

## THE SUMMER MEETING IN VANCOUVER

The sixty-seventh Summer Meeting of the American Mathematical Society was held at the University of British Columbia, Vancouver, B. C., on Tuesday through Friday, August 28–31, 1962, in conjunction with meetings of the Mathematical Association of America, and the Society for Industrial and Applied Mathematics. The registration at the meetings was 595, including 420 members of the Society.

By invitation of the Committee to Select Hour Speakers for Annual and Summer Meetings, hour addresses were presented to the Society by Professor C. C. Lin of the Massachusetts Institute of Technology, Professor Charles Loewner of Stanford University, Professor Albert Nijenhuis of the University of Washington, Professor R. S. Pierce of the University of Washington, and Professor R. L. Vaught of the University of California, Berkeley. Professor Lin's address, entitled *Hydrodynamic stability—a study in applied mathematics*, was given at 9:00 A.M. on Wednesday. He was introduced by Professor R. D. James. Professor Loewner spoke at 2:00 P.M. on Thursday. His talk *On semigroups in analysis and geometry* was introduced by Professor M. H. Protter. The title of Professor Nijenhuis' talk was *Derivations and structure*. It was given at 2:00 P.M. on Tuesday. Professor Nijenhuis was introduced by Professor A. M. Gleason. Professor Pierce spoke at 9:00 A.M. Friday on *Representations of lattices*. He was introduced by Professor J. W. Green. Professor Vaught's address was entitled *Models of complete theories*. This talk was given at 9:00 A.M. on Thursday. Professor Vaught was introduced by Professor R. A. Beaumont.

There were thirteen sessions for contributed papers. The presiding officers at these sessions were Professor W. R. Abel, Dr. J. W. Armstrong, Professor C. W. Clark, Professor R. K. Getoor, Professor V. L. Klee, Professor T. J. McMinn, Professor M. D. Marcus, Professor R. D. Mayer, Dr. E. S. O'Keefe, Professor J. D. Reid, Professor R. A. Restrepo, Professor Charles Wexler, and Professor D. C. Williams.

Abstracts of the papers presented in person appear in the Notices of the American Mathematical Society for August, 1962.

A tea was presented by the Mathematics Department of the University of British Columbia at 4:00 P.M. on Tuesday. There was a salmon barbecue at 6:00 P.M. on Wednesday.

The Committee on Arrangements for this meeting consisted of

B. N. Moys, Chairman, H. L. Alder, N. J. Divinsky, R. D. James, R. S. Pierce, R. A. Restrepo, W. H. Simons, and G. L. Walker.

The Council met on Thursday, August 30, 1962, at 4:00 P.M.

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

- Mr. George Adomian, Hughes Aircraft Co., Culver City, California;  
Mr. Robert A. Agrusti, Auburn University, Auburn, Alabama;  
Mr. Ray W. Albright, Lovelace Foundation, Albuquerque, New Mexico;  
Mr. Garron P. Anderson, Thiokol Chemical Corp. Brigham City, Utah;  
Mr. Timon Anderson, Ohio State University, Columbus, Ohio;  
Mr. Jack L. Archer, De Vry Technical Institute, Chicago 41, Illinois;  
Mr. Jerry L. Archibald, Ohio State University, Columbus, Ohio;  
Professor Nicandro J. Barboza, Universidad Del Zulia, Maracaibo, Venezuela;  
Mr. Maurice J. Bark, Minneapolis-Honeywell Regulator Co., Duarte, California;  
Miss Theresa J. Barz, St. John's University, New York, New York;  
Mr. David N. Berg, Mitre Corp., Bedford, Massachusetts;  
Mr. Warren R. Berman, Hunter College, New York, New York;  
Mr. Edwin F. Beschler, Academic Press Inc., New York 3, New York;  
Mr. John W. Bessman, Jr., Department of Defense, Washington, D. C.  
Mr. Nicholas J. Bezak, Gulf Research and Development Co., Pittsburgh, Pennsylvania;  
Mr. Lawrence C. Biedernharn, Duke University, Durham, North Carolina;  
Professor Earl E. Bilyeu, Southwest Missouri State College, Springfield, Missouri;  
Mr. Sidney Birnbaum, The Martin Company, Denver, Colorado;  
Professor Witold Bogdaniwicz, University of Warsaw, Warsaw, Poland;  
Mr. Richard C. Bollinger, Westinghouse Electric Corp., Pittsburgh 35, Pennsylvania;  
Mr. W. Howard Bond, General Motors Defense Research Laboratories, Goleta, California;  
Mr. Joseph T. Borrego, University of Florida, Gainesville, Florida;  
Mr. Von D. Bower, International Business Machines Corp., Poughkeepsie, New York;  
Mr. James F. Brooks, Villa Madonna College, Covington, Kentucky;  
Brother Barnabas Rudolph Najar, Bishop Armstrong High School, Sacramento, California;  
Mr. John J. Brown, National Science Foundation, Washington 25, D. C.;  
Mr. James C. Browne, University of Texas, Austin, Texas;  
Mr. Roger L. Brunstrum, Purdue University, Lafayette, Indiana;  
Mr. Javier Bunuel, University of Massachusetts, Amherst, Massachusetts;  
Mr. Ronald A. Christensen, Douglas Aircraft Co., Santa Monica, California;  
Major George A. Clark, Defense Medical Supply Center, Brooklyn, New York;  
Mr. Frank R. Cole, Daniel, Mann, Johnson and Mendenhall, Los Angeles, California;  
Mr. Monte W. Coleman, U. S. Army, Ballistics Research Laboratory, Aberdeen Proving Ground, Maryland;  
Mr. Gwyn Collins, Advertising Research Foundation, New York, New York;  
Mr. Craig Comstock, U. S. Naval Postgraduate School, Monterey, California;  
Mr. Howard Cook, University of Texas, Austin, Texas;  
Mr. Roger M. Cooper, De Vry Technical Institute, Chicago 41, Illinois;  
Mr. Lewis C. Corey, Thompson Ramo Wooldridge Inc., Sierra Vista, Arizona;  
Mr. Arvid H. Corneliusen, Sperry Rand Research Center, Sudbury, Massachusetts;  
Mr. Cecil Craig, Jr., University of Cincinnati, Cincinnati, Ohio;

- Mr. James E. Crutchfield, Dade County Junior College, Miami, Florida;  
Mr. Hernando de la Cuesta, University of Delaware, Newark, Delaware;  
Mr. Frederic I. Davis, 2820 Morris Avenue, Bronx 68, New York;  
Mr. Spencer E. Dickson, New Mexico State University, University Park, New Mexico;  
Professor Shafik Doss, Ain Shams University, Cairo, Egypt;  
Mr. Ronald G. Dudley, Carnegie Institute of Technology, Pittsburgh, Pennsylvania;  
Mr. Richard A. Dudman, University of Massachusetts, Amherst, Massachusetts;  
Miss Donna J. Ekstrand, Stanford University, Stanford, California;  
Mr. Marcelino Eleccion, New York University, University Heights, New York;  
Mr. Robert A. Estes, Otterbein College, Westerville, Ohio;  
Professor Joong Fang, Northern Illinois University, DeKalb, Illinois;  
Miss Mary E. Farrey, Newton College of the Sacred Heart, Newton, Massachusetts;  
Mr. Edward D. Fisher, National Aviation Facilities Experimental Center, Atlantic City, New Jersey;  
Mr. Louis A. Foster, Valparaiso University, Valparaiso, Indiana;  
Mr. Ronald I. Frank, International Business Machines Corp., Newark, New Jersey;  
Mr. Frederick P. Frey, Jr., Lehigh University, Bethlehem, Pennsylvania;  
Mr. Hubert H. Frisinger II, University of Michigan, Ann Arbor, Michigan;  
Mr. Theodore W. Gamelin, University of California, Berkeley, California;  
Mr. Herbert C. Ganske, Rohr Corporation, Chula Vista, California;  
Mr. Richard S. Garvin, Holden-Day Incorporated, San Francisco, California;  
Mr. Ronald J. Gaynor, 432 Central Avenue, Orange, New Jersey;  
Mr. Freeman Gilbert, University of California, La Jolla, California;  
Mr. Charles M. Glennie, University of Western Ontario, London, Ontario, Canada;  
Mr. Castor S. Goa, Avenida Cachimbo N'2, Los Chorros, Caracas, Venezuela;  
Mr. Orville Goering, International Business Machines Corporation, Poughkeepsie, New York;  
Mr. Arnold Goldberger, Cross Country Consultants, Baltimore 2, Maryland;  
Mr. Cloyd S. Goodrum, Jr., Charlotte College, Charlotte, North Carolina;  
Mr. Seymour Gottlieb, Los Angeles Board of Education, Los Angeles, California;  
Mr. William B. Gragg, Jr., University of California, Los Angeles, California;  
Mr. Jack E. Graver, Indiana University, Bloomington, Indiana;  
Mr. Alfred Gray, University of California, Los Angeles 24, California;  
Mr. John W. Greiner, North American Aviation Inc., Anaheim, California;  
Mr. Garabed Gulbenkian, General Precision Inc., Little Falls, New Jersey;  
Mr. Richard F. Gundy, University of Chicago, Chicago, Illinois;  
Mr. Rainer Guting, Earlham College, Richmond, Indiana;  
Mr. Robert B. Hall, Martin Marietta Corp., Baltimore, Maryland;  
Mr. Keith A. Hardie, University of Cape Town, Rondebosch, South Africa;  
Mr. Lane F. Harris, 2202 Enfield Road, Austin, Texas;  
Mr. Hartono, University of Kentucky, Lexington, Kentucky;  
Mr. Walter G. Hartung, Martin Marietta Corp., Orlando, Florida;  
Mr. Stephen H. Hechler, Ohio State University, Columbus, Ohio;  
Mr. James K. Hightower, Claremont University College, Claremont, California;  
Miss Susanne R. Hilker, Massachusetts Institute of Technology, Cambridge, Massachusetts;  
Mr. Daniel C. Hoagland, Auburn University, Auburn, Alabama;  
Mrs. April E. Holladay, Lovelace Foundation, Albuquerque, New Mexico;  
Mr. John W. Hooker, State University College of Education, Oswego, New York;  
Mr. Chin-Shui Hsu, University of Hong Kong, Hong Kong;  
Mr. William D. Jackson, Wayne State University, Detroit, Michigan;

- Mr. David L. Jagerman, System Development Corp., Paramus, New Jersey;  
Mr. Charles E. Johnson, 1313 Jewel Court, Madison, Wisconsin;  
Mr. James E. Johnson, University of Arizona, Tucson, Arizona;  
Mr. Arthur H. Jones, General Electric Co., West Lynn, Massachusetts;  
Mr. Martin P. Jurkat, International Electric Corporation, Paramus, New Jersey;  
Mr. Andrew S. Kahr, Massachusetts Institute of Technology, Cambridge, Massachusetts;  
Mr. Stuart I. Kaplan, Beacon High School, Beacon, New York;  
Mr. Lael F. Kinch, University of Kentucky, Lexington, Kentucky;  
Mr. Walter H. Kroy Jr., Douglas Aircraft Corp., Santa Monica, California;  
Mr. Warren M. Krueger, 1942 Menomonee Parkway, Wauwatosa, Wisconsin;  
Mr. Joseph H. Kullback, Stanford Research Institute, Menlo Park, California;  
Mr. Guy F. Kuncir, Remington Rand UNIVAC, San Diego, California;  
Mr. William A. LaBach, University of Illinois, Urbana, Illinois;  
Mr. James P. Lamb, James P. Lamb, Inc., Alexandria, Virginia;  
Professor Leo J. Lange, University of Missouri, Columbia, Missouri;  
Mr. Leon J. Lareau, Massachusetts Institute of Technology, Cambridge, Massachusetts;  
Mr. Charles L. Lawson, 727 La Loma Road, Pasadena, California;  
Mr. Hills Lee, U. S. Naval Radiological Defense Laboratory, San Francisco, California;  
Mr. Holman Lee, Jr., Central Regional High School, Bayville, New Jersey;  
Professor Johann B. Leicht, University of Toronto, Toronto, Canada;  
Mr. Robert A. Lerman, United Aircraft Corporation, Windsor Locks, Connecticut;  
Mr. Donald J. Livengood, University of Vermont, Burlington, Vermont;  
Mr. George W. Lofquist, Louisiana State University, New Orleans, Louisiana;  
Lt. Charles W. Long, U. S. Navy Dept., F.P.O. San Francisco, California;  
Mr. Michael H. McAndrew, International Business Machines Corp.; Yorktown Heights, New York;  
Mr. Richard F. McCoart, Jr., Georgetown University, Washington, D. C.;  
Mr. Charles M. McGinnis, Middle Tennessee State College, Murfreesboro, Tennessee;  
Mr. John V. McHugh, Jr., Arthur D. Little Incorporated, Santa Monica, California;  
Professor Michel A. McKiernan, University of Waterloo, Waterloo, Ontario, Canada;  
Mr. Maurice Machover, New York University, New York 3, New York;  
Mr. Lewis E. MacNaughton, DeGolyer and MacNaughton, Dallas 6, Texas;  
Professor Josiah Macy, Jr., Albert Einstein College of Medicine, New York, New York;  
Mr. Arnold M. Matschke, Sylvania Electric Co., Mountain View, California;  
Mr. Thomas A. Matthews, Phillips Petroleum Co., Bartlesville, Oklahoma;  
Mrs. Barbara Medina, New York University, New York 3, New York;  
Mr. Nicholas C. Metropolis, University of Chicago, Chicago, Illinois;  
Mr. James E. Monsma, International Business Machines Corporation, Peoria, Illinois;  
Mr. John G. Moore, Carnegie Institute of Technology, Pittsburgh, Pennsylvania;  
Mr. William A. Morgan, Dallas School District, Dallas, Pennsylvania;  
Mr. Charles F. Murphy, Massachusetts Institute of Technology, Cambridge, Massachusetts;  
Mr. Frederick H. Murphy, Holden-Day Incorporated, San Francisco, California;  
Mr. Burton N. Navid, Naval Research Laboratory, Washington 25, D. C.;  
Mr. Sam Newman, Federal Aviation Agency, Atlantic City, New Jersey;  
Mr. Allen F. Nickel, University of Tennessee, Knoxville, Tennessee;

- Dr. Arnold T. Nordsieck, 6767 Hollister Avenue, Goleta, California;  
Mr. Lewis M. Norton, Massachusetts Institute of Technology, Cambridge, Massachusetts;  
Professor Philip E. Obreanu, Queens' University, Kingston, Ontario, Canada;  
Mr. Yoon Yong Oh, Brandeis University, Waltham, Massachusetts;  
Mr. Thomas B. O'Heir, Minneapolis-Honeywell Regulator Co., Wellesley Hills, Massachusetts;  
Mr. Richard J. Painter, University of North Carolina, Chapel Hill, North Carolina;  
Mr. Franklin D. Pedersen, Tulane University, New Orleans, Louisiana;  
Mr. Luigi Perone, 7 McKinley Place, Glen Cove, New York;  
Professor Gideon Peyser, Pratt Institute, Brooklyn, New York;  
Professor Gerard R. Pilon, College Militaire Royal, St. Jean, Quebec, Canada;  
Mr. Richard Platek, 930 Waverley St., Palo Alto, California;  
Mrs. Irma M. Reiner, University of Illinois, Urbana, Illinois;  
Mr. Peter M. Rice, Florida State University, Tallahassee, Florida;  
Mr. Thomas N. Robertson, Occidental College, Los Angeles, California;  
Mr. Lucian F. Robinson, Chrysler Missile Division, Detroit, Michigan;  
Mrs. Stephanie C. Rosen, Jet Propulsion Laboratories, Pasadena, California;  
Mr. Milton Rosenberg, Indiana University, Bloomington, Indiana;  
Mr. Henry H. A. Rosenthal, Radio Corporation of America, Princeton, New Jersey;  
Professor Nicolas Rouche, Universite Lovanium, Leopoldville XI, Congo, Africa;  
Professor Zalman Rubinstein, Carnegie Institute of Technology, Pittsburgh, Pennsylvania;  
Mr. William H. Ruckle, Florida State University, Tallahassee, Florida;  
Mr. Alberto Saez, Universidad de Los Andes, Merida, Venezuela;  
Mr. Curtis R. Sanders, International Business Machines Corp., Inglewood, California;  
Professor William G. Saunders, Virginia Military Institute, Lexington, Virginia;  
Mr. Chris B. Schaufele, Florida State University, Tallahassee, Florida;  
Mr. Jerry D. Schuur, University of Michigan, Ann Arbor, Michigan;  
Mr. James A. Schneer, George Washington University, Washington, D. C.;  
Dr. Bowen E. Simmons, Syracuse University, Syracuse, New York;  
Sister Claude Marie Faust, Incarnate Word College, San Antonio, Texas;  
Sister Margaret Ann Raphael, Immaculate Heart College, Los Angeles, California;  
Mr. Joe K. Smith, Dade County Junior College, Miami, Florida;  
Mr. Hans J. Sperling, Marshall Space Flight Center, Huntsville, Alabama;  
Mr. Robert S. Spira, 12 Summit Lane, Berkeley, California;  
Mr. Edward L. Spitznagel, Jr., 521 South Delridge Drive, Cincinnati, Ohio;  
Mr. Nicholas J. Stebe, Central High School, Merrick, New York;  
Mr. Shlomo Sternberg, Harvard University, Cambridge, Massachusetts;  
Mr. Charles D. Stocking, University of Michigan, Ann Arbor, Michigan;  
Mr. Charles J. Stone, Princeton University, Princeton, New Jersey;  
Mr. Edward M. Stone, University of Wisconsin, Madison, Wisconsin;  
Mr. Stephen E. Stone, Conduction Corporation, Ann Arbor, Michigan;  
Mr. Dean E. Strickland, Radio Corporation of America, Cherry Hill, Camden, New Jersey;  
Mr. Charles J. Stuth, University of Kansas, Lawrence, Kansas;  
Mr. Te Lou Tchang, United National, United Nations Plaza, New York, New York;  
Mr. Stanley Tennenbaum, University of Michigan, Ann Arbor, Michigan;  
Mr. Reginald P. Tewarson, Minneapolis-Honeywell Regulator Co., Wellesley Hills, Massachusetts;  
Miss Gladys Thomas, Spelman College, Atlanta, Georgia;

Mr. Braynard R. Traweck, General Dynamics, Fort Worth, Texas;  
 Mr. Burson W. Treadwell, Douglas Aircraft Co., Inc., Long Beach, California;  
 Mrs. Ruby H. Tsoi, U. S. Department of Agriculture, New Orleans, Louisiana;  
 Mr. Alfredo Valencia-Melgar, Internacional Del Peru, Lima, Peru;  
 Mr. Henry H. Walbesser, Jr., University of Texas, Austin, Texas;  
 Mr. Strother H. Walker, Research Analysis Corp., Bethesda, Maryland;  
 Miss Mary E. Walsh, Nazareth College, Rochester, New York;  
 Mr. Hao Wang, Harvard University, Cambridge, Massachusetts;  
 Mr. Charles H. Warlick, General Electric Co., Cincinnati, Ohio;  
 Mr. John H. Wenk, Louisiana State University, Baton Rouge, Louisiana;  
 Mr. Robert C. Wherritt, Louisiana State University, New Orleans, Louisiana;  
 Professor Jason W. White, Kutztown State College, Kutztown, Pennsylvania;  
 Mr. Marion C. Wicht, North Georgia College, Dahlonega, Georgia;  
 Mr. Snowden A. Williams, Jr., Chrysler Corporation, Detroit, Michigan;  
 Mr. Jack Wing, University of California, Berkeley, California;  
 Miss Mary Jo Woods, Indianapolis Public Library, Indianapolis, Indiana;  
 Mr. Frank J. Wroblewski, New York Naval Shipyard, Brooklyn, New York;  
 Mr. Edward R. Young, University of Miami, Miami, Florida;

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

*Australian Mathematical Society*: Mr. John St. Alban Sandiford.

*Societe Mathematique de Belgique*: Professor Henri Florin.

*Chinese Mathematical Society*: Mr. Kuang-Yau Hsu.

*Societe Mathematique de France*: Mr. Jean-Paul Bertrandias, Mr. Pierre Henri Eymard, Professor Maurice F. Flamant, Mr. Jean Pierre Lafon, Mr. Jean Jacques Moreau, Mr. Bernard Morin, Mr. K. Srinivasacharyulu.

*Deutsche Matematiker Vereinigung*: Mr. Georg Wolfgang Franz, Mr. Norbert Kuhlmann, Mr. Arnold Oberschelp, Mr. Ernst J. Thiele.

*Gesellschaft für Angewandte Mathematik und Mechanik*: Mr. Helmut C. Kohler, Mr. Franz F. Selig.

*Indian Mathematical Society*: Mr. Rameswar R. Dekkata, Professor Prabhakar R. Khandekar, Mr. D. Ramakrishna Rao, Mr. Kailash N. Srivastava.

*Calcutta Mathematical Society*: Mr. Santi Ranjan Das Gupta.

*Israel Mathematical Union*: Mr. Dan Amir, Professor Luisa Bonfiglioli, Mr. Michael Edelstein.

*Unione Matematica Italiana*: Professor Emilio Gagliardo, Mr. Giovanni G. Zacher.

*Mathematical Society of Japan*: Mr. Tetutarō Hirano, Professor Yanagiwara Hiroki, Mr. Jyun Ishii, Mr. Taiichi Kitamura, Mr. Motoyoshi Sakuma, Mr. Toshio Sasai.

*Polski Towarzystwo Matematyczne*: Mr. Abraham Goetz.

*Real Sociedad Matematica Espanola*: Professor Juan Auge, Mr. Serrano D. Garcia.

*Suomen Matemaattinen Yhdistys*: Professor Kalervo V. Laurikainen.

*The London Mathematical Society*: Mr. Douglas Barlow, Mr. Robert J. Elliott, Mr. Thomas Kovari, Mrs. Jill S. Yaqub.

*Svenska Matematikersamfundet*: Mr. Harry Bjork, Professor Germund G. Dahlquist, Mr. Erik G. Ekman, Mr. Lars E. Ingelstam, Mr. Lars E. Lofgren.

It was reported that nine persons were elected to membership on nomination of institutional members as indicated:

*Brown University*: Mr. Frank R. Deutsch.

*University of California, Davis*: Mr. David C. Barnes, Mr. Peter A. Griffin.

*University of Connecticut*: Mr. Erwin R. Sparks.

*Harvard University*: Mr. Clifford John Earle, Jr.

*Howard Payne College*: Professor Dale W. Manness.

*University of Idaho*: Mr. Vishwvasu M. Sakhare.

*Massachusetts Institute of Technology*: Mr. John M. Freeman.

*University of Toronto*: Mr. Gabriel G. Michaelides.

The following Presidential appointments were reported:

To the Summer Institutes Committee for three years beginning July 1, 1962: G. D. Mostow and C. B. Tompkins; Leonard Gillman to be Chairman, July 1, 1962–June 20, 1963.

To the Translations Committee: for three year terms beginning July 1, 1962: Felix Browder, J. R. Isbell; H. A. Antosiewicz to be Chairman July 1, 1962–June 30, 1963.

As a Committee to Nominate Candidates for the National Medal of Sciences: E. J. McShane, Chairman, Saunders MacLane, and Richard Brauer.

As an Organizing Committee for the 1963 Summer Seminar for Space Mathematics: J. Barkley Rosser, Chairman, Dirk Brouwer, Director of Yale University Observatory, Morris S. Davis, Director of Yale Computer Center, William R. Sears, Director of the Graduate School of Aerospace Engineering of Cornell University, and Victor Szebehely, Manager of Space Mechanics Operation, General Electric Company.

The Secretary reported that the following persons had accepted invitations to deliver hour addresses at meetings of the Society: Joseph B. Keller, Atlantic City, April, 1962; Andrew Wallace, Chicago, April, 1962; Noboru Ito, Chicago, April, 1962; R. S. Pierce, R. L. Vaught, Charles Loewner, Albert Nijenhuis, C. C. Lin, Vancouver, August, 1962; Albert E. Heins, Northwestern, November, 1962; M. F. Atiyah, Dartmouth, October, 1962; Elias Stein, John Thompson, E. J. McShane (Retiring President's Address), Berkeley, January, 1963.

There was a business meeting of the Society at 10:00 A.M. on Friday, August 31, 1962, in the Auditorium Building. Vice President Gleason presided. The Secretary expressed thanks on behalf of the Society to the University of British Columbia for its hospitality and commented briefly on the affairs of the Society. His report is to be found in the Notices of the Society.

JOHN W. GREEN,  
*Secretary*

R. S. PIERCE,  
*Associate Secretary*