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REPORT OF THE OAK RIDGE MEETING OF THE INSTITUTE

The forty-sixth meeting of the Institute of Mathematical Statistics was held jointly with the Biometric Society (Eastern North American Region) at the Oak Terrace in Oak Ridge, Tennessee, on March 15-17, 1951. The registration was one hundred four, including the following members of the Institute:

G. E. Albert, Kenneth J. Arnold, Joseph Berkson, R. C. Bose, R. A. Bradley, A. E. Brandt, Irwin J. Bross, Lyle D. Calvin, Osmer Carpenter, Jerome Cornfield, Phelps P. Crump, Edward E. Cureton, D. B. Duncan, Arthur M. Dutton, Meyer Dwass, Churchill Eisenhart, Evelyn Fix, B. G. Greenberg, Samuel W. Greenhouse, Robert J. Haden, Boyd Harshbarger, Alston S. Householder, Oscar Kempthorne, Allyn W. Kimball, Jacob E. Lieberman, Joseph Mandelson, Nathan Mantel, Margaret P. Martin, Herbert A. Meyer, Jack Moshman, T. Ellison Neal, H. W. Norton, I. Olkin, D. A. Probst, John H. Reynolds, S. N. Roy, Marvin Schneiderman, Esther Seiden, H. Fairfield Smith, Melvin D. Springer, William F. Taylor, D. Teichroew, M. E. Terry, Donovan J. Thompson, David V. Tiedeman, John W. Tukey, Myron J. Willis, W. J. Youden.

Professor Paul Densen, University of Pittsburgh, presided at the first Institute session, Thursday afternoon, March 15, devoted to *Public Health Statistics* Papers read were:

- 1. A Simple Stochastic Model of Recovery, Relapse, Death and Loss of Patients. Evelyn Fix and Jerzy Neyman, University of California, Berkeley.
- 2. An Elementary Stochastic Process for a Syphilis Population. B. G. Greenberg, University of North Carolina.

The Oak Ridge National Laboratory acted as host at a smoker and beer party in honor of the visitors at the Ridge Recreation Hall on Thursday evening. About seventy-five people were present.

On Friday morning Dr. W. A. Arnold, Oak Ridge National Laboratory, acted as chairman at a session on *Bioassay with Quantal Responses*. Papers presented were:

- 1. Why I Prefer Logits to Probits and Sinits. Joseph Berkson, Mayo Clinic.
- 2. How Much Does the Choice of Metameter Matter? J. W. Tukey, Princeton University.
- 3. Extensions of Elementary Methods in Bioassay. Irwin Bross, The Johns Hopkins University.

Jerome Cornfield, National Institute of Health, initiated a lively discussion.

Professor C. L. Comar, University of Tennessee, was chairman of the meeting Friday afternoon concerning *Experimental Design*. The following papers were presented:

- 1. Incomplete Block Designs. R. C. Bose, University of North Carolina.
- 2. Fractional Replication. Oscar Kempthorne, Iowa State College.
- 3. The Analysis of Long Term Experiments. A. M. Dutton, Iowa State College.
- 4. Testing-for-Preference Experiments. L. D. Calvin, G. D. Searle and Company, Chicago.

About seventy people were present at a banquet sponsored by both organizations. Dr. E. R. McCrady, U. S. Atomic Energy Commission, acted as toastmaster and introduced Dr. A. M. Weinberg, Research Director of the Oak Ridge National Laboratory. Dr. Weinberg welcomed the visitors and spoke briefly of the analogy between nuclear physics and biometrics (in the broad sense) and stochastic processes in nuclear research.

The first session Saturday morning on *Multivariate Analysis* was presided over by Professor E. E. Cureton, University of Tennessee. Papers presented were:

- 1. On the Properties and Statistical Purposes of Some Well-known and Some New Tests in Multivariate Analysis. S. N. Roy, University of North Carolina.
- 2. Some Applications of Compound Symmetry Tests. A. W. Kimball, Oak Ridge National Laboratory.
- 3. Some Preliminary Results of Multivariate Discriminant Analysis. D. V. Tiedeman, Harvard University.

There followed two concurrent sessions of contributed papers. Dr. A. S. Householder, Oak Ridge National Laboratory, presided at the first session, at which the following papers were contributed:

- Confidence Intervals for the Mean Rate at Which Radioactive Particles Impinge on a Type I Counter. Preliminary Report. G. E. Albert, University of Tennessee and Oak Ridge National Laboratory.
- 2. A Problem of Elapsed Times in a Sequence of Events. Osmer Carpenter, Carbide and Carbon Chemicals Division, Oak Ridge.
- 3. On the Existence of Unbiased Tests for Testing Composite Hypotheses. Esther Seiden, University of Buffalo.
- 4. Group Divisible Incomplete Block Designs. R. C. Rose, University of North Carolina.
- Orthogonal Arrays of Strength Two and Three. R. C. Bose and Kenneth A. Bush, University of North Carolina.
- 6. The Structure of Balanced Incomplete Block Designs, and the Impossibility of Certain Unsymmetrical Cases. (By Title.) William S. Connor, University of North Carolina.
- 7. Some Bounded Significance Level Tests for the Median. (By Title.) John E. Walsh, The Rand Corporation.

Professor W. S. Snyder, University of Tennessee, presided at the second session Saturday morning, at which the following contributed papers were presented:

- 1. Joint Sampling Distribution of the Mean and Standard Deviation for Distribution Functions of the First Kind. Melvin D. Springer, U. S. Naval Ordnance, Indianapolis.
- 2. On Certain Distribution Problems in Multivariate Analysis. Preliminary Report. Ingram Olkin, University of North Carolina.
- 3. A Unified Approach to a Wide Class of Distribution Problems in Multivariate Analysis. S. N. Roy, University of North Carolina.
- 4. An Extension of the Buffon Needle Problem. Nathan Mantel, National Cancer Institute.
- 5. A Generalization of Sampling without Replacement from a Finite Universe. D. G. Horvitz and D. J. Thompson, Iowa State College.
- A Problem in Two-Stage Sampling. (By Title.) B. M. Seelbinder, University of North Carolina.
- 7. Bounds on a Distribution Which Are a Function of Moments to Order Four. Preliminary Report. (By Title). Marvin Zelen, University of North Carolina.
- 8. An Inconsistency among Type A Regions. (By Title.) Herman Chernoff, University of Illinois.
- 9. Stochastic Approximation. Preliminary Report. (By Title.) Herbert Robbins and S. Monro, University of North Carolina.

Additional special events of the meeting included a tour through the American Museum of Atomic Energy and a tea for the ladies given by Mrs. A. W. Kimball.

JACK MOSHMAN

Assistant Secretary

PUBLICATIONS RECEIVED

Butterbaugh, Grant I., A Bibliography of Statistical Quality Control, Supplement, University of Washington Press, Seattle, 1951, 141 pp., \$2.00.

Tables d'Intérêts et d'Annuités, Crédit Communal de Belgique, Brussels, 1950, 163 pp.