS, Colorado State University

1. *Weighted Percentile Frequency Tests for the Two-Sample Problem with Censored Data*, FRED L. RAMSEY, Oregon State University.
2. *On a Multivariate Extension of the Bradley-Terry Model for Paired Comparisons*, ROGER R. DAVIDSON, University of Victoria.
3. *The Folded Cubic Association Scheme* (Preliminary Report), PETER W. M. JOHN, University of California (Davis).

#### Papers Contributed by Title

1. *Necessary Equations for the Existence of Some Partially-Balanced Arrays with Two Symbols*, DHARAM VIR CHOPRA, Southern Colorado State College.
2. *Exact Moments of Order Statistics from a Power-Function Distribution*, H. J. MALIK, Canadian Services College, Victoria.

3. *Exact Distribution of the Quotient of Independent Generalized Gamma Variables*, H. J. MALIK, Canadian Services College, Victoria.
4. *Moments, Cumulants, and FORMAC*, JOHN S. WHITE, General Motors Corporation.  
R. F. TATE  
Associate Secretary

---

### PUBLICATIONS RECEIVED

- ABADIE, J. (editor) (1967). *Nonlinear Programming*. John Wiley and Sons, New York, and North-Holland, Amsterdam. xxii + 316 pp. \$13.00.
- CENTRE DE RECHERCHES ECONOMIQUES ET SOCIALES (1966). *Etude comparee des tableaux d'entrees et de sorties des communautes europeennes*. Namur. 165 pp.
- CHAKRAVARTI, I. M., LAHA, R. G. AND ROY, J. (1967). *Handbook of Methods of Applied Statistics, Volumes 1 and 2*. John Wiley and Sons, New York. Volume 1, xiv + 460 pp., \$12.95; Volume 2, x + 160 pp. \$9.00.
- CHUNG, KAI LAI (1967). *Markov Chains with Stationary Transition Probabilities* (second edition). Springer-Verlag, New York. xi + 301 pp. \$14.00.
- DANTIZ, TOBIAS (1967). *Number, The Language of Science*. The Free Press, New York. ix + 340 pp. \$2.45.
- FERGUSON, THOMAS S. (1967). *Mathematical Statistics: A Decision Theoretic Approach*. Academic Press, Inc., New York. xi + 396 pp. \$14.50.
- HARRIS, B. (editor) (1967). *Advanced Seminar on Spectral Analysis of Time Series*. John Wiley and Sons, New York. x + 319 pp. \$7.95.
- HEMMERLE, WILLIAM J. (1967). *Statistical Computations on a Digital Computer*. Blaisdell Publishing Co., New York. x + 230 pp. \$7.50.
- INSTITUTO NACIONAL DE ESTADISTICA (1966). *Catalogo de la biblioteca*. Madrid. 616 pp.
- MARKUSHEVICH, A. I. (1967). *Theory of Functions of a Complex Variable, Volume III*. Prentice-Hall, Inc., West Nyack. xi + 360 pp. \$12.95.
- MOORE, JOHN T. (1967). *Elements of Abstract Algebra* (second edition). The MacMillan Company, New York. xv + 349 pp. \$8.95.
- NOETHER, G. E. (1967). *Elements of Nonparametric Statistics*. John Wiley and Sons, New York. x + 104 pp. \$7.95.
- PUTNAM, C. R. (1967). *Commutation Properties of Hilbert Space Operators. Ergebnisse der Mathematik, und ihrer Grnezegebiete, Volume 36*. Springer-Verlag, Berlin. xi + 167 pp. \$7.00.
- RATCLIFFE, J. F. (1967). *Elements of Mathematical Statistics*. Oxford University Press. x + 224 pp. \$2.90.
- TAKACS, L. (1967). *Combinatorial Methods in the Theory of Stochastic Processes*. John Wiley and Sons, New York. xi + 262 pp. \$12.75.
- YAMINE, T. (1967). *Elementary Sampling Theory*. Prentice-Hall, West Nyack. x + 405 pp. \$10.95.