

REPORT OF THE CHICAGO MEETING OF THE INSTITUTE

The Fourth Summer Meeting of the Institute of Mathematical Statistics was held at The University of Chicago, Tuesday to Thursday, September 2 to 4, 1941, in conjunction with the meetings of the American Mathematical Society, the Mathematical Association of America, and the Econometric Society. The following sixty-eight members of the Institute attended the meeting:

R. L. Anderson, T. W. Anderson, K. J. Arnold, H. M. Bacon, Walter Bartky, W. D. Baten, A. A. Bennett, Paul Boschan, I. W. Burr, J. H. Bushey, W. E. Cederberg, W. G. Cochran, A. T. Craig, C. C. Craig, J. H. Curtiss, J. F. Daly, W. E. Deming, J. L. Doob, P. L. Dressel, P. S. Dwyer, Churchill Eisenhart, M. L. Elveback, H. P. Evans, C. H. Fischer, W. C. Flaherty, R. M. Foster, C. H. Graves, Louis Guttman, W. L. Hart, F. C. Hinds, A. S. Householder, E. V. Huntington, William Hurwitz, M. H. Ingraham, Dunham Jackson, Leo Katz, J. F. Kenney, L. A. Knowler, L. F. Knudsen, Tjalling Koopmans, C. F. Kossack, O. E. Lancaster, D. H. Leavens, B. A. Lengyel, W. G. Madow, J. N. Michie, A. M. Mood, J. E. Morton, Leah Naugle, Harold Nisselson, J. I. Northam, E. G. Olds, Oystein Ore, C. K. Payne, G. A. D. Preinreich, Francis Regan, Selby Robinson, C. F. Roos, M. M. Sandomire, Max Sasuly, Henry Scheffe, H. M. Schwartz, Harry Siller, J. H. Smith, M. E. Wescott, S. S. Wilks, E. W. Wilson, Gale Young.

The opening session, on Tuesday morning, was devoted to contributed papers on *Probability and Statistics* and was held jointly with the American Mathematical Society and the Econometric Society. The Chairman was Professor A. T. Craig, University of Iowa, and the following papers were presented:

1. *A geometric derivation of Fisher's z-transformation.*
J. B. Coleman, University of South Carolina.
2. *Large sample distribution of the likelihood ratio.*
Abraham Wald, Columbia University.
3. *On the integral equation of renewal theory.*
(Read by title.)
Willy Feller, Brown University.
4. *Cumulative frequency functions.*
Irving Burr, Purdue University.
5. *On spherical probability distributions.*
K. J. Arnold, Massachusetts Institute of Technology.
6. *Some observations on analysis of variance theory.*
(Read by title.)
Hilda Geiringer, Bryn Mawr College.
7. *On the asymptotic distribution of medians of samples from a multivariate population.*
A. M. Mood, University of Texas.
8. *A problem of estimation.*
J. F. Daly, Catholic University.

Abstracts of these papers follow this report.

On Tuesday afternoon a session was held jointly with the Econometric Society on *Time Series Analysis*. Under the chairmanship of Professor C. C. Craig of the University of Michigan, the following papers were presented:

1. *Is sampling theory applicable to economic time series?*
Tjalling Koopmans, Penn Mutual Life Insurance Co., Philadelphia.
2. *Serial correlation.*
R. L. Anderson, North Carolina State College.

The morning session on Wednesday was held jointly with the Econometric Society on *Curve Fitting*. The chair was held by Dr. J. Marschak of the New School for Social Research and the following papers were presented:

1. *Weights to compensate for transformation in curve fitting.*
T. O. Yntema, University of Chicago and Cowles Commission.
2. *Curve fitting by cumulative addition.*
John H. Smith, University of Chicago and Cowles Commission.

On Wednesday afternoon, Professor S. S. Wilks of Princeton University acted as chairman of a session on *Multivariate Analysis*. The following papers were read:

1. *On testing sets of means and discriminant analysis.*
Abraham Wald, Columbia University.
2. *On tests of hypotheses concerning variances and covariances.*
William G. Madow, Bureau of the Census.

The Josiah Willard Gibbs Lecture of the American Mathematical Society was delivered on Wednesday evening by Professor Sewall Wright of the University of Chicago. His topic was *Statistical Genetics and Evolution*.

On Thursday morning a joint session on *Demand and Supply Analysis* was held with the Econometric Society. At this session Dr. C. F. Roos of the Institute of Applied Econometrics presided, and the following papers were presented:

1. *Demand analysis for certain commodities based on income and budget data.*
J. Marschak, New School for Social Research, and George Garvey, National Bureau of Economic Research.
2. *Derivation of elasticities of demand and supply: A direct method.*
Oscar Lange, University of Chicago and Cowles Commission.
3. *On the workings of a general equilibrium system.*
J. L. Mosak, University of Chicago and Cowles Commission.

An informal reception was held on Monday evening in the Judson Court Lounge. On Tuesday and Wednesday afternoons the ladies of the Mathematics Department of the University of Chicago served tea in the Eckhart Hall Common Room. After the joint session on Tuesday afternoon, the Cowles Commission for Research in Economics gave a tea in the Common Room of the Science Building. On Thursday evening a joint dinner of the four mathematical organizations was held in Hutchinson Commons, preceded by an informal reception at the Reynolds Club.

EDWIN G. OLDS,
Secretary