

NEWS AND NOTICES

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

Personal Items

Mir M. Ali has been promoted from Associate Professor to Professor of Mathematics at the University of Western Ontario.

Dr. Manuel P. Berri, on leave of absence from Tulane University, is a Visiting Professor at Louisiana State University, New Orleans.

U. N. Bhat has joined the Operations Research Group of the Division of Organizational Sciences, Case Institute of Technology, as Assistant Professor as of September 1966.

Dr. Saul Blumenthal has resigned from the Statistics Center, of Rutgers-The State University to Accept an Associate Professorship in the Department of Industrial Engineering and Operations Research at New York University (University Heights Campus).

Professor H. D. Brunk of the University of Missouri at Columbia has been appointed Senior Lecturer in Statistics at the University College of Wales in Aberystwyth for the academic year 1966-67.

Dr. Theophilos Cacoullos has been promoted from Assistant Professor to Associate Professor in the Department of Industrial Engineering and Operations Research at New York University.

Dr. J. George Caldwell has joined the Operations Research Department of the Deering Milliken Service Corporation as Senior Operations Research Analyst. For the past two years he has been with the Operations Research and Economics Division of the Research Triangle Institute.

Dr. Gerald R. Chase of Stanford University has been appointed Assistant Professor of Statistics and Assistant Professor of Community Health and Medical Practice at the University of Missouri at Columbia.

Professor Keewhan Choi of Cornell University has been appointed Assistant Professor of Statistics at the University of Missouri at Columbia.

Patricia Conn has been appointed an instructor at Iowa State University.

Mr. A. E. Crofts, Jr., formerly of Pan American College, is an Instructor in the Department of Statistics, Southern Methodist University.

Dr. A. E. Foster, Visting Lecturer at Iowa State University, has returned to his former position at North Dakota State University.

Dr. Wayne Fuller has been promoted from Associate Professor to Professor at Iowa State University.

Mr. Dennis P. Grantham has resigned his position at Louisiana State University. He is now at the University of Northeastern Louisiana.

Irwin Guttman is on leave of absence from the Department of Statistics, University of Wisconsin (Madison) from September 1, 1966 until August 31, 1967. He will spend the first half of the leave as a visitor at the Department of

Statistics, London School of Economics and the latter half at the Mathematics Research Center at Madison.

Irving Hall all has been appointed Associate after serving as graduate assistant at Iowa State University.

Mr. Lynn C. Hayward, formerly Chief of the Section of Computer Sciences at the University of Texas M. D. Anderson Hospital and Tumor Institute, has been named Director of Operations of the Common Research Computer Facility in the Texas Medical Center, Houston.

Dr. B. K. Kale has been promoted from Visiting Assistant Professor to Visiting Associate Professor at Iowa State University.

Mr. Gordon Landry is on leave of absence from Louisiana State University. He is studying for the Ph.D degree at Texas A and M University.

Frank Martin has been appointed Associate after serving as graduate assistant at Iowa State University.

Dr. M. V. Menon of The Mathematics Research Center, U. S. Army, Madison, Wisconsin, has been appointed Associate Professor of Statistics at the University of Missouri at Columbia.

Dr. Jack Moshman has resigned his position as Vice President and General Manager, Applied Research and Management Sciences Division, C-E-I-R, Inc., to become Managing Director, Management Sciences of EBS Management Consultants, Inc.

Dr. Wiktor Oktaba, formerly Assistant Professor, has been named Associate Professor of Mathematics and Statistics in the Department of Mathematical Statistics at the College of Agriculture, Lublin, Poland as of May 1966.

Dr. Donald B. Owen, formerly Professor and Head of the Division of Mathematical and Stochastic Systems of the Graduate Research Center of the Southwest, is now Professor and Director of Graduate Studies in the Department of Statistics of Southern Methodist University.

Dr. David E. Penny has resigned his position at Louisiana State University to accept a position at the University of Georgia.

Professor Madan L. Puri of Courant Institute of Mathematical Sciences, New York University was a Visiting Associate Professor at the University of North Carolina at Chapel Hill during the summer of 1966.

Dr. Prem S. Puri has joined the Department of Statistics, Purdue University, Lafayette, Indiana, after spending a year in the Department of Statistics and three years in the Statistical Laboratory, University of California at Berkeley.

Dr. T. A. Ramasubban, a Visiting Lecturer at Iowa State University, has returned to his post as an economic statistician with the Indian Agricultural Research Institute in New Delhi.

Dr. B. Raja Rao has joined the University of Pittsburgh as a Visiting Associate Professor of Biometry. He will be on leave from the University of Poona, India, for two years.

Martin Rosenzweig has been appointed as an Associate after serving as a graduate assistant at Iowa State University.

Dr. Diran Sarafyan has been promoted from Associate Professor to Professor at Louisiana State University.

Mr. Paul Schnare is on leave of absence from Louisiana State University. He has been awarded an NSF Faculty Fellowship and is working on the Ph.D. degree at Tulane University.

Dr. Joseph Sedransk, Iowa State University, has been promoted from Assistant Professor to Associate Professor.

K. Subrahmanaiya has resigned his position as Assistant Professor of Mathematics at the University of Western Ontario to accept an Associate Professorship in the University of Manitoba. He will be with the Department of Actraual Mathematics and Statistics.

Dr. Henry Tucker, Associate Director of the Systems Engineering Department, Numerical Analysis Laboratory, University of Arizona, has been named as a Visiting Lecturer at Iowa State University.

Dr. William T. Tucker, Jr., has completed his doctoral studies at Oklahoma State University and is now Assistant Professor in the Department of Statistics, with a joint appointment in the Department of Industrial Engineering, of Southern Methodist University.

Dr. Irene M. Trawinski has resigned her position at Louisiana State University to accept a position at the University of Alabama.

Dr. James Walsh of Iowa State University has been promoted from Assistant Professor to Associate Professor.

Dr. John E. Walsh, Senior Scientist for Operations Research and Statistics at Systems Development Corporation, will be Visiting Professor for a 6-weeks term this fall in the Department of Statistics of Southern Methodist University.

Dr. Peter C. C. Wang, formerly of Wayne State University, has joined the Department of Statistics and Probability, Michigan State University.

Dr. Jeong Sheng Yang, formerly of the University of Miami, has accepted the position of Associate Professor at Louisiana State University.

Elizabeth H. Yen, formerly a Research Assistant Professor at the Catholic University of America, is now an Assistant Professor in the Department of Mathematical Statistics, Columbia University.

New Members

Ahmad, Rashid, M.A., (University of Panjab); Graduate Student, Department of Statistics, Western Reserve University.

Althaus, Paul G., B.A., (Gettysburg College); Graduate Student, Duke University.

Babad, Jair, B.Sc., (The Hebrew University, Jerusalem); Graduate Student, The Hebrew University, Jerusalem.

Brain, Carlos, Ingeniero Agrónomo, (Universidad Agraria); Técnico en Estadística, Dirección Nacional de Estadística y Censos, Lima, Peru.

Brindly, Edward Charles, Jr., B.S., (Memphis State University); Graduate Student, Department of Statistics, University of Missouri.

Brown, Lawrence D., Ph.D., (Cornell University); Assistant Professor, Cornell University.

Bühler, Wolfgang J., Ph.D., (University of California, Berkeley); Wissenschaftlicher Assistent, Universität Heidelberg.

- Cane, Gwenda J.**, B.Sc., (University of New England); Lecturer in Mathematics, University of New England, Armidale, N.S.W., Australia.
- Carson, Charles Edward**, B.A., (University of Michigan); Graduate Student, Department of Statistics, University of North Carolina.
- Chang, Monica Liu**, M.S., (Virginia Polytechnic Institute); Graduate Student, Department of Statistics, Virginia Polytechnic Institute.
- Chiang, Chi-yung**, M.S., (Kansas State University); Graduate Student, Department of Statistics, Kansas State University.
- Çinlar, Erhan**, Ph.D., (University of Michigan); Assistant Professor, Northwestern University.
- Dahlgren, Dirk A.**, M.S., (University of Wisconsin); Staff Member, Sandia Corporation; 12216 Pineridge Avenue, Albuquerque, New Mexico.
- Davidian, Marie-Louise Agob**, M.S., (American University of Beirut); Graduate Student, Department of Statistics, University of California, Berkeley.
- DeCicco, Henry**, M.S., (Courant Institute of Mathematical Sciences, New York University); Mathematician, U. S. Army Munitions Command; 78 Hillside Avenue, Florham Park, New Jersey.
- Deverman, Jerone N.**, M.S., (Purdue University); Graduate Student, Department of Statistics, Purdue University.
- Dickinson, Peter Charles**, B.Sc., (London University); Graduate Student, Statistics Centers, Rutgers—The State University.
- Dillon, Ronald L.**, B.S., (Kansas State University); Graduate Student Research Assistant, Department of Statistics, Kansas State University.
- Edge, Orlyn, P.**, M.S., (University of Iowa); Graduate Student, Department of Statistics, Iowa State University.
- Ficker, Viliam**, Cand. Physic. and Math. Sc., (The Czechoslovak Math. Statist. Committee); Lecturer, Department of Mathematics, University of Khartoum, Sudan.
- Filliben, James J.**, B.A., (Lasalle College); Graduate Student, Department of Mathematical Statistics, Princeton University.
- Flynn, James O.**, A.B., (University of California, Los Angeles); Graduate Student, University of California, Berkeley.
- Fong, James Shek Lee**, B.A., (University of California, Berkeley); Graduate Student, Department of Statistics, University of California, Berkeley.
- Gardipee, Clara Schifferle**, M.A., (University of California, Berkeley); Assistant Statistician, California State Department of Public Health, Berkeley; 818 Seaveiw Drive, El Cerrito, California.
- Gilat, David**, M.Sc., (The Hebrew University of Jerusalem); Graduate Student Teaching and Research Assistant, Department of Statistics, University of California, Berkeley.
- Girgis, Nadia Makary**, Ph.D., (University of California, Berkeley); Assistant Professor, Department of Statistics, Cairo University.
- Gokhale, Dattaprabhakar V.**, M.Sc., (University of Poona); Graduate Student, Department of Statistics, University of California, Berkeley.
- Goreux, Francis**, Docteur in Sciences, (Louvain, Belgium); Head of the Department of Mathematics, St. Xavier's College, Calcutta.
- Gross, Alan M.**; Student, Pomona College, Claremont, California.
- Gustafsson, Lennart B.**, Fil. Kand., (University of Gothenburg); Lektor, Department of Statistics, University of Umeå.
- Haller, H. Smith, Jr.**, M.A., (American University); Graduate Student, Case Institute of Technology.
- Hanurav, T. V.**, Ph.D., (Indian Statistical Institute, Calcutta); Assistant Professor, Department of Statistics and Probability, Michigan State University.
- Hartigan, John Anthony**, Ph.D., (Princeton University); Assistant Professor, Princeton University.

- Heath, Richard D.**, M.S., (University of Minnesota); Lecturer, School of Business Administration, University of Minnesota.
- Highfill, Jerry W.**, B.A., (Southwestern College); Graduate Student, Department of Statistics, Kansas State University.
- Holmes, John R. H.**, B.S., (University of Oregon); Graduate Student, University of Pennsylvania.
- Hosken, Jerome W.**, M.S., (University of California, Berkeley); Graduate Student, Department of Statistics, University of California, Berkeley.
- Ikeda, Sadao**, Rigaku-Hakushi, (Kyusyu University); Visiting Research Associate, Department of Statistics, University of North Carolina.
- Johnson, Douglas H.**, B.A., (University of Minnesota); Computer Programmer, UWM Computing Center, Milwaukee, Wisconsin.
- Kalotay, Andrew**, M.Sc., (Queen's University); Graduate Student, Department of Mathematics, University of Toronto.
- Kaminsky, Kenneth S.**, M.S., (Rutgers—The State University); Graduate Student/Teaching Assistant, The Statistics Center, Rutgers—The State University.
- Kieser, Manfred B.**, B.A., (Kent State University); Graduate Student, Department of probability and Statistics, Michigan State University.
- Koul, Hira Lal**, M. A., (University of Poona); Graduate Student, Department of Statistics, University of California, Berkeley.
- Kozuh, Joseph A.**, B.A., (University of Dayton); Graduate Student/Teaching Assistant, University of Texas.
- Kulkarni, Shridhar Ramarao**, M.A., (Karnatak University); Graduate Student, Department of Statistics, University of California, Berkeley.
- Ledin, George, Jr.**, B.S., (University of California, Berkeley); Biochemical Statistician, Institute of Chemical Biology, University of San Francisco.
- Lee, S. W.**, M.S., (Kansas State University); Graduate Student/Research Assistant, Kansas State University.
- Lentner, Marvin M.**, M.S., (Iowa State University); Graduate Student, Department of Statistics, Kansas State University.
- Leyton, Morley K.**, M.S., (Columbia University); Graduate Student, Department of Biostatistics, Johns Hopkins University.
- Light, Richard Jay**, A.M., (University of Pennsylvania); Graduate Student, Department of Statistics, Harvard University.
- Mesic, Richard F.**, B.A., (Knox College); Graduate Student, Department of Statistics, Michigan State University.
- Mustafi, Chandan Kumar**, M.S., (Calcutta University); Graduate Student, Department of Mathematical Statistics, Columbia University.
- Olshen, Richard A.**, M.S., (Yale University); Graduate Student, Department of Statistics, Yale University.
- Park, Hong Nai**, M.A., (University of Minnesota); Graduate Student, Department of Experimental Statistics, North Carolina State University.
- Penrod, James I.**, B.A., (Harding College); Graduate Student, Department of Biostatistics, Tulane University.
- Purakam, Niyom**, Ph.D., (North Carolina State University); Statistician, National Statistical Office, Office of the Prime Minister, Bangkok, Thailand.
- Rao, Poduri S. R. S.**, Ph.D., (Harvard University); Sr. Mathematician/Statistician, Information Research Associates, Inc., Lexington, Massachusetts.
- Ross, Sheldon M.**, M.S., (Purdue University); Graduate Student/Research Assistant, Department of Statistics, Stanford University.
- Salsburg, David S.**, M.S., (Trinity College); Graduate Student, Department of Statistics University of Connecticut.

- Schilling, Edward G.**, M.S., (Rutgers—The State University); Instructor, Statistical Center, Rutgers—The State University.
- Smith, George E. J.**, M.A., (University of British Columbia); Graduate Student, Department of Mathematics, University of Alberta.
- Speckman, Janace A.**, M.S., (Florida State University); Mathematician, Statistical Engineering Laboratory, National Bureau of Standards.
- Sporer, Ann C.**, B.A., (Austin College); Graduate Student, Department of Biostatistics, Tulane University.
- Stephens, Kenneth S.**, Ph.D., (Rutgers—The State University); Research Leader, Applied Math and Statistics, Engineering Research Center, Western Electric Co.
- Taylor, William F.**, Ph.D., (University of California, Berkeley); Professor of Biostatistics, School of Public Health, University of California, Berkeley.
- Wiorkowski, John J.**, M.S., (University of Chicago); Graduate Student, Department of Statistics, University of Chicago.
- Wiseman, Frederick**, B.S., (Tufts University); Graduate Student/Teaching Assistant, Cornell University.
- Wong, Seok Pin**, M.S., (University of Delaware); Graduate Student/Research Assistant, University of Illinois.
- Yahiku, Paul Y.**, B.A., (Pacific Union College); Graduate Student, University of California, Los Angeles; *1729½ S. Westmoreland Avenue, Los Angeles, California.*
- Yeh, Vincent C. H.**, B.S., (Cheng Kung University, Taiwan); Graduate Student, Department of Statistics, University of Wyoming.

NEW FELLOWS

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

Harald Bergstrom	Clifford Hildreth
Gunnar Blom	J. H. B. Kemperman
Joseph Gani	Arthur Linder
John Gurland	Yuri Linnik
James F. Hannan	Howard Tucker

VISITING LECTURER PROGRAM

A visiting lecturer program in statistics has been organized for the fourth successive year. The program is sponsored jointly by the principal statistical organizations in the United States, the American Statistical Association, the Biometric Society and the Institute of Mathematical Statistics. The National Science Foundation provides financial support. Leading teachers and research workers in statistics—from universities, industry and government—have agreed to participate as lecturers. Lecture topics include subjects in experimental and theoretical statistics, as well as in such related areas as probability theory, information theory and stochastic models in the physical, biological, and social sciences.

The purpose of the program is to provide information to students and the nature and scope of modern college faculty about statistics, and to provide advice about careers, graduate study, and college curricula in statistics. Inquiries should be addressed to: Visiting Lecturer Program in Statistics, Department of Statistics, 315 Phillips Hall, University of North Carolina, Chapel Hill, N. C. 27514.

The participating lecturers include: T. W. Anderson (Columbia University), C. A. Bennett (Battelle Memorial Institute), J. R. Blum (University of New Mexico), R. J. Buehler (University of Minnesota), D. G. Chapman (University of Washington), C. Daniel (consultant), H. A. David (University of North Carolina, Chapel Hill), A. P. Dempster (Harvard University), W. J. Dixon (U.C.L.A.), S. Ehrenfeld (New York University), S. Geisser (S.U.N.Y., Buffalo), S. G. Ghurye (University of Indiana), F. A. Graybill (Colorado State University), S. W. Greenhouse (National Institutes of Health), S. S. Gupta (Purdue University), R. V. Hogg (University of Iowa), M. A. Kastenbaum (Oak Ridge National Lab.), L. H. Koopmans (University of New Mexico), C. F. Kossack (University of Georgia), R. M. Kozelka (Williams College), F. C. Leone (University of Iowa), W. G. Madow (Stanford Research Institute), P. D. Minton (Southern Methodist University), L. E. Moses (Stanford University), J. Neyman (University of California, Berkeley), E. Parzen (Stanford University), F. Proschan (Boeing), R. Pyke (University of Washington), J. R. Rosenblatt (National Bureau of Standards), L. J. Savage (Yale University), E. L. Scott (University of California, Berkeley), W. L. Smith (University of North Carolina, Chapel Hill), H. Solomon (Stanford University), M. E. Terry (Bell Telephone Labs.), H. G. Tucker (University of California, Riverside), O. Wesler (North Carolina State University), W. J. Youden (George Washington University).

The organizing committee consists of: F. J. Anscombe, H. T. David, S. W. Greenhouse, S. S. Gupta (chairman-elect), W. J. Hall (chairman), L. Katz, L. H. Koopmans, and G. J. Resnikoff.

DOCTORAL DISSERTATIONS

Readers are invited to submit information about doctorates received during 1966 for inclusion in the list to appear in the April issue. The list gives the doctor's name, institution, major subject, and title of dissertation. To be included, the information should reach the Editor by January 27, 1967.

FELLOWSHIP AND RESEARCH OPPORTUNITIES IN MATHEMATICS

The Division of Mathematical Sciences, National Academy of Sciences-National Research Council, calls attention to a variety of fellowship and other support for research in the mathematical sciences at both the predoctoral and postdoctoral levels to be awarded during the year 1966-67. Copies of the complete announcement are available from the Division of Mathematical Sciences, National Academy of Sciences—National Research Council, 2101 Constitution Avenue, Washington, D. C. 20418.

STATISTICS AT CARNEGIE

Carnegie Institute of Technology has recently established a Department of Statistics offering graduate programs at the doctor's and master's levels. Emphasis will be placed on statistics as a general methodology for application in science, engineering, and management, as well as on statistics as one of the mathematical sciences. Members of the Department of Statistics include Professors Morris H. DeGroot (Head) and Donald P. Gaver; Assistant Professors Melvin J. Hinich, Norman Starr, and Michael B. Woodroffe; and Research Associate Ronald P.

Hackleman. Graduate assistantships, fellowships, and traineeships in statistics are available for the coming year. Prospective students should write to the Head, Department of Statistics, Carnegie Institute of Technology, Pittsburgh, Pa. 15213.

REPORT OF THE PRESIDENT FOR 1966

I am pleased to report that the Institute has survived another year, the *Annals* has continued to appear, meetings have been held as scheduled, and our finances have taken a turn for the better because of the increase in dues. The major problem which has faced us for some time, that of functioning as a volunteer organization without a paid, professional secretariat, continues unsolved. The Executive Committee and Council have discussed ways of relieving our officers of the burden of organizing and supervising the office work involved in mailings, billings, and communications and of making these activities more efficient and economical, but no agreement was reached. It will be the task of my successor, T. E. Harris, and his colleagues to find an acceptable solution of this problem.

Let me call the attention of the membership to the provision in our constitution whereby the President alone selects the Nominating Committee. I have felt for some time that this system is defective both in principle and in practice and that it is likely to lead to recurrent abuse. I must admit that most of those with whom I have discussed this question feel that the present system works well on the whole and that no change is needed. Nevertheless, I wish that the membership would consider whether power to appoint the nominating committee should not be put in the hands of the elected members of the Council or some other body over which the membership has some control.

My heartfelt thanks go to the officers, Council, and committee members who have worked so hard to keep the Institute functioning during my term of office.

I have asked the following members to serve as the next nominating committee: E. Sparre Andersen, D. Burkholder, C. Derman, G. Elfving, S. Gupta, G. Jenkins, S. Moriguti, I. Olkin (chairman), J. Rosenblatt, J. Sacks, I. R. Savage.

HERBERT ROBBINS

REPORT OF THE TREASURER FOR 1966

This report covers the year ending December 31, 1965. During this year the Institute of Mathematical Statistics had 1750 U.S.-Canada members, 516 members from other countries, 437 student members, 27 life members, and 54 Institutional members. This represents a net gain of 326 members over all categories. These figures include only those members who had paid their dues by the end of the calendar year.

For 1966, a very slight loss in membership is forecast. As of the date of this report, 2630 members had paid their dues as compared with a total of 2784 at the end of 1965.

The financial statement on the following pages show that an anticipated deficit

did not occur. Instead there was a surplus of income over expenditures amounting to \$7,007.07. This was due in part to a membership increase. It was also due to the fact that back-issue sales and page-charge collections were far above normal due to vigorous efforts of the Treasurer.

For the first eight months of 1966, returns from all sources or revenue, except dues and subscriptions, are running far behind those of 1965 and 1964. However, the rises in dues and in the subscription-rates easily offset rising costs and the other revenue losses. The Treasurer confidently predicts that 1966 will show a substantial surplus of income over expenditures.

GEORGE J. RESNIKOFF

We have examined the attached financial statements of the Institute of Mathematical Statistics, consisting of the following:

Exhibit A - Balance Sheet, December 31, 1965

Exhibit B - Statement of Operations for the Year Ended December 31, 1965

Exhibit C - Statement of Changes in Surplus for the Year Ended December 31, 1965

Our examination was conducted in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances, except that equipment and supplies are expended in the year of purchase as normal accounting procedure and our examination of these items was limited to an audit of acquisitions of the current year.

In our opinion, subject to the comments aforementioned, the accompanying balance sheet, statement of operations, and statement of changes in surplus, together with the notes to financial statements, present fairly the financial position of the Institute of Mathematical Statistics at December 31, 1965 and the results of operations for the period then ended in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

DILLION, CURRY AND HARRINGTON
Certified Public Accountants

Exhibit A

INSTITUTE OF MATHEMATICAL STATISTICS

Balance Sheet

December 31, 1965

Assets

Current Assets	
Cash in bank—checking accounts	\$51,624.83
Cash in bank—savings accounts	40,287.11
Receivables:	
Dues	\$31,280.00
Subscriptions	13,664.82
Back issues of <i>Annals</i>	750.05
Sale of indexes and miscellaneous	670.61
Total receivables	46,365.48

Inventory—at cost:	
<i>Annals</i>	38,726.22
Index.....	4,737.60
Total inventory.....	43,463.82
Balance due on N.S.F. Grants—Note 1.....	28,500.00
Deferred agency charges.....	1,676.30
Total assets.....	<u>\$211,917.54</u>
<i>Liabilities, Deferred Income, Unexpended Grants and Surplus</i>	
Current liabilities:	
Accounts payable.....	\$14,850.54
Due advanced by members for future years.....	1,172.34
Collection for <i>Biometrika</i>	1,327.50
Wald royalties and other payables.....	283.50
Total.....	\$17,633.88
Deferred income—advance billings for 1965.....	90,106.00
Unexpended Grants from National Science Foundation—Note 1.....	26,752.46
Surplus—Exhibit C.....	77,425.20
Total liabilities, deferred income, unexpended grant and surplus.....	<u>\$211,917.54</u>

Exhibit B

INSTITUTE OF MATHEMATICAL STATISTICS

*Statement of Operations**For the Year Ended December 31, 1965*

Income:	
Dues.....	\$37,248.65
Subscriptions.....	23,924.42
Sales of back issue of <i>Annals</i>	\$24,933.26
Less cost of back issues sold.....	9,418.96
Net.....	15,514.30
Sales of indexes.....	3,233.81
Less cost of indexes sold.....	462.88
Net.....	2,770.93
Advertising.....	732.20
Page charges.....	16,436.00
Interest on investments and savings accounts.....	2,077.79
Miscellaneous.....	5,148.45
Total income.....	\$103,852.74

Expenses:		
Publication Expense:		
Printing of <i>Annals</i>	58,600.98	
Maintenance and shipping of <i>Annals</i>	5,620.55	
Binding.....	117.50	
Editorial expense.....	7,300.12	
Maintenance and shipping of indexes.....	196.21	
Total.....		71,835.36
Treasurer's and Secretary's Office:		
Salaries.....	9,319.91	
Bookkeeping.....	1,438.05	
Stationery and supplies.....	1,275.15	
Postage.....	1,426.04	
Telephone and cable.....	846.92	
IBM charges.....	1,878.21	
Miscellaneous.....	302.16	
Total.....		16,486.44
General Expense:		
Agency charges.....	2,226.42	
Special printing and mailings.....	84.26	
Travel.....	103.20	
Accounting.....	1,750.00	
Contributions to other organizations.....	1,610.00	
Meeting expense.....	2,281.33	
Miscellaneous.....	468.66	
Total.....		8,523.87
Total expense.....		96,845.67
Operating income—to Exhibit C.....		<u>\$7,007.07</u>
		Exhibit C

INSTITUTE OF MATHEMATICAL STATISTICS

Statement of Changes in Surplus

For the Year Ended December 31, 1965

Surplus, January 1, 1965.....	\$70,418.13
Add operating income for the year ended December 31, 1965—Exhibit B.....	7,007.07
Surplus, December 31, 1965—Exhibit A.....	<u>\$77,425.20</u>

Changes in Allocated Surplus

	Reserve for Life Members	Reserve for Replacement of <i>Annals</i>	General Purposes
Balance, January 1, 1965.....	\$2,757.50	\$15,967.84	\$51,692.79
Operating income.....			7,007.07
Increase of reserve for replacement of <i>Annals</i> —Note 2.....		4,579.68	(4,579.68)
Balance, December 31, 1965.....	<u>\$2,757.50</u>	<u>\$20,547.52</u>	<u>\$54,120.18</u>

INSTITUTE OF MATHEMATICAL STATISTICS

Notes to Financial Statements

December 31, 1965

Note 1.—There are two outstanding grants:

GE—9681—Visiting Lecturer for the year beginning 9/1/65 in the amount of \$13,900.

Expenditures to 12/31/65 were as follows:

Honorarium.....	\$100.00
Travel.....	123.77
Other direct costs:	
Printing.....	\$458.62
Mailing.....	199.78
Secretarial services.....	340.00
Director.....	375.00
Other.....	150.37
Total other.....	1,523.77
Total.....	<u>\$1,747.54</u>

GP—4155—Summer Institute for 1965 in the amount of \$14,600.00. Nothing was done under this grant in 1965.

Nothing had been received from N.S.F. as of December 31, 1965.

The balance due of \$28,500.00 is the total granted while the liability of \$26,752.46 is the gross amount granted less the expenditures shown above.

Note 2. The reserve for replacement of *Annals* issued is computed as follows:

Estimated cost to reprint 300 copies each volume 1 through 36.....	\$59,941.20
Less inventory of back issues at December 31, 1965 (see Exhibit A) which is covered by insurance.....	39,403.68
Reserve necessary at December 31, 1965.....	<u>\$20,547.52</u>

During 1960 and 1961 a special study was made by the Finance Committee on the policy of maintaining a reserve to replace the back issues of *Annals* in case of fire or other emergency which would destroy the entire inventory. It was recommended (among other things) that the reserve be adjusted to reflect the amount necessary to reprint 300 copies of each issue of *Annals*. This report was adopted at the Twenty-fourth Annual Meeting along with the report of other standing committees.

The estimated cost to reprint was obtained from figures supplied by Cushing-Malloy, the firm that is currently reprinting specific issues of *Annals* as required. The reduction factor is the cost of the issues on hand at December 31, 1965 even though there is some indication that the group policy coverage furnish by Waverly Press, Inc., might base its reimbursement on expected sales value.

REPORT OF THE PROGRAM SECRETARY FOR 1966

The 28th Annual Meeting of the Institute, the 107th meeting, was held in Philadelphia, Pennsylvania, September 8–11, 1965, in conjunction with the 125th annual meeting of the American Statistical Association and the annual meeting of the Biometric Society (Eastern North American Region). Ingram Olkin was Chairman of the Program Committee and D. F. Morrison was Assistant Secretary in charge of local arrangements.

The Wald Memorial Lectures were delivered by J. Wolfowitz, Cornell University; J. L. Doob, Institute for Advanced Study and University of Illinois, delivered the Rietz Lecture. A Special Invited Paper was presented by R. R. Bahadur, University of Chicago.

The Central Regional Meeting, the 108th meeting, was held at Purdue University, Lafayette, Indiana, March 23–25, 1966. C. R. Blyth was Chairman of the Program Committee and S. M. Samuels was Assistant Secretary for the meeting.

The Eastern Regional Meeting, the 109th meeting, was held at Brookhaven National Laboratory, Upton, Long Island, New York, April 27–29, 1966. R. Gnanadesikan was Chairman of the Program Committee and M. Skibinsky was Assistant Secretary for the meeting.

The Western Regional Meeting, the 110th meeting, was held at Los Angeles, California, August 15–17, 1966, in conjunction with the annual meeting of the American Statistical Association, the annual meetings of the Eastern and Western North American Regions of the Biometric Society, and the Western Farm Economic Association. Albert Madansky was Chairman of the Program Committee and E. M. Scheuer was Assistant Secretary for the meeting.

The regional Associate Program Secretaries during this year were S. W. Greenhouse (Eastern), S. S. Gupta (Central), R. F. Tate (Western), and P. Whittle (European).

The Institute is deeply indebted to all those whose time has been given for organizing meetings, and to the host institutions whose facilities have been made available.

JOAN RAUP ROSENBLATT

REPORT OF THE EDITOR 1966

During the year September 1, 1965, to August 31, 1966, 388 manuscripts were submitted to the *Annals* compared to 380 for the preceding year and 300 for the year before that. The 1966 volume of the *Annals* contains 180 papers, 96 appearing within one year of the submission of the original manuscript.

Listed below are the names of referees of papers for which final editorial decisions have been made during the year ending August 31, 1966. The Associate Editors also do some of the refereeing as well as the major share of the editorial work. Thanks are due to all of these colleagues, several hundred in number, whose cooperation is indispensable for maintaining and enhancing the quality and effectiveness of the *Annals*.

D. L. BURKHOLDER

Addelman, S.	Berk, R.	Bose, R. C.
Anderson, T. W.	Bhapkar, V. P.	Breiman, Leo
Anscombe, F. J.	Bickel, Peter J.	Brown, L.
Banerjee, K. S.	Billingsley, Patrick	Brunk, H. D.
Bartholomew, D. J.	Blackwell, David	Buehler, R. J.
Basu, D.	Bland, R. P.	Burr, E. J.
Bell, C. B.	Blyth, C. R.	Chow, Y. S.

- Chung, K. L.
 Clatworthy, W. H.
 Cohen, Arthur
 Constantine, A. G.
 Cronbach, Lee
 Dalenius, Tore
 David, H. A.
 David, Herbert T.
 Dayhoff, G.
 DeGroot, Morris H.
 Derman, Cyrus
 Devinatz, Allen
 Doksum, K.
 Draper, N. R.
 Dvoretzky, A.
 Dwass, Meyer
 Eaton, Morris L.
 Efron, Bradley
 Farrell, Roger H.
 Feldman, D.
 Ferguson, Thomas S.
 Fraser, D. A. S.
 Freedman, David A.
 Furstenferg, H.
 Gangolli, R.
 Gans, Daniel
 Gastwirth, J. L.
 Geisser, S.
 Getoor, R.
 Ghosh, J. K.
 Giri, N.
 Gleser, Leon
 Govindarajulu, Z.
 Greenberg, B. G.
 Guenther, William C.
 Gundy, R.
 Gupta, S. S.
 Haggstrom, G.
 Hájek, Jaroslav
 Hall, W. J.
 Hannan, J. F.
 Han, Chien-Pai
 Herzberg, A.
 Heyde, C. C.
 Hill, Bruce
 Hoadley, A. B.
 Hogg, R.
 Holland, Paul
 Hollander, Myles
 Houston, T. R.
 Hunter, J. S.
 Iglehart, D. L.
 Ionescu, Tulcea, A.
 Isaac, R.
 Jogdeo, K.
 John Floyd I.
 John, Peter W. M.
 Johns, M. V., Jr.
 Johnson, N. L.
 Kallianpur, G.
 Kesten, Harry
 Kiefer, J.
 Klotz, Jerome
 Knight, Frank
 Koopmans, L. H.
 Kraft, Charles
 Kregel, U.
 Krishnamoorthi, S.
 Kruskal, W.
 Kshirsagar, A. M.
 Kunita, H.
 Leadbetter, Ross
 LeCam, Lucien
 Levinson, Norman
 Linnik, Y. V.
 Lorentz, G. G.
 Madansky, A.
 Madow, W. G.
 Marsaglia, G.
 Marshall, A. W.
 Martin, F.
 Matthes, T.
 McCullough, R. S.
 McIntyre, G. A.
 Mesner, Dale M.
 Millar, P. W.
 Miller, R. G., Jr.
 Morris, Carl
 Mosteller, Frederick
 Mudholkar, G. S.
 Nelson, W.
 Nemenyi, P.
 Neuts, M. F.
 Ney, Peter
 Olkin, Ingram
 Orey, S.
 Owen, D. B.
 Parzen, E.
 Pathak, P. K.
 Patil, G. P.
 Paulson, Edward
 Port, S.
 Priestley, M. B.
 Proschan, Frank
 Quade, Dana
 Raghavadao, D.
 Raktoe, B. L.
 Ramachandran, B.
 Rao, M. M.
 Resnikoff, G.
 Robbins, H.
 Rosenblatt, Murray
 Ruben, Harold
 Sacks, Jerome
 Sakaguchi, Minoru
 Samuel, Esther
 Savage, L. J.
 Schaufele, Ronald A.
 Scheuer, E. M.
 Schweizer, B.
 Seiden, Esther
 Sethuraman, J.
 Shepp, L. A.
 Shrikhande, S. S.
 Singer, B.
 Singh, R.
 Skibinsky, M.
 Sobel, M.
 Spitzer, Frank
 Sprott, D.
 Stein, Charles M.
 Stone, Mervyn
 Strauch, R. E.
 Switzer, Paul
 Takacs, L.
 Teicher, H.
 Truax, Donald R.
 van Eeden, Constance
 Van Ryzin, J.
 Varadarajan, V. S.
 Venter, J.
 Weiss, Lionel
 Wendel, J. G.
 White, David
 White, Harrison C.
 Whittle P.
 Williams, E. J.
 Woodroofe, M. B.
 Yen, E.
 Ylvisaker, D.
 Zacks, S.
 Zyskind, George

REPORT OF THE MANAGING EDITOR FOR 1966

Starting with the October issue of 1965, Waverly Press imposed a 3% cost increase covering all aspects of composition and printing work. This increase in cost was accompanied by a guarantee that no additional increase will occur through the December issue of 1966.

During the period March 1964–August 1965, the cost per page has been in the range \$29.40, \$31.20 with the average at \$30.37. After the above-mentioned cost increase went into effect, our cost naturally rose but because of certain stylistic changes which were made, only by about 1½%. Specifically, during the period October 1965–August 1966, the cost per page has been in the range \$30.79, \$31.55 with the average at \$30.79.

The Managing Editor's office has now been in existence for a little more than two years. The cost of maintaining this office is about \$3,500 per year. This expense would be considerably higher were it not for the generous support given by Washington State University not only for supplying ample office space, supplies and equipment, but also for absorbing a major portion of the mailing costs.

PAUL L. MEYER

REPORT OF THE NEW BRUNSWICK, NEW JERSEY MEETING OF THE INSTITUTE OF MATHEMATICAL STATISTICS

The 29th annual meeting, the 111th meeting of the Institute of Mathematical Statistics, was held at Rutgers – The State University, New Brunswick, New Jersey on August 30–September 2, 1966 in conjunction with the summer meetings of the American Mathematical Society, The Mathematical Association of America and the Society for Industrial and Applied Mathematics.

D. Freedman, University of California, Berkeley, delivered a Special Invited Paper on *Some Invariance Principles for Functionals of a Markov Chain*, and R. E. Kalaba, RAND Corporation presented a one-hour invited address on *Mathematical Challenges of Biological Processes*. The John von Neumann Lecture sponsored by the Society for Industrial and Applied Mathematics was delivered by E. P. Wigner, Princeton University on *Statistical Theory of Spectra*.

A total of 1856 persons attended the meetings of whom 1352 were registered participants. Of this latter total, over 213 were members of the Institute.

Program

Tuesday, August 30, 1966

3:10 p.m.–4:20 p.m.—Contributed Papers I

Chairman: R. E. THOMAS, Bell Telephone Laboratories

1. *The Distribution of the Smallest Sample Spacing* (Preliminary Report), L. R. ABRAMSON, Columbia University.
2. *Moments of Some Rank Order Measures of Correlation* (Preliminary Report), W. J. DICK and B. CHOW, Rutgers—The State University.
3. *On The Probability of Large Deviations of Functions of Several Empirical CDF's* (Preliminary Report), A. B. HOADLEY, University of California, Berkeley.

4. *A Unified Treatment of Various Representations of the Distribution of Positive Definite Quadratic Forms in Normal Variables*, S. KOTZ, University of Toronto, N. L. JOHNSON, University of North Carolina, and D. W. BOYD, University of Alberta.
5. *Sequential Selection of the Best of K Populations*, J. DEELY, Purdue University.

3:10 p.m.-4:20 p.m.—Optimal Stopping Rules

Chairman: H. ROBBINS, Purdue University

1. *On Some Optimal Stopping Rules*, Y. S. CHOW, Purdue University.
2. *Optimal Stopping, the Markov Case*, D. Siegmund, Columbia University.

4:30 p.m.-5:30 p.m.—Statistical Theory

Chairman: B. J. FLEHINGER, International Business Machines Corp.

1. *Comparisons under Convex and Starshaped Transformations*, R. E. BARLOW, University of California, Berkeley, and F. PROSCHAN, Boeing Scientific Research Laboratories.
2. *A New Statistic for Testing Monotone Failure Rates*, J. EILBOTT and J. NADLER, Bell Telephone Laboratories.

4:30 p.m.-5:50 p.m.—Probability Theory

Chairman: L. H. KOOPMANS, University of New Mexico

1. *On Weak Convergence of Measures in $[0, 1]$* , N. FRIEDMAN, University of New Mexico.
2. *Some Results Relating Moment Generating Functions and Convergence Rates for Weighted Sums of Independent Random Variables*, D. L. HANSON, University of Missouri.
3. *Local Times for Markov Processes*, R. GRIEGO, University of California, Riverside.

8:00 p.m. 1966 Council Meeting

Wednesday, August 31, 1966

8:30 a.m.-10:30 a.m.—Contributed Papers II

Chairman: N. D. Ylvisaker, University of Washington

1. *An Example in Which the Preliminary Test of Significance Leads to a Uniformly Better Estimator*, B. K. KALE, Iowa State University.
2. *Estimation of the Mean of the Multivariate Normal Distribution with an Empirical Bayes Application*, M. KANTOR, Columbia University.
3. *Inverse Least Squares Estimators Used in Calibration*, R. G. KRUTCHKOFF, Virginia Polytechnic Institute.
4. *Maximum-Likelihood Estimators of the Relative Scale Parameters of Type III and Type V Populations*, N. NORRIS, Hunter College.
5. *Inadmissibility of the Best Invariant Estimate for Loss Function $W(t) = |t|^k$* (Preliminary Report), S. K. PERNG, Michigan State University.
6. *The Empirical Bayes Approach: Estimation of Posterior Quantiles*, J. R. RUTHERFORD, Royal Military College of Canada.
7. *On Maximum Likelihood Estimation for Two-Phase Linear Regression*, D. L. SYLWESTER, University of Vermont.
8. *Asymptotically Admissible Linear Unbiased Estimators (AALUE) for Robust Estimation of Location and Scale Parameters* (Preliminary Report), E. F. YHAP, International Business Machines Corp. Research Center. (Introduced by A. Birnbaum, New York University.)

9:00 a.m.–10:30 a.m.—Statistical Inference

Chairman: W. ERICSON, University of Michigan

1. *Upper and Lower Probabilities and Their Role in Statistical Inference*, A. P. DEMPSTER, Harvard University.
2. *A Bayesian Approach to Some Outlier Problems*, G. E. P. BOX and G. C. TIAO, Harvard University and University of Wisconsin.

Discussion: L. J. SAVAGE, Yale University

10:50 a.m.–11:50 a.m.—Special Invited Paper

Chairman: E. L. LEHMANN, University of California, Berkeley

Some Invariance Principles for Functionals of A Markov Chain, D. FREEDMAN, University of California, Berkeley.

2:00 p.m.–3:20 p.m.—Contributed Papers III

Chairman: H. RUBIN, Michigan State University

1. *On a Class of Matrices Arising in the Study of Markov Renewal Processes*, E. ÇINLAR, Northwestern University.
2. *Queues with State-Dependent Stochastic Service Rates*, C. M. HARRIS, Western Electric Company.
3. *Infinite Product Markov Processes*, T. E. HARRIS, University of Southern California.
4. *Prediction Filter Coefficients for Jointly Stationary Time Series*, G. WAHBA, Stanford University.
5. *On Age Dependent Branching Processes*, H. J. WEINER, University of California, Davis.

2:00 p.m.–3:20 p.m.—Contributed Papers IV

Chairman: R. H. RODINE, State University of New York, Buffalo

1. *Minimax Unbiased Estimator of Mixing Distribution for Finite Mixtures*, D. C. BOES, Colorado State University.
2. *Strict Efficiency Excludes Superefficiency*, P. J. HUBER, Swiss Federal Institute of Technology.
3. *Some Observations on Estimates of the Distributions of Two Stochastically Ordered Random Variables*, T. ROBERTSON and R. V. HOGG, University of Iowa.

3:30 p.m.–5:00 p.m.—Contributed Papers V

Chairman: D. L. HANSON, University of Missouri

1. *On Some Optimum Nonparametric Procedures in Two-way Layout*, M. L. PURI, New York University and P. K. SEN, University of North Carolina.
2. *Randomized Fractional Weighing Designs*, S. ZACKS, Kansas State University.
3. *Some Aspects of the Statistical Analysis of the "Mixed Model"* (Preliminary Report), G. G. KOCH and P. K. SEN, University of North Carolina.
4. *On the Asymptotic Representation of Sample Quantiles*, F. EICKER, Columbia University.
5. *Some Sharp Tchebycheff Inequalities*, G. S. MUDHOLKAR and P. S. R. S. RAO, The University of Rochester.
6. *An Optimum π PS Sampling without Replacement*, T. V. HANURAV, Michigan State University. (Introduced by K. R. SHAH, Michigan State University.)

4:00 p.m.-5:30 p.m.—Multivariate Analysis

Chairman: M. S. SRIVASTAVA, Princeton University

1. *Bayesian Discrimination*, S. GEISSER, State University of New York, Buffalo.
2. *Selection Procedures for Multivariate Normal Populations in Terms of Measures of Dispersion*, M. GNANADESIKAN, Bell Telephone Laboratories and S. S. GUPTA, Purdue University.
3. *Invariant Proper Bayes Tests*, R. E. SCHWARTZ, General Electric Co.

8:00 p.m. Von Neumann lecture (SIAM)

Statistical Theory of Spectra, E. P. WIGNER, Princeton, University.

9:00 p.m. IMS Mixer

Thursday, September 1, 1966

8:30 a.m.-9:20 a.m.—Contributed Papers VI

Chairman: W. A. THOMPSON, Florida State University

1. *Sequential Evaluation of Graded Preferences for Two Treatments*, W. J. HALL, University of North Carolina.
2. *Extension of the SPRT to 3 Decisions* (Preliminary Report), J. A. LECHNER, Westinghouse Defense & Space Center.
3. *Two Properties of a Subset Selection Procedure* (Preliminary Report), D. M. MAHAMUNULU, State University of New York, Buffalo.

8:30 a.m.-9:20 a.m.—Experimental Designs

Chairman: R. GNANADESIKAN, Bell Telephone Laboratories

1. *Isomorphism and Independence among Balanced Incomplete Block Arrangements*, W. H. CLATWORTHY, State University of New York, Buffalo.
2. *Graph Theoretic Characterization of Incomplete Block Designs*, D. K. RAY-CHAUDHURI, Mathematics Research Center, University of Wisconsin.

9:30 a.m.-11:20 a.m.—Queueing Theory

Chairman: V. E. BENES, Bell Telephone Laboratories

1. *Some Recent Work in Queueing Theory*, N. U. PRABHU, Cornell University.
2. *Passage Time Distributions for Rare Events and Associated Limit Theorems*, J. KEILSON, University of Rochester.
3. *Limiting Diffusion Processes in Queueing Theory*, D. L. IGLEHART, Institute for Defense Analyses and Cornell University.

11:30 a.m.-12:30 p.m.—Invited Paper

Chairman: T. E. HARRIS, University of Southern California

Mathematical Challenges of Biological Processes, R. E. KALABA, RAND Corporation.

3:10 p.m.-5:10 p.m.—Contributed Papers VII

Chairman: N. C. SEVERO, State University of New York, Buffalo

1. *An Application of Numerical Integration Techniques to Statistical Tolerancing*, D. H. EVANS, General Motors Research Laboratories. (Introduced by J. S. White, General Motors Research Laboratories.)

2. *Some Characterizations of Normality*, T. CACOULLOS, New York University.
3. *Testing the Homogeneity of a Set of Correlated Variances*, C. P. HAN, Harvard University.
4. *Matric-Variate Generalizations of the Multivariate t Distribution and the Inverted Multivariate t Distribution*, J. M. DICKEY, Yale University.
5. *Large-Sample Approximations to the Variance and Bias of Bispectral Estimates*, P. SHAMAN, Columbia University.
6. *A Pitman-Type Close Estimator for the Parameter of a Poisson Distribution* (Preliminary Report), J. M. MAYNARD and B. CHOW, Rutgers—The State University.
7. *A Covariance-Like Analysis for Incorporating Extra Observations*, G. ZYSKIND, Iowa State University.

3:10 p.m.—4:10 p.m.—Regression

Chairman: I. OLKIN, Stanford University

1. *Designs for Regression Problems with Correlated Errors: Multi-Parameter Case*, N. D. YLVISAKER, University of Washington and J. SACKS, Northwestern University.
2. *Shorter Confidence Bands in Linear Regression*, M. HALPERIN, National Institutes of Health.

4:20 p.m.—5:20 p.m.—Inference from Incompletely Specified Models

Chairman: H. LARSON, U. S. Naval Postgraduate School

1. *Inferences Concerning a Population Mean from a Single Sample Subsequent to an Outlier Test*, T. A. BANCROFT, Iowa State University and F. TETRAULT, University of Detroit.
2. *Inference for a Linear Hypothesis Model Using Two Preliminary Tests of Significance*, V. P. GUPTA, Vikram University and S. R. SCRIVASTAVA, Laval University.

5:30 p.m. IMS Business Meeting

8:00 p.m. 1967 Council Meeting

Friday, September 2, 1966

8:30 a.m.—10:30 a.m.—Contributed Papers VIII

Chairman: M. FOX, Michigan State University

1. *Some Results Related to the Darmais-Koopman Problem*, J. L. DENNY, University of California, Riverside.
2. *A Property of Positive Random Variables* (Preliminary Report), S. W. DHARMADHARI, University of Arizona.
3. *A Tchebycheff Type of Inequality*, D. B. HILL, University of Vermont.
4. *An Extension of the Birthday Problem*, J. I. NAUS, Rutgers—The State University.
5. *The Halmos-Savage Theorem in the Non- σ -Dominated Case*, H. RUBIN, Michigan State University
6. *Convergence of a Sequence of Transformations of Distribution Functions*, R. SHANTARAM and W. L. HARKNESS, Pennsylvania State University.
7. *Some Results on the Complete Convergence of Linear Combinations of Martingale Sums*. (Preliminary Report), W. F. STOUT, Purdue University.
8. *On the Existence of an Optimal Stopping Rule for X_n/n* . (Preliminary Report), O. A. WEHMANEN, Purdue University.

9:00 a.m.—10:30 a.m.—Sampling Theory

Chairman: W. KRUSKAL, University of Chicago

1. *Theoretical Foundations of Survey Sampling—A New Approach*, V. P. GODAMBE, Johns Hopkins University.

Discussion:

H. O. HARTLEY, Texas A and M University, O. KEMPTHORNE, Iowa State University

10:40 a.m.—12:30 p.m.—Probability Theory

Chairman: M. H. DEGROOT, Carnegie Institute of Technology

1. *Infinite Divisibility of Discrete Distributions*, S. K. KATTI, Florida State University.
2. *Random Difference Equations Occurring in Compartmental Models*, V. R. RAO Uppuluri, Oak Ridge National Laboratory, and L. R. SHENTON, University of Georgia and Oak Ridge National Laboratory.
3. *Stochastic Convergence Algorithms for Pattern Recognition*, J. VAN RYZIN, Argonne National Laboratory

10:40 a.m.—12:30 p.m.—Statistical Theory

Chairman: A. COHEN, Rutgers—The State University

1. *On Robust Linear Estimators*, J. L. GASTWIRTH, Johns Hopkins University and H. RUBIN Michigan State University.
2. *Adequate Subfields and Least Squares Prediction*, M. SKIBINSKY, Brookhaven National Laboratory.
3. *The Use of Limit Theorems in Paired Comparison Model Building*, J. SINGH and W. A. THOMPSON, Florida State University.

Contributed Papers by Title

1. *Further Studies on the Robustness of Exponential Testing Procedures*. (Preliminary Report), A. P. BASU, University of Minnesota.
2. *Statistical Determination of Certain Mathematical Constants and Functions Using Computers*, S. D. DUBEY, Ford Motor Company.
3. *Asymptotic Expansions Associated with the n th Power of a Density*, R. A. JOHNSON, University of Minnesota.
4. *A Note on Confidence Bounds for Certain Ratios of Characteristic Roots of Covariance Matrices*, P. R. KRISHNAIAH and P. K. PATHAK, Indian Statistical Institute.
5. *Simultaneous Test Procedures under Intraclass and other Correlation Models*, P. R. KRISHNAIAH and P. K. PATHAK, Indian Statistical Institute.
6. *Multidimensional Partially Balanced Designs*, D. A. ANDERSON, University of Nebraska.
7. *On the Non-Existence of some Partially Balanced Arrays with 2 Symbols* (Preliminary Report), D. V. CHOPRA, University of Nebraska.
8. *A Multiple Decision Procedure for Ranking the Means of Normal Populations: Dependent Sample Case*, K. M. L. SAXENA, University of Nebraska.
9. *On the Extensions of Gauss-Markov Theorem to Complex Multi-Variate Linear Models* (Preliminary Report), J. N. SRIVASTAVA, University of Nebraska.
10. *Strongly Consistent Estimator for Mixtures of Distribution Functions*, K. CHOI, Cornell University.
11. *A Note on the Asymptotic Form of A Posteriori Distributions* (Preliminary Report), R. A. JOHNSON, University of Minnesota.

12. *Likelihood Ratio Test for Equal Correlation*, M. A. AITKIN, University of North Carolina and W. C. NELSON, Virginia Polytechnic Institute.

S. W. GREENHOUSE
Associate Secretary

PUBLICATIONS RECEIVED

- ASHTON, WINIFRED D. (1966). *The Theory of Road Traffic Flow*. Methuen's Monographs on Applied Probability and Statistics (John Wiley), London. vii + 178 pp. \$5.00
- BARTLE, ROBERT G. (1966). *The Elements of Integration*. John Wiley And Sons, New York. x + 129 pp. \$6.95.
- BAUER, RAYMOND A. (1966). *Social Indicators*. The M.I.T. Press. Cambridge. xxi + 357 pp. \$10.00.
- COOK, EARNSHAW (1966). *Percentage Baseball*. The M.I.T. Press, Cambridge. xiii + 417 pp. \$12.50.
- DAVID, F. N. (Editor) (1966). *Research Papers in Statistics*. Festschrift for A. Neyman. John Wiley and Sons, New York. vii + 468 pp. \$16.75.
- DRAPER, N. R. and SMITH, H. (1966). *Applied Regression Analysis*. John Wiley and Sons, New York. ix + 407 pp. \$11.75.
- DREYFUS, STUART E. (1965). *Dynamic Programming and the Calculus of Variations*. Academic Press, New York. xix + 248 pp. \$9.00.
- GRAF, ULRICH, HENNING, HANS-JOACHIM, and STRANGE, K. (1966). *Formeln und Tabellen der mathematischen Statistik*. Springer-Verlag, Berlin. xv + 362 pp. DM58,50; \$14.65.
- HELMER, OLAF (1966). *Social Technology*. Basic Books. 108 pp. \$5.95.
- KARLIN, SAMUEL (1966). *A First Course in Stochastic Processes*. Academic Press, New York. xi + 502 pp. \$11.75.
- KARLIN, SAMUEL J. and STUDDEN, WILLIAM J. (1966) *Tchebycheff Systems; with Applications in Analysis and Statistics*. John Wiley and Sons, New York. xviii + 586 pp. \$16.00.
- KINGMAN, J. F. C. and TAYLOR, S. J. (1966). *Introduction to Measure and Probability*. Cambridge University Press. x + 401 pp. \$12.50.
- LAVI, ABRAHIM and VOGL, THOMAS (1966). *Recent Advances in Optimisation Techniques*. John Wiley and Sons, New York. xii + 656 pp. \$12.50.
- MARKUSHEVICH, A. I. (1966). *Entire Functions*. American Elsevier Publishing Co., New York. iv + 105 pp. \$6.50.
- MODE, E. B. (1966). *Elements of Probability and Statistics*. Prentice-Hall, Englewood Cliffs. xii + 356 pp. \$8.00.
- MUMFORD, DAVID (with a section by BERGMAN, G. M.) (1966). *Lectures on Curves on an Algebraic Surface*. Annals of Mathematics Studies Number 59. Princeton University Press. 200 pp. \$4.50.
- NAKANO, HIDEGORO (1966). *Linear Lattices*. Wayne State University Press. 157 pp. \$2.95.
- PEARSON, E. S. and HARTLEY, H. O. (1966). *Biometrika Tables for Statisticians*. Volume 1, 3rd edition. Cambridge University Press. xvi + 264 pp. \$6.50.