

## NEWS AND NOTICES

*Readers are invited to submit to the Secretary of the Institute news items of interest*

### Personal Items

Thomas L. Austin, Jr., formerly Research Assistant at the University of Georgia, has accepted a position as Mathematician with the Dept. of Defense in Washington.

Professor Francisco Azorín P. of the University of Madrid, Spain, spent the academic year 1954-55 at the Universidad Central de Venezuela under UNESCO's Technical Assistance Program.

Maurice H. Belz has been appointed as Professor of Statistics in the University of Melbourne.

Francesco Bignardi was designated Statistical Fellow at the University of Palermo (Italy) where he is charged with the teaching of Social Statistics in the Statistical School. He is also chief of the Economical and Statistical Service of the Banco di Sicilia's Presidency.

Arthur B. Brown has been promoted to Professor of Mathematics at Queens College, Flushing, N. Y.

Dr. E. J. Gumbel was Visiting Professor for Mathematical Statistics at the Free University of Berlin (West) for the Summer Term 1955.

Harry M. Hughes, formerly Assistant Professor, University of California, Berkeley, is now Analytical Statistician, Dept. of Biometrics, USAF School of Aviation Medicine, Randolph Field, Texas.

Dr. H. Paul Kelley is now on active duty as a Research Psychologist at the Naval School of Aviation Medicine, U. S. Naval Air Station, Pensacola, Florida. He was formerly an Educational Testing Service Psychometric Fellow and more recently was with the U.S. Air Force Personnel and Training Research Center at Lackland Air Force Base, San Antonio, Texas.

Wharton F. Keppler has recently transferred from his position as Statistician, U.S. Naval Ordnance Test Station, Inyokern, California, to Elgin Air Force Base, Florida, where he is an Operations Analyst, Office of Operations Analysis, Dept. of Chief of Staff/Operations (DCS/O), Hq. Building, Air Proving Ground Command.

Robert J. Nichol is Statistician, Quality Control Group, Planning Dept., R.C.A. Service Co., Inc., Missile Test Project, Patrick Air Force Base, Florida.

Gottfried E. Noether of Boston University has been promoted to Associate Professor.

Don C. Price is now employed in the Engineering Department of the Good-year Aircraft Corporation, Akron, Ohio.

Ronald Pyke having received his M.Sc. degree in Mathematical Statistics is continuing at the University of Washington as Research Assistant while working toward a Doctorate.

Robert L. Rogers recently resigned from his statistical and accounting duties with Stokely-Van Camp, Inc. in order to accept a position as Mathematician in the Computing Bureau with International Business Machines, Inc., Los Angeles, California.

C. H. Springer has recently accepted a position with the Aircraft Gas Turbine Development Department, General Electric Company, Cincinnati, Ohio. As Component Testing Evaluation Engineer, he will be engaged in the application of statistical principles to the design and evaluation of Jet Engine Research Testing Operations.

Jerome R. Steen has become Manager of Quality Control for the Radio and Television Division of Sylvania Electric Products Inc. He is at present located at Batavia, N. Y.

Dr. Joseph V. Talacko, Assistant Professor of Mathematics, Marquette University, Milwaukee, Wisconsin, returned in February from Berkeley to Milwaukee. He plans to spend the second half of his 1954/55 Ford Foundation Fellowship at the University of Chicago.

Dr. G. S. Watson has resigned from the Department of Statistics, University of Melbourne, to take up a new position as Senior Fellow, Dept. of Statistics, The Australian National University, Canberra.

William Wolman, formerly with Naval Inspector of Ordnance, Eastman Kodak Co., Rochester, N. Y., is now head of the Statistical Methodology and Reliability Section, Statistics Branch, Quality Control Division, Bureau of Ordnance, Navy Department in Washington, D. C.

James K. Yarnold, formerly a graduate student and Research Assistant at the Statistical Laboratory, University of California, Berkeley, is now a graduate student in Mathematical Statistics at the University of Illinois and a Research Assistant in the University of Illinois Training Research Laboratory.

Mr. H. Zindler is now Referent für Mathematische Statistik in Abteilung VIII des Statistischen Bundesamtes, Wiesbaden-Biebrich, Rheinstr. 25, Germany.

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### Educational Testing Service

The Educational Testing Service is offering for 1956-57 its ninth series of research fellowships in psychometrics leading to the Ph.D. degree at Princeton University. Open to men who are acceptable to the Graduate School of the University, the two fellowships each carry a stipend of \$2,500 a year and are normally renewable. Fellows will be engaged in part-time research in the general area of psychological measurement at the offices of the Educational Testing Service and will, in addition, carry a normal program of studies in the Graduate School.

Suitable undergraduate preparation may consist either of a major in psychology with supporting work in mathematics, or a major in mathematics together with some work in psychology. However, in choosing fellows, primary emphasis

is given to superior scholastic attainment and demonstrated research ability rather than to specific course preparation. The closing date for completing applications is January 12, 1956. Information and application blanks will be available about October 1 and may be obtained from: Director of Psychometric Fellowship Program, Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

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### New Members

*The following persons have been elected to membership in the Institute*

February 9, 1955 to May 11, 1955

- Baumann, Carl O.**, B.A. (American International College), Assistant Statistician, Monsanto Chemical Company, Indian Orchard, Massachusetts, *221 Britton Street, Fairview Massachusetts.*
- Beckwith, Richard E.**, B.S. (Stanford Univ.), Research Assistant, Case Institute of Technology, Cleveland 6, Ohio.
- Birch, John J.**, B.S., (Brown Univ.), Graduate Student in Statistics, University of California, Berkeley, California, *540 Alcatraz Avenue, Oakland 9, California.*
- Block, Aaron**, B.A. (Brooklyn College), Analyst, City Planning Department, Office of Master Planning, 15 Park Row, New York, New York, *102-35 64th Road, Forest Hills 75, New York.*
- Blum, Joseph**, M.A. (George Washington Univ.), Machine Methods Analyst, Assistant Branch Chief of Spec. Processing Branch, National Security Agency, Washington 25, D. C., *4314 N. Pershing Drive, Arlington 3, Virginia.*
- Boyd, Evelyn**, Ph.D. (Yale Univ.), Mathematician, Department of the Army, Diamond Ordnance Fuse Laboratory, Washington 25, D. C., *1353 Ritchie Place, N. E., Washington 17, D. C.*
- Breakwell, John Valentine**, Ph.D. (Harvard Univ.), Senior Research Engineer, North American Aviation, Inc., Downey, California, *21 Temple Avenue, Long Beach 3, California.*
- DeMarr, Ralph A.**, M.A. (Washington State College), Member of Technical Staff, Bell Telephone Laboratory, Whippany, New Jersey, *29 DeBary Place, Summit, New Jersey*
- Dubay, Joseph A.**, M.A. (Harvard Univ.), Graduate Student, Committee on Statistics, University of Chicago, Chicago 37, Illinois, *22 Snell Hall, 5709 South Ellis Avenue, Chicago 37, Illinois.*
- Friedman, Henry D.**, Ph.D. (Penn. State Univ.), Mathematician, General Electric Co., Electronics Park, Syracuse, New York, *Room 235, Bldg. 3.*
- Guthrie, Donald Jr.**, B.Sc. (Stanford Univ.), Student and Department Teaching Assistant, Dept. of Mathematical Statistics, Columbia University, New York 27, New York.
- Heit, Paul B.**, B.S. (C.C.N.Y.), Graduate Student, Columbia University, New York 27, New York, *1540 Walton Avenue, Bronx 52, New York.*
- Hopkins, John W.**, Ph.D. (Univ. of London), Biometrician, Division of Applied Biology, National Research Council, Ottawa 2, Canada.
- Inman, Patricia**, B.A. (Reed College), Student and Research Assistant, Department of Mathematics, University of Oregon, Eugene, Oregon.
- Kastenbaum, Marvin A.**, M.S. (North Carolina State College), Graduate Assistant, Department of Biostatistics, School of Public Health, University of North Carolina, Chapel Hill, North Carolina.

- Kendall, G. R.**, M.A. (Univ. of Toronto), Meteorologist and Climatologist, Meteorological Division, Department of Transport, 315 Bloor Street W., Toronto, Ontario, Canada, 2099 Stovebank Road, R.R. #1, Port Credit, Ontario, Canada.
- Lanahan, James F.**, M.S. (Univ. of Michigan), Instructor of Mathematics, University of Detroit, Detroit 21, Michigan.
- Madansky, Albert**, A.B. (Univ. of Chicago), Student in Committee on Statistics, University of Chicago, Eckhart Hall, Chicago, Illinois, 1516 S. Kostner, Chicago 23, Illinois.
- Oneson, Thomas M.**, M.A. (Univ. of Illinois), Statistician, Owens-Corning Fiberglas Corp., Case Avenue, Newark, Ohio.
- Paul, William H.**, B.S. (Penn. State College), Project Supervisor, Aircraft Instrumentation Display Studies, Stavid Engineering, Inc., 312 Park Avenue, Plainfield; New Jersey.
- Perrin, Edward B.**, B.A. (Middlebury College), Graduate Student, Department of Mathematical Statistics, Columbia University, 179 S. Main Street, Barre, Vermont.
- Rothman, Stanley**, M.A. (Columbia Univ.) Staff Member, RAMO Wooldridge Co., 8820 Bellanca Avenue, Los Angeles, California.
- Sax, Edward**, B.A. (Wayne Univ.), Analytical Statistician, 1121 New Hampshire Avenue, #403, Washington 6, D. C.
- Seibel, Melvin H.**, B.S. (Univ. of Illinois), Physicist, Statistical Section, Engineering and Technical Department, Army Electronic Proving Ground, Fort Huachuca, Arizona.
- Stevens, Kerry N.**, B.A. (Central Wash. College), Graduate Student, University of Washington, Seattle 5, Washington, 120 East 110th, Seattle 55, Washington.
- Stuart, Alan**, B.Sc. (Univ. of London), Senior Research Officer and Lecturer, Division of Research Techniques, London School of Economics, Houghton Street, Aldwych, London W.C. 2, England.
- Suurballe, John W.**, M.Sc. (State Univ. of Iowa), Applied Mathematician, Farnsworth Electronics Co., Fort Wayne, Indiana, 2407 North Anthony, Fort Wayne, Indiana.
- Thampuran, D. V.**, M.S. (Univ. of Travancore), Research Assistant, Central Marine Fisheries Research Station, Madapam Camp., P.O., S. Rly, India.
- Wartmann, Rolf**, Dr. (Technische Hochschule Darmstadt), Sachbearbeiter für Technische Statistik, Verein Deutscher Eisenhüttenleut, Düsseldorf, Breite Str. 27, Germany.
- Weibull, Martin**, Fil. Dr. (The Royal Univ. of Lund), Docent, University of Lund, Lund, Sweden, Department of Statistics, Solvegatan 5, Lund, Sweden, Revingeg 17, Lund, Sweden.
- Wendel, J. G.**, Ph.D., (California Inst. of Tech.), Associate Professor of Mathematics, Louisiana State University, Baton Rouge, Louisiana.
- Wetzel, Wolfgang**, Dr. rer. Pol. (Freie Univ. Berlin), Wissenschaftlicher Assistent, Seminar für Statistik der Freien Universität Berlin, Berlin-Dahlem, Bachstelzenweg 29/31, Berner Str. 19, Berlin—Lichterfelde West.

## REPORT OF THE CHAPEL HILL MEETING OF THE INSTITUTE

The 1955 Eastern Regional Meeting, sixty-fifth meeting of the Institute of Mathematical Statistics, was held in Chapel Hill, North Carolina, April 22-23, 1955. A meeting of the Biometric Society (Eastern North American Region) was held in Chapel Hill at the same time.

The following 80 members of the Institute registered for the meeting:

R. L. Anderson, T. W. Anderson, Helen Bozovich, R. H. Brunelle, Benjamin Buchbinder, D. L. Burkholder, J. M. Cameron, R. L. Carter, J. T. Chu, W. H. Clatworthy, A. C. Cohen, Jr., Theodore Colton, W. C. Connor, L. M. Court, E. L. Cox, Gertrude Cox, P. P. Crump, Claude de Courval, Cyrus Derman, Alfred Descloux, Elizabeth Doan, D. B. Duncan, Churchill Eisenhart, Lillian Elveback, Benjamin Epstein, S. M. Free, J. E. Freund, Seymour Geisser, H. S. Graf, B. G. Greenberg, S. W. Greenhouse, F. E. Grubbs, S. S. Gupta, R. J. Hader, Max Halperin, Boyd Harshbarger, Wassily Hoeffding, Jacob Horowitz, D. G. Horvitz, Harold Hotelling, W. G. Howe, J. S. Hunter, D. C. Hurst, Mohammad Iqbal, K. Ito, A. W. Kimball, Julius Lieblein, D. V. Lindley, Eugene Lukacs, J. H. MacKay, F. S. McFeely, H. A. Meyer, D. F. Morrison, M. E. Muller, V. N. Murty, C. R. Newell, G. E. Nicholson, Jr., G. E. Noether, Wyman Richardson, D. L. Richter, David Rosenblatt, Joan R. Rosenblatt, A. E. Sarhan, Roberto Sasso, F. E. Satterthwaite, M. A. Schneiderman, H. Smith, W. L. Smith, G. W. Snedecor, P. N. Somerville, Jacques St-Pierre, H. C. Sweeny, Z. Szatrowski, W. A. Thompson, Jr., M. E. Turner, Jr., M. C. K. Tweedie, Lionel Weiss, J. W. Wilkinson, R. L. Wine, Marvin Zelen.

The program was as follows:

### FRIDAY, APRIL 22, 1955

#### 8:30 a.m. Joint Session with Biometric Society.

Chairman: H. FAIRFIELD SMITH, North Carolina State College.

- Papers:
1. *Life Testing in the Discrete Case*, FRANKLIN S. McFEELY and JOHN E. FREUND, Virginia Polytechnic Institute.
  2. *The Components of Variance and the Correlation Between Relatives in Symmetrical Random Mating Populations*, TED HORNER, Iowa State College.
  3. *Tests of Hypotheses when the Decision is Based on Several Criteria (Preliminary Report)*, IRWIN MILLER and JOHN E. FREUND, Virginia Polytechnic Institute.
  4. *Power Function of Procedures for Some Components of Variance Models*, HELEN BOZIVICH, Iowa State College.
  5. *Preference Patterns for Decisions on Means*, R. LOWELL WINE and JOHN E. FREUND, Virginia Polytechnic Institute.

(Papers 1, 3, and 5 were on work sponsored by the Office of Ordnance Research, U.S. Army.)

#### 10:30 a.m. Problems of Probability.

Chairman: EUGENE LUKACS, Office of Naval Research.

- Papers:
1. *Differentiation of Markov Transition Functions*, DONALD G. AUSTIN, Syracuse University.
  2. *An Extension of the Kolmogorov Limit Theorem*, JERRY BLACKMAN, Syracuse University.
  3. *Non-recurrent Random Walks*, CYRUS DERMAN, Syracuse University.

**2:00 p.m. Multivariate Analysis.**

Chairman: HAROLD HOTELLING, University of North Carolina.

- Papers:
1. *Principal Components and Factor Analysis*, T. W. ANDERSON, Columbia University.
  2. *Some Contributions to Factor Analysis*, WILLIAM G. HOWE, Oak Ridge National Laboratory and University of North Carolina.
  3. *Analysis of Variance of Correlated Variates with Heterogeneous Variances*, H. C. SWEENEY, Virginia Polytechnic Institute.

**4:00 p.m. Contributed Papers I.**

Chairman: GEORGE E. NICHOLSON, JR., University of North Carolina.

- Papers:
1. *Estimation of Location and Scale Parameters by Order Statistics from Singly and Doubly Censored Samples. Part I. The Normal Distribution up to Samples of Size 10*, A. E. SARHAN and B. G. GREENBERG, University of North Carolina.
  2. *An Application of Chung's Lemma to the Kiefer-Wolfowitz Stochastic Approximation Procedure*, CYRUS DERMAN, Syracuse University.
  3. *Simplified Estimators Based on Order Statistics (Preliminary Report)*, BENJAMIN EPSTEIN, Wayne University.
  4. *Distribution of the Difference Between the Two Largest Sample Values (Preliminary Report)*, A. ZINGER and J. ST-PIERRE, University of Montreal.
  5. *Some Continuous Monte Carlo Methods for the Dirichlet Problem*, MERVIN E. MULLER, Cornell University.
  6. *On the Distribution of the Number of Successes in Independent Trials*, WASILY Hoeffding, University of North Carolina.
  7. *On the Solution of Truncated and Censored Sample Estimating Equations for Normal Populations*, A. C. COHEN, Jr., University of Georgia.
  8. *The Modified Mean Square Successive Difference and Related Statistics*, SEYMOUR GEISSER, University of North Carolina.
  9. *The Distribution of the Ratios of Certain Quadratic Forms in Time Series (By Title)*, SEYMOUR GEISSER, University of North Carolina.

**SATURDAY, APRIL 23, 1955****8:30 a.m. Symposium on Relation Between Smoking and Mortality from Lung Cancer. (Co-sponsored by Biometric Society.)**

Chairman: B. G. Greenberg, University of North Carolina.

- Papers:
1. *Current Status of the Problem*, JEROME CORNFIELD, National Institute of Health.
  2. *Needed Future Work*, WILLIAM HAENSZEL, National Cancer Institute.

Discussants: BOYD HARSHBARGER, Virginia Polytechnic Institute, DANIEL HORN, American Cancer Society.

**2:00 p.m. Contributed Papers II:**

Chairman: LIONEL WEISS, University of Virginia.

- Papers:
1. *The "Inefficiency" of the Sample Median for Many Familiar Symmetric Distributions*, J. T. CHU, University of North Carolina.
  2. *On Some Stochastic Models of Behavioral Interaction of Organization Theory*, DAVID ROSENBLATT, American University.

3. *On Inverting a Class of Patterned Matrices, Part I*, S. N. ROY and A. E. SARHAN, University of North Carolina.
4. *Convergence Properties of a General Stochastic Approximation Process (Preliminary Report)*, DONALD BURKHOLDER, University of North Carolina.
5. *Distribution of Rounding Off Errors in Some Numerical Processes, Part I*, A. E. SARHAN, University of North Carolina.
6. *On a Measure of the Information Provided by an Experiment (Preliminary Report)*, D. V. LINDLEY, University of Cambridge and University of Chicago.
7. *A Comparison Between Alternative Techniques Using Supplementary Information in Sample Survey Design (Preliminary Report)*, EL MAHDY SAID, North Carolina State College (introduced by R. L. Anderson).
8. *The Canonical Distribution of the Non-central Rectangular Co-ordinates*, MISS ALEYAMMA GEORGE, University of North Carolina and University of Travancore (introduced by H. Hotelling).
9. *Confidence Interval Estimation for the Parameters of a Rectangular and an Exponential Population in Terms of Complete or Censored Samples (Preliminary Report)* (By Title), S. N. ROY and A. E. SARHAN, University of North Carolina.
10. *Some Generalizations of Analysis of Variance and Covariance to the Case of Discrete Variates or of Grouping in Qualitative Categories* (By Title), S. N. ROY and MARVIN KASTENBAUM, University of North Carolina.
11. *Some Analytic Properties of Markoff Functions: Denumerable Case* (By Title), DONALD G. AUSTIN, Syracuse University (introduced by C. Derman).

LIONEL WEISS  
Associate Secretary

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### PUBLICATIONS RECEIVED

*Tables of Sines and Cosines for Radian Arguments*, National Bureau of Standards, Applied Mathematics Series 43, U.S. Government Printing Office, Washington, D. C., 1955, 278 pp., \$3.00.