

THE ANNUAL MEETING IN BERKELEY

The sixty-ninth Annual Meeting of the American Mathematical Society was held at the University of California, Berkeley, on Thursday through Sunday, January 24–27, 1963, in conjunction with meetings of the Mathematical Association of America, and the Association for Symbolic Logic. The registration at the meeting was 1666, including 1171 members of the Society.

The thirty-sixth Josiah Willard Gibbs Lecture was presented by Professor Claude E. Shannon of the Massachusetts Institute of Technology at 8:00 P.M. on Thursday, January 24. Professor J. L. Doob, the President of the Society, introduced Professor Shannon. The title of Professor Shannon's lecture was *Information theory*.

Professor E. J. McShane of the University of Virginia delivered the Retiring President's Address at 9:00 A.M. on Friday, January 25. Professor McShane's talk, entitled *Integrals devised for special purposes*, was introduced by Professor G. C. Evans.

By invitation of the Committee to Select Hour Speakers for Annual and Summer Meetings, hour addresses were presented by Professor E. M. Stein of the University of Chicago and the Institute for Advanced Study, and Professor John Thompson of the University of Chicago. Professor Stein's address, entitled *Harmonic functions and Fourier analysis in several variables*, was given at 9:00 A.M. on Thursday, January 24. He was introduced by Professor J. L. Doob. The title of Professor Thompson's talk was *Some results about finite groups*. Professor Thompson was introduced by Dean A. A. Albert.

There were five sessions of selected twenty minute papers at this meeting. The first of these special sessions, devoted to papers on algebra, was held at 3:00 P.M. on Thursday, January 24. It was arranged and presided over by Professor L. J. Paige, and consisted of papers by I. N. Herstein, D. K. Harrison, S. U. Chase and Alex Rosenberg, Nathan Jacobson, and A. A. Sagle. The second special session was devoted to algebraic topology, and it took place at 10:15 A.M. on Friday, January 25. Professor E. H. Spanier arranged this session and introduced the speakers. The papers at this session were by F. A. Raymond, F. P. Peterson and E. H. Brown, Jr., A. I. Weinstein, William Browder, and P. E. Thomas. At 3:15 P.M. on Friday, January 25 there was a special session on functions of one or several complex variables. This session, arranged and presided over by Professor Halsey Royden, consisted of papers by A. E. Hurd, Nachman Aronszajn, Simon Hellerstein and L. A. Rubel, M. L. Weiss, and Leo Sario. The last two special sessions were at 2:00 P.M.

on Saturday, January 26. Professor R. H. Bing arranged and presided at the session on general topology, which consisted of papers by R. F. Williams, D. S. Gillman and J. M. Martin, James Kister, Prabir Roy, and Melvin Henriksen and Meyer Jerison. Professor Arthur Erdelyi arranged and presided over a session on asymptotic methods and singular perturbations in analysis. The papers in this session were by F. E. Browder, Y. Sibuya, W. Wasow, M. Wyman, and W. B. Fulks.

There were twenty-one sessions for contributed ten minute papers. The presiding officers at these sessions were Professor E. F. Beckenbach, Professor C. B. Bell, Professor D. L. Boyer, Professor T. S. Chihara, Professor Harvey Cohn, Dr. B. H. Colvin, Professor William Craig, Professor James Dugundji, Professor Robert Finn, Professor J. N. Franklin, Professor Edwin Hewitt, Professor M. W. Hirsch, Professor J. M. Irwin, Professor F. Burton Jones, Professor W. A. J. Luxemburg, Professor J. L. Selfridge, Professor M. F. Smiley, Professor S. K. Stein, Professor Irving Sussman, Professor Olga Taussky Todd, and Professor Bertram Yood.

Abstracts of the papers presented in person appear in the Notices of the American Mathematical Society for January, 1963.

The University of California was the sponsor of a tea given on Saturday at 4:30 P.M. A recital by pianist Irene Schreier was given for persons attending the meeting and their families at 8:15 P.M. on Saturday evening. This recital was sponsored by a group of local mathematicians. There was a wine tasting party on Friday at 4:30 P.M.

The Committee on Arrangements for this meeting consisted of R. M. Robinson, Chairman, H. L. Alder, W. G. Bade, L. A. Henkin, Mrs. Emma Lehmer, R. S. Pierce, H. L. Royden, G. L. Walker, and E. H. Whitmore.

The Council met on Wednesday, January 23, 1963, at 4:00 P.M.

The Secretary announced the election of the following one hundred fifty persons to ordinary membership in the Society:

- Mr. Howard Allen, Seton Hall University;
- Mr. William O. Alltop, U. S. Naval Ordnance Test Station, China Lake, California;
- Mr. Peter G. Anderson, Massachusetts Institute of Technology;
- Professor William B. Antliff, Royal Military College;
- Mr. Achmad Arifin, Kentucky Research Foundation, University Station, Lexington, Kentucky;
- Professor Lucio Artiag, Essex College, Assumption University;
- Professor Edgar W. Averill, Parson College, Fairfield, Iowa;
- Mr. Robert E. Bacon, International Harvester, Chicago, Illinois;
- Professor V. K. Balakrishnan, Birla Engineering College, Pilani, India;
- Mrs. Cora H. Barry, Stanford University;

- Mr. Zamir Bavel, Southern Illinois University;
Professor Hermann Bondi, University of London, London 2, England;
Mr. John Borisewich, Hartford, Connecticut;
Professor Elsa K. Boyce, Rensselaer Polytechnic Institute;
Miss Deborah Boyd, Wittenberg University;
Mr. Robert L. Brewer, Indiana University;
Professor Peter S. Bullen, University of British Columbia;
Mr. Donald E. Catlin, University of Florida;
Mr. Felix Chiang, Bethlehem Steel Co., Bethlehem, Pennsylvania;
Mr. Hing Lun Chow, Courant Institute of Mathematical Sciences, New York University;
Mr. Paul G. Clerkin, Kent State University;
Professor Eric S. Clutter, West Virginia Institute of Technology;
Mr. Robert R. Colby, The Boeing Co., Seattle, Washington;
Professor William W. Cooper, Carnegie Institute of Technology;
Professor A. George Davis, Clarkson College of Technology;
Mrs. M. D. Daybell, New Mexico State University;
Professor Duane E. Deal, Ball State College;
Mr. John L. DeVault, Compagnie Generale de Geophysique, Brisbane, Queensland, Australia;
Mr. Raymond F. Dickman, Jr., University of Miami;
Miss Suzanne E. Dinga, Anaheim, California;
Professor Bartholomew Donohue, University of Maine;
Mr. John Douglas, Jr., Hooper City High School, Sayreton, Alabama;
Reverend Marinus D. Duman, St. Vincent College;
Mr. Wendell A. Dwyer, The Boeing Co., Seattle, Washington;
Mr. Jacob Englehardt, Grumman Aircraft Corp., Bethpage, New York;
Mr. Lloyd D. Fisher, Jr., Lockheed Aircraft Co., Palo Alto, California;
Mr. Linus R. Foy, President, Marist College;
Professor Matthew M. Fryde, Yeshiva University;
Mr. Frank S. Gillespie, University of Missouri;
Mr. Larry J. Goldstein, University of Pennsylvania;
Professor Jerrold R. Goodwin, California Institute of Technology;
Mr. E. Paul Gorog, International Business Machines Corp., Nice, France;
Dr. Vasant R. Gowariker, United Kingdom Atomic Energy Authority, Harwell, Berks, England;
Mr. Fred Gross, University of California, Los Angeles;
Mr. Edgar R. Guillot, Jr., Louisiana State University;
Professor Charles E. Haines, De Vry Technology Institute;
Professor John H. Halton, University of Colorado;
Mr. George C. Hancock, Radio Corporation of America, Camden, New Jersey;
Miss Joan M. Harries, London University, London, England;
Mr. Richard P. Harrison, Texas Instruments Inc., Dallas, Texas;
Mrs. J. P. Hecklen, University of California, Berkeley;
Professor Ernest L. Heighton, Dalhousie University;
Mr. Robert N. Hightower, University of Chicago;
Professor David M. Himmelblau, University of Texas;
Mr. Wolfgang D. Hinze, Escher-Wyss-Platz, Zurich, Switzerland;
Mr. Howard L. Johnson, U. S. Air Force, Sunnyvale, California;
Mr. William B. Jones, International Business Machines Corp., Poughkeepsie, N. Y.;
Mr. Peter C. Kaestner, San Diego, California;

Professor Dean M. Karns, Coe College;
Mr. Al Kelley, Jr., University of California, Berkeley;
Mr. John F. Kennison, Harvard University;
Mr. Irving J. Kessler, University of Wisconsin;
Professor Raymond B. Killgrove, San Diego State College;
Mr. Donald L. Kozlovsky, Milwaukee 11, Wisconsin;
Professor Jon M. Laible, Western Illinois University;
Mr. Keith M. Lane, Prahran, Australia;
Professor James A. LaRue, Fairmont State College;
Mr. Edwin R. Lassetre, International Business Machines Corp., Columbus, Ohio;
Mr. John J. Leary, South Deerfield, Massachusetts;
Professor Rosaline S. Lee, Drexel Institute of Technology;
Dr. Eugene H. Lehman, Jr., Houston Fearless Corporation, Los Angeles, California;
Mr. Robert A. Levey, Illinois Institute of Technology;
Miss Betty Levine, Columbia University;
Mr. Norman F. Lindquist, Oregon State University;
Mr. Jerry L. Linnstaedter, Northeast Louisiana State College;
Mr. Teng-Sun Liu, University of Pennsylvania;
Mr. Yu-Mei Yu Lu, Cheng Kung Middle School, Taipei, Taiwan;
Miss Mildred M. Luzader, University of Illinois;
Mr. Melvyn S. Lynn, California Research Corporation, La Habra, California;
Professor Gordon J. F. MacDonald, University of California, Los Angeles;
Professor Joseph J. Malone, Jr., University of Houston;
Mr. Nojislav S. Maric, Stanford University;
Mr. Paul F. Marino, Sylvania Electric Products, Inc., Waltham, Mass.;
Professor Cecil B. Mast, University of Notre Dame;
Mr. William E. Masterson, Jr., Hartford, Conn.
Mr. Granville McCormick, The Boeing Co., Seattle, Washington;
Mr. Gerda Mendel, International Business Machines Corp., Poughkeepsie, N. Y.;
Professor William J. Meyers, Purdue University;
Mr. Charles K. Miller, William Marsh Rice University;
Mr. Paul A. Minturn, Talbot Theological Seminary;
Professor Thomas P. Mitchell, Cornell University;
Professor James M. Nash, A. and M. College of Texas;
Mr. Alexander N. Nickols, Canoga Park, California;
Mr. Richard V. Olson, Worcester Polytechnic Institute;
Professor John E. Osborn, University of Minnesota;
Mr. Krishnan Palanivelu, Newcastle-on-Tyne, England;
Mr. William Parry, University of Birmingham, Birmingham, England;
Mr. Peter W. van der Pas, Holmes and Narver, Inc., Los Angeles, California;
Mr. John W. Pennisten, U. S. Army, Monterey, California;
Mr. Jack R. Porter, U. S. Navy, USS Yorktown;
Mr. Jack Postman, New Brunswick Scientific Co., Inc., New Brunswick, N. J.;
Mr. Koneru V. R. Rao, University of California, Los Angeles;
Mr. Joel H. Rascoff, Rockaway, New York;
Mr. Tullio E. Regge, University of Torino, Torino, Italy;
Mr. Robert K. Remple, Lawrence, Kansas;
Professor Marcel K. Richter, University of Minnesota;
Mr. Aldelbert L. Roark, University of Kentucky;
Professor Ivor Robinson, Graduate Research Centre of the Southwest, Dallas, Texas;
Mr. T. Thacher Robinson, Princeton University;

Professor Louis H. Rohr, Illinois Institute of Technology;
 Professor Leonard R. Rubin, University of Miami;
 Mr. Norman Rushfield, Courant Institute, New York, N. Y.;
 Mr. John J. Saccoman, Seton Hall University;
 Professor B. L. Sander, Texas Christian University;
 Professor Leonard Sarason, New York University;
 Mr. Eugene R. Sauer, International Business Machines Corp., Jersey City, New Jersey;
 Mr. Paul Seligmann, Portland Cement Association, Skokie, Illinois;
 Mr. John Shaw, National Institutes of Health, Bethesda, Maryland;
 Professor Frederick W. Silverman, University of Michigan;
 Professor Abraham Sinkov, University of Maryland;
 Mr. Bolesh S. Joseph Skutnik, Yale University;
 Mr. Neil J. A. Sloane, Cornell University;
 Mr. John A. Spicer, Goodyear Aircraft Corp., Litchfield Park, Arizona;
 Mr. Robert L. Stallard, U. S. Army Signal Corps, Ft. Huachuca, Arizona;
 Professor Caslav V. Stanojevic, University of Detroit;
 Mr. William B. Stellwagon, Jr., U. S. Naval Ordnance Test Station, China Lake,
 California,
 Mrs. H. D. Stidham, University of Massachusetts;
 Mr. Michael P. Strzelev, Niagara University;
 Professor Siao F. Sun, Northland College, Ashland, Wisconsin;
 Mr. Albert M. Sutton, Yeshiva University;
 Professor Gerald E. Tauber, Western Reserve University;
 Professor Michael D. Taylor, University of Florida;
 Mr. Sarwottam S. Thakur, University of Tennessee;
 Captain John B. Tindall, U. S. Air Force Academy, Colorado;
 Mr. Thomas Chi-Tsai Ting, Brown University;
 Professor Bendn J. Trawinski, Tulane University;
 Professor Robert J. Troyer, Indiana University;
 Professor Chester Eng-Shi Tsai, Illinois Institute of Technology;
 Professor Joseph S. Ullian, University of Chicago;
 Mr. Arun K. Varma, University of Alberta;
 Professor Thurman B. Wenzel, Rennselaer Polytechnic Institute;
 Professor Edwin P. Westbrook, Stanford University;
 Mr. George A. Westlund, Arlington, Virginia;
 Professor John A. Wheeler, Princeton University;
 Mr. Russell A. Whiteman, Armour Research Foundation, Chicago, Illinois;
 Mr. Joseph S. Wholey, Pentagon, Washington, D. C.
 Mr. Albert C. Williams, Socony Mobil Oil Co., Paulsboro, New Jersey;
 Professor Gareth Williams, University of Florida;
 Mr. Paul A. Willis, Massachusetts Institute of Technology,
 Mr. Glenn C. Wooters, Nortronics, Anaheim, California;

The Secretary announced that the following had been admitted to the Society in accordance with reciprocity agreements with various mathematical organizations:

Union Matematica Argentina: Professor Robert W. Frucht.

Australian Mathematical Society: Professor Edward J. Hannan, Mr. John B. Miller,
 Mr. Grainger R. Morris, Mr. Mehmet N. Oguztoreli.

Societe Mathematique de Belgique: Professor Jacob Sonnenschein.

Calcutta Mathematical Society: Professor Suresh C. Arya, Mr. Himansu R. Pramanik.
Deutsche Mathematiker Vereinigung: Professor Kurt Vogel.

Societe Mathematique de France: Mr. Andrew Avez, Professor Jean Rene Barra, Mr. Jean B. Bocle', Mr. Marcel Evrard, Mr. Jacques Lesca, Professor Baganas Nicolas.

Gesellschaft für Angewandte Mathematik und Mechanik: Professor Heinz Rutishauser.

Indian Mathematical Society: Professor Visvanatha Krishnamurthy, Mr. Thiramalai Lakshminarisimhan, Professor Rampurkar Manohar, Mr. Charles R. Nicolaysen.

Israel Mathematical Union: Dr. Leon Bernstein, Dr. Juliusz Reichbach, Mr. Eliahu Shamir.

Unione Matematica Italiana: Mr. Ubaldo Richard.

London Mathematical Society: Professor Albrecht Frohlich, Mr. Anthony C. Thompson.

Mathematical Society of Japan: Mr. Tsuyoshi Ando, Professor Yasataka Ando, Professor Takeshi Dani, Mr. Nobuo Hitotsuyanagi, Mr. Chorng-shi Houh, Professor Sho Iseki, Mr. S. L. Iseki, Professor Akiro Kinohara, Professor Takayuki Nono, Mr. Tatsuo Sawa, Professor Hisao Watanabe, Mr. Takeshi Yabe.

Malayan Mathematical Society: Mr. Wai-Mun Lee.

Sociedade de Matematica de Sao Paulo: Mr. Jean Pierre M. Frankenhuis.

It was reported that twenty-one persons were elected to membership in the Society on nomination of institutional members as indicated:

Antioch College: Mr. Mark A. Pinsky.

California Institute of Technology: Mr. Phillip J. Chase, Mr. Milton Levy, Mr. Robert A. MacLeod.

Harpur College: Mr. D. M. Bloom, Mr. Martin E. Goldman, Mr. Robert L. Madell.

Harvey Mudd College: Mr. Robert E. Beck, Mr. Ernest G. Manes, Mr. Lauren R. Mather.

Howard University: Mr. James E. Joseph.

Lehigh University: Mr. William M. Fleishman.

Nicholls State College: Miss Virginia A. Cook, Mr. Norman G. Payne.

Oklahoma State University: Mr. John E. Allen, Professor Charles E. Antle, Mr. Frantz W. Ashley, Jr.

Southern Illinois University: Mr. David L. Rector.

Washington State University: Mr. Richard R. Easkin, Mr. Howard B. Emerson, Mr. Ronald C. Fryzell.

The following Presidential appointments were reported:

Tellers for the 1962 election: Tilla Klotz, Cedric Schubert.

Committee to select Council members to run for the Executive Committee: J. W. Green, W. T. Martin, G. T. Whyburn.

To the Committee on Applied Mathematics: Alfred Schild, C. C. Lin (Chairman).

To the Committees to Select Hour Speakers for Summer and Annual Meetings: S. S. Chern; Eastern Sectional Meetings: L. V. Ahlfors; Southeastern Meetings: M. L. Curtis; Western Meetings: A. Zygmund; Far Western Meetings: V. L. Klee.

The Secretary reported that the following persons had accepted invitations to deliver hour addresses at meetings of the Society: David B. Lowdenslager, at Atlantic City, April, 1962; Masataka Kuranishi, New York, February, 1963; H. E. Rauch, New York, April, 1963.

The Secretary reported that S. D. Conte represented the Society at the inauguration of Elvis J. Stahr, Jr., as President of Indiana University. Alice T. Schafer represented the Society at the inauguration of the President of Connecticut College. E. C. Schlesinger represented the Society at the inauguration of Homer Babbidge as President of the University of Connecticut. H. E. Bray represented the Society at the inauguration of Kenneth Pitzer as President of Rice University. Mina Rees represented the Society at the inauguration of President Hestor of New York University. Marion P. Emerson represented the Society at the inauguration of Harold E. Sponberg as President of Washburn University of Topeka.

There was a business meeting of the Society at 1:30 P.M., January 24, 1963 in Wheeler Auditorium. The Secretary reported at some length on the activities and plans of the Society; this report is to be found in the April issue of the Notices. Following them was some discussion concerning the possibility of having more of the Annual meetings on university campuses, at least as far as the scientific sessions are concerned. Some members expressed strong preferences for this type of meeting over hotel meetings.

JOHN W. GREEN
Secretary
R. S. PIERCE
Associate Secretary