
Biographies of Candidates 1995

Biographical information about the candidates has been verified by the candidates, although in a few instances prior travel arrangements of the candidate at the time of assembly of the information made communication difficult or impossible. A candidate had the opportunity to make a statement of not more than 200 words on any subject matter without restriction and to list up to five of her or his research papers.

Abbreviations: American Association for the Advancement of Science (AAAS); American Mathematical Society (AMS); American Statistical Association (ASA); Association for Computing Machinery (ACM); Association for Symbolic Logic (ASL); Association for Women in Mathematics (AWM); Canadian Mathematical Society, Société Mathématique du Canada (CMS); Conference Board of the Mathematical Sciences (CBMS); Institute of Mathematical Statistics (IMS); International Mathematical Union (IMU); London Mathematical Society (LMS); Mathematical Association of America (MAA); National Academy of Sciences (NAS); National Academy of Sciences/National Research Council (NAS/NRC); National Aeronautics and Space Administration (NASA); National Council of Teachers of Mathematics (NCTM); National Science Foundation (NSF); Operations Research Society of America (ORSA); Society for Industrial and Applied Mathematics (SIAM); The Institute of Management Sciences (TIMS).

Each candidate had the opportunity to supply a photograph to accompany his or her biographical information.

President-Elect

Frederick W. Gehring

T. H. Hildebrandt Distinguished University Professor, University of Michigan; chair, Department of Mathematics, University of Michigan, 1973-1975, 1977-1980, and 1981-1984.

Born: August 7, 1925, Ann Arbor, Michigan.

Ph.D.: Cambridge University, 1952; Honoris Causa: University of Helsinki, 1977, and University of Jyväskylä, 1990.

Sc.D.: Cambridge University, 1976.

AMS Offices: Member-at-Large of the Council, 1980-1982; Executive Committee, 1973-1975, 1980-1982; Board of Trustees, 1983-1992 (chair, 1986, 1991).

AMS Committees: *Proceedings* Editorial Committee (Associate Editor), 1962-1964; *Mathematical Reviews* Editorial Committee, 1969-1975 (Chair, 1973-1975); Nominating Committee for the 1975 Election (chair); Editorial Committee for the Research Expository Journal, 1977-1978; *Bulletin* Editorial Committee (Associate Editor for Research Expository Articles), 1979-1983; Committee on Membership (Board of Trustees), 1979-1992 (chair, 1989-1992); Committee on Committees, 1980-1982; Committee on Science Policy, 1981-1987; Committee on Steele Prizes, 1984-1987; Search Committee for the Position of Executive Director, 1987; Committee on Institutional Membership (Board of Trustees), 1987-1992 (chair, 1989-1992); Committee on Academic Review, 1989-; Bergman Trust Committee, 1990-; Com-

mittee on Governance (Board of Trustees), 1993 (chair).

Selected Invited Addresses: AMS, Milwaukee, November 1961; International Congress of Mathematicians, Moscow, August 1966; MAA, Madison, August 1968; International Congress of Mathematicians, Vancouver, August 1974; Plenary Address, International Congress of Mathematicians, Berkeley, August 1986.

Additional Information: Guggenheim Fellow and Fulbright Fellow Research Scholar, 1958–1959; National Science Foundation Fellow, 1959–1960; Foreign Member, Finnish Academy of Sciences, 1974–; UK Science Research Council Senior Visiting Fellowship, 1981; Alexander von Humboldt Fellowship, 1981–1982, 1988; Commander of the Order of Finland's White Rose, 1986–; Member, U.S. National Academy of Sciences, 1989–; Member, American Academy of Arts and Sciences, 1989–. MAA: Chauvenet Prize Committee, 1988–1991 (chair, 1991). NAS/NRC: Nominating Committee, 1972–1973; ICM Travel Grants Committee, 1978 (chair); Board on Mathematical Sciences, 1988–1991; Selection Committee for Award in Mathematics, 1992. NSF: Board of Governors, Institute for Mathematics and its Applications, 1980–1984; Search Committee for Director, Institute for Mathematics and its Applications, 1985–1986 (chair); Geometry Center External Advisory Committee, 1991–1995 (chair). SIAM: Polyá Prize Committee, 1993; Served on fifteen external review committees for mathematics departments in the United States, Canada, and Japan, 1979–1995. Editor: *Duke Mathematical Journal*, 1963–1980; Editorial Boards: *Indiana University Mathematical Journal*, 1966–1975; *Complex Variables Theory and Applications*, 1981–; *Michigan Mathematical Journal*, 1989–. Member: AMS, 1952–; AWM, 1973–; MAA, 1962–, as well as five European mathematical societies. Consultant: D. Van Nostrand, 1963–1970; Springer-Verlag, 1974–.

Selected Publications: 1. *Rings and quasiconformal mappings in space*, Trans. Amer. Math. Soc. **103** (1962), 353–393. MR **25** #3166; 2. with J. Väisälä, *The coefficients of quasiconformality of domains in space*, Acta. Math. **114** (1965), 1–70. MR **31** #4905; 3. *The L^p -integrability of the partial derivatives of a quasiconformal mapping*, Acta. Math. **130** (1973), 265–277. MR **53** #5861; 4. *Spirals and the universal Teichmüller space*, Acta. Math. **141** (1978), 99–113. MR **58** #17076; 5. with G. J. Martin, *Commutators, collars and the geometry of Möbius groups*, J. d'Analyse Math. **63** (1994), 175–219.

Statement: American mathematics, which has experienced meteoric growth since 1945, faces serious problems. Immigrating scientists, plus considerable federal support following Sputnik, stimulated a flowering so dramatic that many

prominent researchers from abroad now elect to spend time at American institutions. However, productive graduate programs, another influx of foreign mathematicians, and recent spending cuts at the federal, state, and local levels have resulted in a shrinking academic job market, reduced research budgets, and a decline in achievement levels of entering undergraduates.

The Society has grown from 3,000 members and a \$50,000 budget in 1945 to 30,000 members and a \$19,000,000 budget; its activities have broadened from a focus on scholarship and research to include professional issues such as employment, mathematics education, research funding, public awareness, and representation of women and minorities in the profession. Unfortunately, the Society also faces a potentially serious problem, since current programs are supported by publication of journals and books, the income from which could change substantially with the advent of electronic publishing.

All these problems must be addressed. If elected, my experience as department chair at a major public university, trustee, member of many governing and ad hoc committees, and consultant for two commercial publishers would prove useful.

Arthur M. Jaffe

Landon T. Clay Professor of Mathematics and Theoretical Science, Harvard University.

Born: December 22, 1937, New York, New York.

Ph.D.: Princeton University, 1966.

AMS Offices: Executive Committee of the Council, 1991–1994.

AMS Committees: Committee to Monitor Problems in Communication, 1986–1991 (chair); Committee to Select the Gibbs Lecturers for 1987 and 1988 (chair); Committee on Steele Prizes, 1990–1992; Committee on Long-Range Planning, 1993 (chair); Science Policy Committee: Federal Policy Agenda Subcommittee, 1993–1994; Agenda and Budget Committee, 1994.

Selected Addresses: AMS Summer Research Institute on Partial Differential Equations, Berkeley, August 1971; International Congress of Mathematicians, Helsinki, 1978; Invited Address, New York, New York, 1978; Symposium on the Mathematical Heritage of Henri Poincaré, 1980; Special Session on Nonlinear Generalizations of Maxwell's Equations, Amherst, October 1981; Special Session on Gauge Theory and Applications, Brooklyn, April 1994.

Additional Information: Academic positions: Chair, Department of Mathematics, Harvard University, 1987–1990. Appointments: Lecturer: Varenna Summer School, 1968; Les Houches Summer School, 1970, 1984, 1995; Erice Summer School, 1973, 1983, 1985; Special Lecturer, Acad-

emia Nazionale dei Lincei, 1977; Porter Lecturer, Rice University, 1983; Alumni Lecturer, Pennsylvania State University, 1983; Frank Hahn Lecturer, Yale University, 1985; Balomenos Lecturer, University of New Hampshire, 1987; Lecturer, Collège de France, 1990. Awards: New York Academy of Sciences Prize for the Mathematical and Physical Sciences, 1979; Dannie Heinemann Prize for Mathematical Physics, 1980. Committees and panels: Member, David Committee: committee's work led to the report, "Renewing American Mathematics" (1981-1984); author of the appendix, *Ordering the universe: The role of mathematics*; member of several visiting committees, including Princeton University, 1977-1980, and the E.T.H. Zurich, 1989; Member, COSEPUP Briefing Panel on the Status of Mathematical Research, 1983. Addresses: International Association of Mathematical Physics Congresses, 1977, 1979, 1981, 1988, 1991; Canadian Mathematical Society, 1984; Australian Mathematical Society, 1987; von Neumann Symposium, 1988; Twenty-fifth Anniversary of the IBM Mathematical Research Center at Yorktown Heights, 1988; 350th Anniversary of the Mathematische Gesellschaft in Hamburg, 1990; MSRI Sponsors Day, 1995. Co-organizer: Cargèse Summer School in Mathematical Physics, 1976, 1979, 1983, 1987, 1991; International Congress on Information Theory, Estergom, 1979; AMS Summer Research Conference on Geometry, Probability and Mathematical Physics, University of New Hampshire, 1982; Harvard Prize Fellowship, designed to invite Russian mathematicians as visitors to this country, 1988; International Association of Mathematical Physics Congress, Paris, 1994; Conference on Current Developments in Mathematics (cosponsored by Harvard University's and Massachusetts Institute of Technology's departments of mathematics), 1995. Editor: Chief editor, *Communications in Mathematical Physics*, 1979-; associate editor for several other journals. Offices: Trustee, MSRI, Berkeley, 1991-; President, International Association of Mathematical Physics, 1991-. Fellowships: Alfred P. Sloan Foundation Fellow, 1968-1970; Guggenheim Fellow, 1977, 1992; fellow, American Academy of Arts and Sciences, American Association for the Advancement of Science. Member: AMS, AWM, MAA. **Selected Publications:** 1. with J. Glimm, *The $(\lambda\phi^4)_2$ quantum field theory without cutoffs*. III, *The physical vacuum*, *Acta Math.* **125** (1970), 203-267. MR **42** #4130; 2. with J. Glimm and T. Spencer, *The Wightman axioms and particle structure in the $P(\phi)_2$ quantum field model*, *Ann. of Math.* **100** (1974), 585-632. MR **50** #15694; 3. with C. Taubes, *Vortices and monopoles. Structure of static gauge theories*, *Progress in Physics*, **2**, Birkhäuser Boston, 1980. MR **82m**:81051; 4. with J. Glimm, *Quantum physics. A functional*

integral point of view, Second edition, Springer-Verlag, New York, Berlin, 1987. MR **89k**:81001; 5. with A. Lesniewski and K. Osterwalder, *Quantum K-theory, I. The Chern character*, *Comm. Math. Phys.* **118** (1988), 1-14. MR **90a**:58170; 6. *Noncommutative geometry and mathematical physics*, *New Symmetry Principles in Quantum Field Theory*, Plenum Press, London, 1992. MR **94f**:46095.

Statement: This was a banner year for mathematics, with major mathematical progress made in many areas! We are certainly doing something right and justifiably might conclude that mathematics is fundamentally healthy. However, we face serious problems which affect us today and threaten the vitality of the future of mathematics. Paramount issues are declining research funds and a shortage of jobs. The AMS must address this situation by taking a leadership role in increasing recognition of mathematics and communicating its value, excitement, and vigor to the general public, to members of Congress, and to funding agencies. The AMS must also help mathematicians secure jobs as the academic market shrinks.

In addition, the AMS should encourage broad and inclusive participation in mathematics by all those interested and talented, regardless of gender, race, or economic status. The AMS should strengthen its role in mathematics education and help mathematicians with the new technologies, particularly with making an orderly transition to electronic publication while ensuring access to mathematical results now and in the future. AMS meetings should become even more valuable and engaging, and joint cooperation with the other mathematical organizations should be encouraged. The Society must develop new ways to foster a creative atmosphere for mathematical discovery.

Vice-President

Michael Aschbacher

Professor, California Institute of Technology.

Born: April 8, 1944, Little Rock, Arkansas.

Ph.D.: University of Wisconsin, 1969.

AMS Committees: Ad Hoc Committee for the 1979 Summer Institute on Classification of Simple Groups and New Directions; Ad Hoc Committee for the 1985 Cole Prize (chair); Far Western Section Program Committee, 1990, and Western Section Program Committee, 1991; Nominating Committee, 1991-1993 (chair, 1992).

Selected Addresses: Invited Address, Toronto, August 1976; International Congress of Mathematicians, Helsinki, 1978; Special Session on Classification of Finite Simple Groups, San Francisco, January 1981; Special Session on Finite Geometries and Related Topics, East Lansing,

November 1982; Symposium on Mathematics into the Twenty-first Century, AMS Centennial, Providence, August 1988.

Additional Information: Sloan Fellow, 1973–1975; Cole Prize in Algebra, 1980; Board of Trustees, MSRI, 1981–1984; Member, National Academy of Sciences, 1990–; Member, American Academy of Arts and Sciences, 1991–; Executive Officer for Mathematics, Caltech, 1991–1994.

Selected Publications: 1. *On finite groups of component type*, Illinois J. Math. **19** (1975), 87–115. MR **51** #13018; 2. *A characterization of Chevalley groups over fields of odd order*, Ann. of Math. **106** (1977), 353–398. MR **58** #16865a; and *A characterization of Chevalley groups over fields of odd order. II*, Ann. of Math. **106** (1977), 399–468. MR **58** #16865b; 3. *On the maximal subgroups of the finite classical groups*, Invent. Math. **76** (1984), 460–514. MR **86a**:20054; 4. with S. Smith, *On Quillen's conjecture for the p -groups complex*, Ann. of Math. **137** (1993), 473–529. MR **94g**:20073; 5. *Sporadic groups*, Cambridge Univ. Press, Cambridge and New York, 1994.

Statement: Changes in federal funding of science, in the public's expectation of the role of university faculty in undergraduate teaching, and in the number of academic jobs in mathematics are likely to lead to significant changes in the structure of graduate programs in mathematics and the career paths of mathematicians. The AMS has already established committees to consider some of the implications of these changes. This effort should continue and become more focused.

Spencer J. Bloch

Robert Maynard Hutchins Distinguished Service Professor, University of Chicago.



Born: May 22, 1944, New York, New York.

Ph.D.: Columbia University, 1971.

AMS Committees: *Bulletin* (New Series) Editorial Committee (Associate Editor, Research Announcements), 1983–1990.

Selected Addresses: International Congresses of Mathematicians, Helsinki, August 1978, and Kyoto, August 1990 (one-hour talk).

Additional Information: Editor (books): *Algebraic Geometry*, Bowdoin, 1985, Proceedings of Symposia in Pure Mathematics, vol. 46, parts 1 and 2, Amer. Math. Soc., Providence, RI, 1987. Editorial Boards: *American Journal of Mathematics*, 1982–1988; *Compositio Mathematica*, 1982–1988; *Communications in Algebra*,

1982–1988; *Journal of K-theory*, 1987–; *Journal of Algebraic Geometry*, 1990–, and *Journal of Mathematical Research Letters*, 1994–; Sloan Foundation Mathematics Fellowship Committee, 1990; Member, National Academy of Sciences, 1994–.

Selected Publications: 1. *K_2 and algebraic cycles*, Ann. of Math. **99** (1974), 349–379. MR **49** #7260; 2. *Higher regulators, algebraic K-theory, and zeta functions of elliptic curves* (unpublished); 3. *A note on height pairings, Tamagawa numbers, and the Birch and Swinnerton-Dyer conjecture*, Invent. Math. **58** (1980), 65–76. MR **81m**:14030; 4. *Algebraic cycles and higher K-theory*, Adv. Math. **61** (1986), 267–304. MR **88f**:18010; 5. with K. Kato, *L-functions and Tamagawa numbers of motives*, The Grothendieck Festschrift, vol. I, Progr. Math., vol. 86, Birkhäuser Boston, Boston, MA, 1990, pp. 333–400. MR **92g**:11063.

Statement: With the retreat of the NSF, the AMS will play an increasingly important service role for American mathematicians. In addition to its traditional functions running conferences and publishing research, the AMS should involve itself in fighting to reverse the decline in professional and research standards at American colleges and universities and in lobbying federal and state governments on behalf of mathematics.

Member-at-Large of the Council

Curtis D. Bennett

Assistant professor, Bowling Green State University.

Born: July 26, 1963, Madison, Wisconsin.

Ph.D.: University of Chicago, 1990.

AMS Committees: Committee on the Profession Subcommittee on Employment Issues, 1993–.

Selected Addresses: Conference on Groups and Geometries, Oberwolfach, Germany, July 1991; Special Session on Groups and Geometries, Manhattan, Kansas, March 1994.

Additional Information: NSF Graduate Fellow, 1985–1989; NSF Postdoctoral Fellow, 1992–1995; Founding Board Member, The Young Mathematicians Network.

Selected Publications: 1. *Imaginary roots of Kac-Moody Lie algebra whose reflections preserve root multiplicities*, J. Algebra **158** (1993), 244–267. MR **94g**:17043; 2. *Affine Λ -buildings*, I, Proc. London Math. Soc. **68** (1994), 541–576. MR **94m**:20068; 3. with B. Sagan and K. Dempsey, *Partition lattice q -analogs associated with q -Stirling numbers*, J. Algebraic Combinatorics **3** (1994), 261–283.

Statement: A major problem facing the mathematical community today is the employment crisis. This crisis has proven disheartening to many junior mathematicians and has led to difficul-

ties in launching a career for junior mathematicians. I would like to see the AMS Council continue to address this problem.

The AMS is also lacking in representation of junior mathematicians. I feel the Council would benefit from having a member who has been directly affected by the job crisis and other problems faced by junior mathematicians.

David M. Bressoud

Professor of mathematics and computer science, Macalester College.



Born: March 27, 1950, Bethlehem, Pennsylvania.

Ph.D.: Temple University, 1977.

Selected Addresses: Enumerative Combinatorics and Special Functions, Oberwolfach, January 1995; Invited MAA Addresses: Indiana Section Meeting, March

1995, and Allegheny Mountain Section Meeting, April 1995; MAA Student Lecture, Burlington, August 1995.

Additional Information: Sloan Foundation Research Fellow, 1982–1984; Fulbright Fellow, 1985–1986; Member: Association of American Universities Task Force on Intellectual Property Rights, 1992–1994; Distinguished Teaching Award, Allegheny Mountain Section of the MAA, 1994; Member: AMS, MAA, NCTM.

Selected Publications: 1. *Some identities for terminating q -series*, Math. Proc. Cambridge Philos. Soc. **89** (1981), 211–223. MR **82d**:05019; 2. with I. Goulden, *Constant term identities extending the q -Dyson theorem*, Trans. Amer. Math. Soc. **291** (1985), 203–228. MR **86k**:05011; 3. *Factorization and primality testing*, Undergraduate Texts in Mathematics, Springer-Verlag, New York, 1989. MR **91e**:11150; 4. *Second year calculus from celestial mechanics to special relativity*, Springer-Verlag, New York, 1991; 5. *A radical approach to real analysis*, Classroom Resource Materials Series, vol. 2, Math. Assoc. of America, Washington, DC, 1994. MR **95d**:26002.

Statement: The electronic revolution is creating unprecedented opportunities for the entire research community to have easy access to scholarly communication. But there are dangers that threaten to restrict this access: narrower interpretations of Fair Use, licensing agreements that replace copyright as the legal basis for publication and dissemination, subscriptions and databases that are charged per use and so open the user to prohibitive costs. The AMS has been moving aggressively into electronic publication

and dissemination of information. It must continue to explore ways in which it can shape the future of scholarly communication so that all mathematicians have affordable access.

Gail A. Carpenter

Professor, Boston University.



Born: December 23, 1948, New York, New York.

Ph.D.: University of Wisconsin, Madison, 1974.

AMS Committees: AMS-SIAM Committee on Mathematics in the Life Sciences, 1983–1986.

Selected Addresses: Invited Address, San

Antonio, January 1993; Invited Lecture, NATO Advanced Statistics Institute, Les Arcs, France, 1993; Invited Lecture, IEEE World Congress on Computational Intelligence, Orlando, 1994; Wei Lun Visiting Professor Lecture, Chinese University of Hong Kong, 1995; Plenary Lecture, World Congress on Neural Networks, Washington, DC, 1995.

Additional Information: Fellowships: NSF, 1970–1973; Mathematics Research Center, 1973–1974. Employment: Massachusetts Institute of Technology, 1974–1976; Northeastern University, 1976–1989; Boston University, 1989–. Editorial Boards: *Neural Networks*, 1987–; *Neural Computation*, 1989–; *IEEE Transactions on Neural Networks*, 1992–; *Brain Research*, 1992–. International Neural Network Society: Board of Governors, 1987–; Vice-President, 1988–1989; Secretary, 1994–. Program Committees: World Congress on Neural Networks; International Conference on Pattern Recognition; International Conference on Fuzzy Logic, Neural Nets, and Soft Computing; Russian Neural Network Society/IEEE Joint Conference on Neural Networks; NSF Workshop on Neuroengineering. Member: AMS, AWM, SIAM, IEEE, Society for Neuroscience, International Neural Network Society, European Neural Network Society.

Selected Publications: 1. *A geometric approach to singular perturbation problems with applications to nerve impulse equations*, J. Differential Equations **23** (1977), 335–367. MR **56** #762a; 2. *Some mathematical questions in biology-circadian rhythms* (ed.), Lectures on Mathematics in the Life Sciences, vol. 19, Amer. Math. Soc., Providence, RI, 1987. MR **88f**:92024; 3. *Neural network models for pattern recognition and associative memory*, Neural Networks **2** (1989), 243–257; 4. with S. Grossberg, N. Markuzon, J. H. Reynolds, and D. B. Rosen, *Fuzzy ARTMAP: A*

neural network architecture for incremental supervised learning of analog multidimensional maps, IEEE Trans. Neural Networks 3 (1992), 698–713; 5. *Spatial pattern learning, catastrophic forgetting, and optimal rules of synaptic transmission*, Optimality in Biological and Artificial Networks (D. S. Levine and W. R. Elsberry, eds.), Lawrence Erlbaum Associates, Hillsdale, NJ, 1995.

Statement: The AMS should maintain as its primary goal the support and dissemination of mathematical research. Another currently important task is to try to improve the employment prospects of young mathematicians. By offering conference workshops and helping universities design programs that prepare young mathematicians for nonacademic as well as academic employment, the AMS can help bridge the gap between traditional training and useful, challenging job opportunities. The AMS should also continue to help parents of young children maintain their professional lives.

John B. Conway

Professor and chair, Department of Mathematics, University of Tennessee, Knoxville.



Born: September 22, 1939, New Orleans, Louisiana.

Ph.D.: Louisiana State University, 1965.

AMS Committees: *Proceedings* Editorial Committee, 1985–1988 (Associate Editor, 1985–1986).

Selected Addresses: Principal Speaker (four lectures), NATO

Conference on Operators and Function Theory, University of Lancaster, England, 1984; AMS Summer Research Institute on Operator Theory/Operator Algebras and Applications, University of New Hampshire, Durham, July 1988; Steklov Institute of Mathematics, Leningrad, and Moscow University, 1989; Principal Speaker (two lectures), Southeastern Analysis Meeting, Charlotte, 1991; Shanks Lectures, Vanderbilt University, 1993; Hungarian Academy of Sciences Conference in Honor of Bela Sz. Nagy's 80th Birthday, 1993.

Additional Information: NSF Research Grants, 1968–1989 and 1990–1993; NSF Sabbatical Grant, 1980–1981; Organizer, Special Session on Function Theoretic Operator Theory, Louisville, January 1984; Member, NSF Postdoctoral Fellowship Committee, 1984–1986; Indiana University Research Grant, 1984–1987; Recipient of NSF Grant and Argonne Universities Association Trust Fund Grant to conduct the Special Year in Operator Theory, Indiana University, 1985–1986;

Organizer, Special Year in Operator Theory, Indiana University, 1985–1986; Professor and Head, Department of Mathematics, University of Tennessee, 1990–; NSF Undergraduate Science and Mathematics Education Evaluation Panel, 1991, 1993; University of Tennessee Science Alliance (Mathematics Division) Director, 1992–; Mathematics Connection Teleconference Participant, 1993.

Selected Publications: 1. *Functions of one complex variable*. Graduate Texts in Mathematics, Springer-Verlag, New York and Heidelberg, 1973. MR 56 #5843; 2. with R. F. Orlin, *A functional calculus for subnormal operators*. II, Mem. Amer. Math. Soc. 184 (1977). MR 55 #8864; 3. with B. B. Morrel, *Roots and logarithms of bounded operators on a Hilbert space*, J. Funct. Anal. 70 (1987), 171–193. MR 87m:47044; 4. *The theory of subnormal operators*. Math. Surveys Monographs, vol. 36, Amer. Math. Soc., Providence, RI, 1991. MR 92h:47026; 5. with N. Elias, *Analytic bounded point evaluations for spaces of rational functions*, J. Funct. Anal. 117 (1993), 1–24.

Statement: I have concerns about the different directions in which our profession is being pulled. A close scrutiny of what we do as mathematicians is always profitable, whether the focus is on research direction, increasing our awareness of teaching responsibilities, studying the current state of the job market, or making our society politically and socially involved. The difficulty arises when we concentrate too closely on the problem of the moment and lose sight of the long-term development of mathematics.

Complicating the whole process is the issue of funding. There seems to be a pattern of funding for the problems of yesterday that continues long after the crisis has diminished. An example is the increased federal funding of graduate education in mathematics to address an anticipated shortage and a continuation of that funding long after the job market for new mathematicians had hit the disaster level.

I would like to see the Society set long-range goals to foster education and research in mathematics, to encourage further participation by women and minorities, to assist departments in achieving these goals, and to act as a steadying influence on the direction of the funding agencies.

Isom H. Herron

Professor of mathematical sciences, Rensselaer Polytechnic Institute.

Born: September 8, 1946, St. Louis, Missouri.

Ph.D.: The Johns Hopkins University, 1973.

Selected Addresses: Special Session on Function Theoretic Methods in Partial Differential Equations, Baltimore, January 1992; Special Session



on Advances in Function Theoretic Methods, Cincinnati, January 1994.

Additional Information: Faculty Member, Department of Mathematics, Howard University, 1974-1994; Visiting Scientist, Università di Napoli, 1984; Ford Foundation Senior Postdoctoral Fellowship, 1988-1989; Corporation Visiting Committee, Department of Mathematics, Massachusetts Institute of Technology, 1989-1990 and 1993-; Member: AMS, APS, NAM, SIAM.

Selected Publications: 1. *A completeness theorem for the linear stability problem of nearly parallel flows*, J. Math. Anal. Appl. **86** (1982), 168-175. MR **84g**:34038; 2. *Expansion problems in the linear stability of boundary layer flows*, Adv. in Appl. Math. **4** (1983), 260-297. MR **84i**:76034; 3. with G. P. Galdi, *Nonlinear stability of a diffusion equation*, Quart. Appl. Math. **42** (1984), 159-164. MR **85h**:35191; 4. *Linear versus energy stability for time-periodic flows*, Phys. Fluids **28** (1985), 2298-2299; 5. *The Orr-Sommerfeld equation on infinite intervals*, SIAM Rev. **29** (1987), 597-620. MR **88m**:76033.

Statement: Mathematics is an international enterprise. Within that framework, we must take account of our national needs to reinforce academic infrastructure and to empower intellectually those of diverse backgrounds. These are not easy tasks and ones that can only begin to be accomplished with a united will. Mathematicians should be enterprising in making our contributions known to society at large.

Statement: While even the brightest young mathematicians are having difficulties finding academic positions, graduate students do most of the work involved in teaching calculus at many universities. There are typically more undergraduate students per professor in mathematics than there are in other areas. The AMS should offer advice to math departments about how to improve conditions for graduate students by decreasing their teaching duties and about ways to seek more tenure-track positions. The AMS could compile statistics to help the mathematical community ameliorate these problems. The AMS could also recognize those departments that make special efforts to create new positions. Every undergraduate deserves the opportunity to attend inspiring lectures, or to see a beautiful proof, or at least a rigorous argument. How many calculus students get that opportunity?

Krystyna M. Kuperberg

Alumni professor, Auburn University.



Born: July 17, 1944, Tarnow, Poland.

Ph.D.: Rice University, 1974.

AMS Committees: Electronic Research Announcements Editorial Board, 1995- .

Selected Addresses: Princeton University Colloquium, Princeton, March 1994; Mathematical Sciences Research Institute-Evans Lecture, Berkeley, September 1994; Stanford University Colloquium, Stanford, October 1994; Invited Address, Orlando, March 1995; Invited Talk, Dynamical

Systems Conference, Montevideo, Uruguay, March 1995.

Additional Information: Visiting Member, Courant Institute of Mathematical Sciences, Fall 1987; Alabama EPSCoR Mathematics Infrastructure Committee, 1992-1994; Coorganizer (with P. Minc), Special Session on Modern Methods in Continuum Theory, Cincinnati, January 1994; Research Professor, Mathematical Sciences Research Institute, Fall 1994; Auburn University Alumni Professor, 1994-1999; Editor, *Collected works of Witold Hurewicz*, Amer. Math. Soc., Providence, RI, to appear; Member: AMS, AWM, Polish Mathematical Society.

Selected Publications: 1. *On the bihomogeneity problem of Knaster*, Trans. Amer. Math. Soc. **321** (1990), 129-143. MR **90m**:54043; 2. *A nonparallel cylinder packing with positive density*, Mathematika **37** (1990), 324-331. MR **92d**:52044; 3. *Fixed points of orientation reversing homeomorphisms of the plane*, Proc. Amer. Math. Soc. **112** (1991), 223-229. MR **91h**:54049; 4. *A lower bound for the number of fixed points of orientation reversing homeomorphisms*, The Geometry of the Hamiltonian Systems (Berkeley, CA, 1989), Math. Sci. Res. Inst. Publ., vol. 22, Springer, New York, 1991 pp. 367-371. MR **92j**:54044; 5. *A smooth counterexample to the Seifert conjecture*, Ann. of Math. **140** (1994), 723-732.

Statement: While even the brightest young mathematicians are having difficulties finding academic positions, graduate students do most of the work involved in teaching calculus at many universities. There are typically more undergraduate students per professor in mathematics than there are in other areas. The AMS should offer advice to math departments about how to improve conditions for graduate students by decreasing their teaching duties and about ways to seek more tenure-track positions. The AMS could compile statistics to help the mathematical community ameliorate these problems. The AMS could also recognize those departments that make special efforts to create new positions. Every undergraduate deserves the opportunity to attend inspiring lectures, or to see a beautiful proof, or at least a rigorous argument. How many calculus students get that opportunity?

Joshua A. Leslie

Professor and chair, Department of Mathematics, Howard University.

Born: February 18, 1933, Jamaica.

Ph.D.: Université de Paris, France, 1960.

AMS Committees: Committee on the Human Rights of Mathematicians, 1984-1986; Committee on Committees, 1991-1992.

Selected Addresses: Invited Address, Lehigh University, February 1988; Colloquium on Group Theory and Physics, Lie's Fundamental Theo-

rem in Infinite Dimensions, University of Georgia, July 1988; Annual Seminar of the Canadian Mathematical Society, Montreal, August 1989; Invited Address, Pennsylvania State University, University Park, October 1990; University of Marseille, 1991.

Additional Information: Board of Trustees, MSRI, 1994-; Member: AMS, MAA, NAM, AAAS, NYAS.

Selected Publications: 1. *Modules simpliciaux sur une algèbre simpliciale*, C. R. Acad. Sci. Paris **251** (1960), 22–23. MR **22** #5663; 2. *Sur les opérations cohomologiques*, C.R. Acad. Sci. Paris **256** (1963), 4815–4817. MR **27** #6265; 3. *On a differential structure for the group of diffeomorphisms*, Topology **6** (1967), 263–271. MR **35** #1041; 4. *Some Frobenius theorems in global analysis*, J. Differential Geom. **2** (1968), 279–297. MR **40** #4977; 5. *Some integrable subalgebras of Lie algebras of infinite dimensional Lie groups*, Trans. Amer. Math. Soc. **333** (1992), 423–443. MR **92k**:22034.

Statement: I am concerned that the putting in question of affirmative action in academia will be a setback for women and minority mathematicians long before its goals will have been met.

Andrew Odlyzko

Head, Mathematics of Communication and Computer Systems Department, AT&T Bell Laboratories, and adjunct professor, Faculty of Mathematics, University of Waterloo.



Born: July 23, 1949, Tarnow, Poland.

Ph.D.: Massachusetts Institute of Technology, 1975.

AMS Committees: AMS-ASL-IMS Committee on Translations from Russian and Other Foreign Languages, 1982–1984; *Proceedings* Editorial Committee,

1985–1989; Committee on the Publication Program, 1986–1993; *Mathematics of Computation* Editorial Committee, 1986– (associate editor, 1986–1988); Committee on Electronic Exchange of Information, 1989; *Journal of the AMS* Editorial Committee, 1992–; Committee on Copyright, 1993 (chair); Committee on Publications, 1994–; *Abstracts* Revision Task Force, 1995.

Selected Addresses: Invited Address, Pittsburgh, August 1981; Invited Lecture, Australian Mathematical Society, Brisbane, 1983; International Congress of Mathematicians, Berkeley, August 1986.

Additional Information: NSF Postdoctoral Fellowship Selection Panel, 1981–1983; NSF Advisory Committee for Mathematical Sciences, 1987–1990; Advisory Panel, NSA Mathematical Sciences Program, 1990–1994; NRC Review Panel,

Computing and Applied Mathematics, National Institute of Standards and Technology, 1992–1994; Scientific Advisory Council, Mathematical Sciences Research Institute, 1992–1995; Executive Advisory Board, Mathematical Sciences Institute, 1992–1995; Dean's Advisory Council, School of Science, Purdue University, 1993–; Board of Governors, IMA, 1994–.

Selected Publications: 1. *Some analytic estimates of class numbers and discriminants*, Invent. Math. **29** (1975), 275–286. MR **51** #12788; 2. with J. C. Lagarias, *Solving low-density subset sum problems*, J. Assoc. Comput. Mach. **32** (1985), 229–246. MR **87i**:11186; 3. with H. J. J. te Riele, *Disproof of the Mertens conjecture*, J. Reine Angew. Math. **357** (1985), 138–160. MR **86m**:11070; 4. *Asymptotic enumeration methods*, Handbook of Combinatorics (R. L. Graham, M. Groetschel, and L. Lovasz, eds.), North-Holland, Amsterdam, (to appear, 1995); 5. *Tragic loss or good riddance? The impending demise of traditional scholarly journals*, Internat. J. Human-Comput. Stud. **42** (1995), 71–122. Condensed version appeared in *Notices Amer. Math. Soc.* January 1995, 49–53; reprinted in *Deutsche Math. Ver. Mitteilungen* 1995, no. 1, 19–24, and, in a French translation, in *Gazette des Mathématiciens* 1995, no. 63, 41–52, and to be reprinted in *Scholarly Publishing: The Electronic Frontier* (R. P. Peek and G. B. Newby, eds.), MIT Press/ASIS monograph, MIT Press, Cambridge, MA, 1995.

Statement: Technological change and the end of rapid growth in funding for research are the chief causes of the problems facing mathematics. Mathematical research, the main mission of the AMS, can make important contributions to society, and we should make sure this is understood by the public and especially by policy-makers. However, it is likely that we may have to survive with limited means, and we should prepare for that. In particular, while the AMS cannot do too much about the job situation, we should prepare and disseminate realistic projections about future job prospects. We also should position the AMS to survive the coming transition to electronic publication, which, if not managed well, may mean the loss of a large part of the funding for AMS activities that now comes from publications.

George C. Papanicolaou

Professor, Stanford University.

Born: January 23, 1943, Athens, Greece.

Ph.D.: New York University, 1969.

AMS Committees: AMS-SIAM Committee on Applied Mathematics, 1980–1986; Committee on Summer Institutes, 1981–1983.

Selected Addresses: International Congress of Mathematicians, 1986; International Congress of



Mathematical Physics, 1994.

Additional Information: Sloan Fellow, 1974–1976; Guggenheim Fellow, 1983–1984; Member: AMS, SIAM.

Selected Publications: 1. with M. Asch, G. Postel, W. Kohler, and B. White, *Frequency content of randomly scattered signals*, SIAM Rev. **33** (1991), 519–625. MR **93f**:73041; 2. with E. Bacry and S. Mallat, *A wavelet based space-time adaptive numerical method for partial differential equations*, RAIRO Modél. Math. Anal. Numér. **26** (1992), 793–834. MR **94f**:65122; 3. with A. Fannjiang, *Convection enhanced diffusion for periodic flows*, SIAM J. Appl. Math. **54** (1994), 333–408. MR **95d**:76109; 4. with C. Sulem, P.-L. Sulem, and X. P. Wang, *The focusing singularity of the Davey-Stewartson equations for gravity-capillary surface waves*, Phys. D **72** (1994), 61–86. MR **95a**:76007; 5. with R. Burrige and P. Lewicki, *Pulse stabilization in a strongly heterogeneous layered medium*, Wave Motion **20** (1994), 177–195.

Mary Lou Zeeman

Associate professor, Division of Mathematics and Statistics, University of Texas at San Antonio.



Born: November 24, 1961, Princeton, New Jersey.

Ph.D.: University of California at Berkeley, 1989.

Selected Addresses: International Congress on Industrial and Applied Mathematics, Special Session on Population Dynamics, Washington, D.C., 1991; Workshop on Environmental Dynamics, Venice, Italy, 1992; Fall Midwest Dynamical Systems Conference, University of Michigan, Ann Arbor, 1992; Symposium on Comparison Methods and Stability Theory, The Fields Institute, Canada, 1993; International Conference on Differential Equations and Applications to Biology and Industry, Claremont, 1994.

Additional Information: Graduate Student Instructor Teaching Award, University of California, Berkeley, 1986; Postdoctoral Member, The Institute for Mathematics and its Applications, Minneapolis, 1989–1990; C. L. E. Moore Instructor, Massachusetts Institute of Technology, 1990–1991; Coorganizer, Special Session on Low-

Dimensional Geometric Dynamical Systems, San Antonio, January 1993; Coorganizer, Fall Midwest Dynamical Systems Conference, Berkeley, October 1993; University of Texas at San Antonio President's Distinguished Achievement Award for Excellence in Teaching, 1995; Member: AMS, AWM, LMS, MAA, SIAM.

Selected Publications: 1. *Hopf bifurcations in competitive three-dimensional Lotka-Volterra systems*, Dynamics Stability Systems **8** (1993), 189–217. MR **94j**:34044; 2. with E. C. Zeeman, *On the convexity of carrying simplices in competitive Lotka-Volterra systems*, Differential Equations, Dynamical Systems, and Control Science, Marcel Dekker, New York, 1994, pp. 353–364. MR **94h**:34033; 3. *Extinction in competitive Lotka-Volterra systems*, Proc. Amer. Math. Soc. **123** (1995), 87–96. MR **95c**:92019; 4. with F. Montes de Oca, *Balancing survival and extinction in nonautonomous competitive Lotka-Volterra systems*, J. Math. Anal. Appl., to appear, 1995; 5. *On directed periodic orbits in three-dimensional competitive Lotka-Volterra systems*, Proceedings of the International Conference on Differential Equations and Applications to Biology and to Industry, to appear, 1995.

Statement: The demographics of the American mathematical community are improving. There are more women and minorities entering the field, and one of the better consequences of the current job crisis is that talented young mathematicians are being distributed around the country at large and small colleges and universities alike. Now it is important to represent this diversity on the AMS Council and to ensure that all members of the community have equal opportunity to do research, to travel, and to achieve excellence in teaching.

Trustee

Trustee

Fan R. K. Chung

Professor of mathematics,
University of Pennsylvania.



Ph.D.: University of Pennsylvania, 1974.

Offices: Member-at-Large of the Council, 1989–1991.

AMS Committees: AMS-IMS-SIAM Committee on Joint Summer Research Conferences in the Mathematical Sciences, 1990–1992 (chair, 1992); Editorial Boards Committee, 1993–1995 (chair, 1994); Committee on Publications, 1994.

Selected Addresses: AMS-MAA Invited Address, Orono, August 1991; Invited Address, Washington, DC, April 1993; International Congress of Mathematicians, Zurich, 1994.

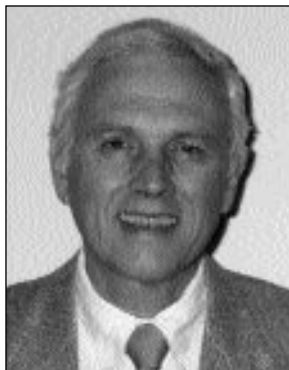
Additional Information: Allendoerfer Award, 1990; Board of Mathematical Sciences, National Research Council, 1995- .

Selected Publications: 1. *Diameters and eigenvalues*, J. Amer. Math. Soc. 2 (1989), 187-196. MR 89k:05070; 2. *Constructing random-like graphs*, Proc. Sympos. Appl. Math., vol. 44, American Mathematical Society, Providence, RI, 1991, pp. 21-56; 3. with S. Sternberg, *Laplacian and vibrational spectra for homogeneous graphs*, J. Graph Theory 16 (1992), 605-627. MR 93j:58135; 4. with D. Mumford, *Chordal completions of planar graphs*, J. Combin. Theory B 62 (1994), 96-106. 95e:05062; 5. with S.-T. Yau, *A Harnack inequality for homogeneous graphs and subgraphs*, Communications on Analysis and Geometry, vol. 2, 1995.

Statement: We are today in the midst of a technological revolution. Mathematics will play a vital role both in laying the foundation for this process and in making crucial contributions throughout the whole spectrum of this development. The AMS, as the major organization for fostering mathematics research, has a special responsibility to maximize the impact of mathematicians and to attract the best talent, including, in particular, women and minorities.

Michael G. Crandall

Professor, University of California,
Santa Barbara.



Born: November 29, 1940, Baton Rouge, Louisiana.

Ph.D.: University of California, Berkeley, 1965.

AMS Offices: Member-at-Large of the Council, 1984-1986.

AMS Committees: Committee to Select Hour Speakers for Far Western Sectional Meetings, 1974-1975; Committee on Committees, 1985-1986; Far Western Section Program Committee, 1990, and Western Section Program Committee, 1991 (chair, 1991); Notices Editorial Committee, 1989-1992; Progress in Mathematics Committee, 1993-1995 (chair, 1995); AMS-MAA Committee on Cooperation, 1995.

Selected Addresses: International Congress of Mathematicians, Vancouver, Canada, 1974; SIAM Annual Meeting, Troy, New York, 1975; Invited Address, Madison, April 1982; NSF Summer Institute on Nonlinear Functional Analysis and

Differential Equations, Berkeley, 1983 (three lectures); principal lecturer, course on semigroup theory and applications, International Center for Theoretical Physics, Trieste, 1984; J. P. La Salle Memorial Lecture, Brown University, 1984; University of Arkansas Lectures in Mathematics, 1986; AMS Progress in Mathematics Lecture, 1990.

Additional Information: Lecturer, University of California, Berkeley, 1965-1966; NSF Postdoctoral Fellowship (awarded but declined), 1966; Visiting Assistant Professor, Stanford University, 1966-1969; Professor, University of California, Los Angeles, 1973-1976; Professor, Department of Mathematics and Mathematics Research Center, University of Wisconsin, 1974-1988 (Houses Professor, 1984-1988); Director, Autumn College on Semigroup Theory and Applications, International Center for Theoretical Physics, Trieste, 1984-1985; Professor, University of California, Santa Barbara, 1988- (director, IAC/Nonlinear Science Program, 1988-1991; chair of department, 1993-); appointed Miller Research Professor, University of California, Berkeley, for fall 1996; Managing Editor, *Communications in Partial Differential Equations*, 1989-1992 (Editorial Board, 1992-). Editorial boards: *Nonlinear Analysis. Theory, Methods, Applications*, 1976-1988; *Applicable Analysis*, 1985- ; *Differential and Integral Equations*, 1989- ; *Analyse Nonlineaire, Annales de IHP*, 1989- ; *Advances in Differential Equations*, 1995- .

Selected Publications: 1. *Two families of periodic solutions of the plane four-body problem*, Amer. J. Math. 89 (1967), 275-318. MR 35 #6439; 2. with P. Rabinowitz, *Nonlinear Sturm-Liouville eigenvalue problems and topological degree*, J. Math. Mech. 19 (1969/1970), 1083-1102. MR 41 #3874; 3. with T. Liggett, *Generation of semigroups of nonlinear transformations on general Banach spaces*, Amer. J. Math. 93 (1971), 265-298. MR 44 #4563; 4. with P.-L. Lions, *Viscosity solutions of Hamilton-Jacobi equations*, Trans. Amer. Math. Soc. 277 (1983), 1-42. MR 85g:35029; 5. with H. Ishii and P.-L. Lions, *User's guide to viscosity solutions of second order partial differential equations*, Bull. Amer. Math. Soc. (N.S.) 27 (1992), 1-67. MR 92j:35050.

Statement: The Bylaws charge the Trustees to "receive and administer the funds of the Society". If elected, I will put my experience with a broad range of mathematical environments and administrative responsibilities to vigorous use in playing my part in the sound, efficient, and forward-looking management of the fiscal operations of the Society. While the Bylaws state that it is the Council which "shall formulate the scientific policies of the Society", a Trustee will also confront the many challenges the profes-

sion faces in a rapidly changing world. We must be simultaneously flexible, aggressive, and wise to ensure that we neither miss new opportunities nor ignore potential pitfalls. I feel that the contemporaneous phenomena of the underutilization and oversupply of mathematicians lie at the core of our profession's future, pointing to the opportunities and the pitfalls. I do not believe that the situation will improve in the foreseeable future if we wait passively, but I do believe that if we, all of us together, seize the opportunities, then the long-term future is bright. In the interim, we must be realistic and keep in mind that the circumstances most of those now entering the profession will encounter throughout their careers will differ in significant ways from the models to which we became accustomed.

Nominating Committee

Sylvain Cappell

Professor, Courant Institute of Mathematical Sciences, New York University.



Born: September 10, 1946, Brussels, Belgium.

Ph.D.: Princeton University, 1969.

AMS Committees: Committee on Steele Prizes, 1991–1993 (chair, 1993).

Selected Addresses: International Congress of Mathematicians, Helsinki, 1978;

Invited Address, Syracuse, October 1978; Principal Speaker, Conference Board of the Mathematical Sciences Lecture Series, Virginia Polytechnical University, 1987; Clifford Lectures, Tulane University, 1990; Conference on Symplectic Geometry and Its Applications, Cambridge University, 1994.

Additional Information: Sloan Foundation Fellowship, 1971–1972; Guggenheim Foundation Fellowship, 1989–1990; Editor, *Communications in Pure and Applied Mathematics*, 1989–.

Selected Publications: 1. *A splitting theorem for manifolds*, Invent. Math. **33** (1976), 69–170. MR **55** #11274; 2. with J. Shaneson, *Nonlinear similarity*, Ann. of Math. **113** (1981), 315–355. MR **83h**:57060; 3. with R. Lee and E. Miller, *A symplectic geometry approach to generalized Casson's invariants of 3-manifolds*, Bull. Amer. Math. Soc. (N. S.) **22** (1990), 269–275. MR **91b**:57024; 4. with J. Shaneson, *Genera of algebraic varieties and counting of lattice points*, Bull. Amer. Math. Soc. (N.S.) **30** (1994), 62–69. MR **94f**:14018; 5. with S. Weinberger, *Replacement of fixed points and*

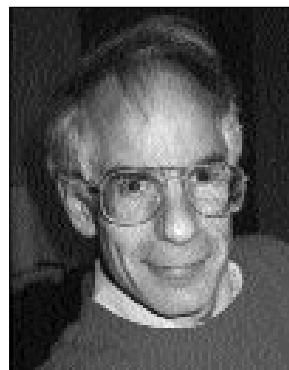
of their normal representations in transformation groups of manifolds (papers presented in honor of the 60th birthday of William Browder), Prospects in Topology (Frank Quinn, ed.), Ann. of Math. Stud., Princeton Univ. Press, Princeton, NJ, 1995, to appear.

Statement: In view of the rapidly changing environment for research support in both academe and industry, in scientific education, in mathematical employment, and in publication and information exchange, the AMS will be facing large new challenges in carrying out its extraordinary record of helping its members develop and meet their scientific and professional goals. In discussing and planning with colleagues from many directions for these and in selecting candidates who would effectively lead the AMS and represent it in both public and scientific forums, I would draw on familiarity with these issues gained from my collegial experiences as an editor of research publications and book series, as chair of an AMS committee, and as many-year chair of my university's Research Challenge Fund Committee (awarding the internal research grants across all the sciences, social sciences, and humanities), and from supervising for many years the mathematical activities and workshops of the Faculty Resources Network (which created scholarly exchange opportunities for faculties from smaller and minority institutions), a recent term as associate director of the Courant Institute, and many-year chair of its Appointments and Promotions Committee.

I would also draw on the good counsel of many friends across the broad generational spectrum of mathematicians in university, college, and industrial employment (and in some cases, sadly, unemployment), and in many branches of pure and applied mathematics.

Eric M. Friedlander

Professor of mathematics, Northwestern University.



Born: January 7, 1944, Santurce, Puerto Rico.

Ph.D.: Massachusetts Institute of Technology, June 1970.

AMS Committees: Committee on Summer Institutes and Special Symposia, 1986–1987; Committee on the Publication Program, 1990–1994; Committee on Science Policy, 1992–1994;

Proceedings Editorial Committee, 1992–; *Bulletin* (New Series) Editorial Committee (Associate Editor for Research Reports), 1995–.

Selected Addresses: Invited Address, Columbia, Missouri, November 1985; Plenary Lecture (surrogate speaker for Andrei Suslin), International Congress of Mathematicians, Berkeley, 1985.

Additional Information: Humboldt Senior Scientist Research Award, 1995–1997.

Selected Publications: 1. with H. B. Lawson, *A theory of algebraic cocycles*, *Ann. of Math.* **136** (1992), 361–428. MR **93g**:14013; 2. with O. Gabber, *Cycle spaces and intersection theory*, *Topological Methods in Modern Mathematics*, Publish or Perish, Houston, TX, 1993, pp. 325–370. MR **94j**:14010; 3. with B. Mazur, *Filtrations on the homology of algebraic varieties*, *Mem. Amer. Math. Soc.*, no. 529, Amer. Math. Soc., Providence, RI, 1994; 4. with W. Dwyer, *Topological models for arithmetic*, *Topology* **33** (1994), 1–24; 5. *Filtrations on algebraic cycles and homology*, *Ann. Sci. École Norm. Sup.* (4), to appear.

Statement: While continuing to address energetically the diverse concerns of the profession, the American Mathematical Society should not lose sight of its central mission to foster and disseminate mathematics.

Jane P. Gilman

*Professor of mathematics,
Rutgers University, Newark.*



Born: April 17, 1945, Washington, D.C.

Ph.D.: Columbia University, 1971.

AMS Offices: Member-at-Large of the Council, 1986–1988.

AMS Committees: Nominating Committee, 1988 and 1989 (chair); Nominating Committee Scheduling Committee, 1990.

Selected Addresses: Invited Addresses: AMS Joint Summer Conference on Riemann Surfaces and Discrete Groups, Arcata, July 1989; AMS Joint Summer Conference on Nielsen Theory and Dynamical Systems, Mount Holyoke College, June 1992; AMS Conference in Honor of Bernie Maskit, Hartford, March 1995; more than a dozen invited talks at AMS special sessions, 1978–1995.

Additional Information: Chair, Department of Mathematics and Computer Science, Rutgers University, Newark, 1982–1990; Member, Institute for Advanced Study, 1979–1980, and spring semester, 1992; Member, Mathematical Sciences Research Institute, January 1986–June 1986, and January 1996–June 1996; Supported short-term visitor: IHES, October and November 1995; Mittag-Leffler Institute, November 1989. Mathematical and educational reform activities in-

clude: Invited (with John Conway, Peter Doyle, and Bill Thurston) to give two-week intensive geometry and the imagination course at University of Minnesota Geometry Center, June 1991; invited to team-teach experimental graduate workshop in hyperbolic geometry and dynamical systems at MSRI, August 1994. Member: AWM, MAA.

Selected Publications: 1. *A matrix representation for automorphisms of Riemann surfaces*, *Linear Algebra and Appl.* **17** (1977), 139–147. MR **58** #17077; 2. *On the Nielsen type and the classification of the mapping-class group*, *Adv. in Math.* **40** (1981), 68–96. MR **82i**:57006; 3. *A geometric approach to the hyperbolic Jørgensen inequality*, *Bull. Amer. Math. Soc.* **16** (1987), 91–92. MR **87m**:30072; and *A geometric approach to Jørgensen's inequality*, *Adv. in Math.* **85** (1991), 193–197. MR **92c**:30051; 4. with B. Maskit, *An algorithm for two-generator Fuchsian groups*, *Michigan Math. J.* **38** (1991), 13–32. MR **92f**:30062; 5. *Two-generator discrete subgroups of $PSL(2, R)$* , *Mem. Amer. Math. Soc.*, Vol. 117, No. 56, September 1995.

Statement: The mathematical community is facing changes that affect virtually every aspect of the profession, and there are, no doubt, important decisions ahead for the AMS. The Nominating Committee should make a special effort to seek out thoughtful and informed candidates from all parts of the mathematical community.

Daniel J. Kleitman

*Professor, Department of Mathematics,
Massachusetts Institute of Technology.*

Born: October 4, 1934, New York, New York.

Ph.D.: Harvard University, 1958.

AMS Committees: AMS-IMS-SIAM Committee on Joint Summer Research Conferences in the Mathematical Sciences, 1988–1989.

Additional Information: Academic positions: NSF Postdoctoral Fellow (physics), Niels Bohr Institute, Copenhagen, and Harvard University, 1958–1960; Assistant professor of physics, Brandeis University, 1960–1966 (on leave spring 1994 at Harvard University); Associate professor of applied mathematics, MIT, 1966–1969; Professor of applied mathematics, MIT, 1969–. Academic administration (MIT): Educational Policy Committee, 1971–1973; Discipline Committee, 1971–1973; Applied Mathematics Committee, 1974–1976 (chair); Faculty Nomination Committee, 1978–1979; Advisory Committee for Education Division, 1979–1981; Committee on Social Science Research, 1978–1979; head, Department of Mathematics, 1979–1984; Applied Mathematics Committee, 1988–1989 (chair); Member, Committee on Women Faculty, School of Science, 1995–. Mathematical community activities: CUPM Panel on Applied Math-

ematics, 1968–1972; SIAM Nominating Committee, 1974–1976; Visiting Committee, University of Pennsylvania, 1978; Visiting Committee, Harvard University, 1980–1984; Visiting Committee, South Carolina Commission on Higher Education, 1987; NSF Site Visit Panel, 1988; Member, NRC Panel on NSA, 1988–1990; Member, Evaluation Team, Emory University, 1992; Evaluation Team, Dartmouth College, 1993 (chair); Member, NRC Associateship Program, 1993–1995; Member, Visiting Committee, Lehigh University, 1994.

James V. Ralston

*Professor of mathematics,
University of California, Los Angeles.*

Born: June 26, 1943, Elyria, Ohio.

Ph.D.: Stanford University, 1969.

Selected Addresses: Invited Address, Providence, August 1978; Workshop on Spectral and Scattering Theory of Partial Differential Operators, Hebrew University, 1990; Conference on Linear and Nonlinear Scattering, Johns Hopkins University, 1995.

Additional Information: Co-managing Editor, *Communications in Partial Differential Equations*, 1986–.

Selected Publications: 1. with C. S. Morawetz and W. Strauss, *Decay of solutions of the wave equation outside nontrapping obstacles*, *Comm. Pure Appl.* **30** (1977), 447–508. MR **58** #23091a; 2. with C. Bardos and J.-C. Guillot, *La relation de Poisson pour l'équation des ondes dans un ouvert non-bourné. Application à la théorie de la diffusion*. *Comm. Partial Differential Equations* **7** (1982), 905–958. MR **84d**:35120; 3. with E. Trubowitz, *Isospectral sets for boundary value problems on the unit interval*, *Ergodic Theory Dynamical Systems* **8** (1988), 301–358. MR **89m**:34035; 4. with G. Eskin, *The inverse backscattering problem in three dimensions*, *Comm. Math. Phys* **124** (1989), 169–215. MR **90j**:35067.

Statement: If one accepts the fashionable but dubious proposition that outsiders are somehow better qualified for office, then I am an ideal candidate for this position. During my twenty-five years of membership, I have been cheerfully oblivious to the operations of the AMS. However, it is apparent even to me that the AMS increasingly needs to go beyond its traditional role of facilitating communication between and conferring honors on its members to the creation of mathematics curricula and the advocacy of federal support for mathematics. As a member of this committee, I would try to nominate people able to carry this out.

Joel Spruck

*Professor of mathematics,
Johns Hopkins University.*

Born: October 3, 1946, Brooklyn, New York.

Ph.D.: Stanford University, 1971.

Selected Addresses: International Congress of Mathematicians (45-minute lecture), Zurich, 1994.

Selected Publications: 1. with L. A. Caffarelli and L. Nirenberg, *The Dirichlet problem for nonlinear second order equations. I. Monge-Ampère equation*, *Comm. Pure Appl. Math.* **37** (1984), 369–402. MR **87f**:35096; 2. with L. A. Caffarelli and B. Gidas, *Asymptotic symmetry and local behavior of semilinear elliptic equations with critical Sobolev growth*, *Comm. Pure Appl. Math.* **42** (1989), 271–297. MR **90c**:35075; 3. with L. C. Evans, *Motion of level sets by mean curvature. I*, *J. Differential Geom.* **33** (1991), 635–651. MR **92h**:35097; 4. with B. Guan, *Boundary value problems on S^n for surfaces of constant Gauss curvature*, *Ann. of Math.* **138** (1993), 601–624. MR **94i**:53039; 5. with H. Rosenberg, *On the existence of convex hypersurfaces of constant Gauss curvature in hyperbolic space*, *J. Differential Geom.* **40** (1994), 379–409. MR **95g**:53007.

Editorial Boards Committee

Sun-Yung Alice Chang

*Professor, Department of Mathematics,
University of California, Los Angeles.*



Born: March 24, 1948, Ci-an, China.

Ph.D.: University of California, Berkeley, 1974.

AMS Offices: Vice-President, 1989–1991.

AMS Committees: AMS representative, Evaluation Panel for NSF Postdoctoral Fellowships, 1982–1985,

1992–1995; Committee on Translation from Chinese, 1983–; Committee to Select Hour Speakers for Far Western Sectional Meetings, 1989, and Far Western Section Program Committee, 1990 (chair, 1990). *Transactions and Memoirs* Editorial Committee, 1991–1994.

Selected Addresses: Invited Address, Toronto, August 1982; International Congress of Mathematicians, Berkeley, 1986; Invited Address, Louisville, January 1990; Invited Speaker, Regional Geometry Institute, Park City, Utah, 1992.

Additional Information: Sloan Foundation Fellowship, 1979–1981; Member, Board of Mathematical Sciences, 1989–1992; Managing Editor, *Pacific Journal of Mathematics*, 1994–; Editor: *Journal of Mathematical Research Letters*, 1994–;

Journal of Functional Analysis and Applications, 1994-. Satter Prize, American Mathematical Society, 1995. Member: AWM, MAA.

Selected Publications: 1. *A characterization of Douglas subalgebras*, Acta Math. **137** (1976), 82–89. MR **55** #1047a; 2. with R. A. Fefferman, *A continuous version of duality of H^1 with BMO on the bidisc*, Ann. of Math. **112** (1980), 179–201. MR **82a**:32009; 3. with L. Carleson, *On the existence of an extremal function for an inequality of J. Moser*, Bull. Sci. Math. **110** (1986), 113–127. MR **88f**:46070; 4. with P. C. Yang, *Prescribing Gaussian curvature on S^2* , Acta Math. **159** (1987), 215–259. MR **88m**:35056; 5. with P. C. Yang, *Extremal metrics of zeta function determinants on 4-manifolds*, Ann. of Math., 1995, to appear.

Statement: If elected, I will try my best to be well informed and evenhanded in soliciting suggestions of nominations for each AMS editorial committee.

Jennifer Tour Chayes

*Professor of mathematics,
University of California, Los Angeles.*



Born: September 20, 1956, New York, New York.

Ph.D.: Princeton University, 1983.

Selected Addresses: Invited Address, Irvine, November 1990; Invited Talks: Twenty-second Conference on Stochastic Processes, Amsterdam, 1993; NATO Meeting on Probability Theory, Newton Institute, Cambridge, England, 1993. Organizer and Speaker, Special Session, AAAS Annual Meeting, San Francisco, 1994; Principal Speaker, Mark Kac Lectures, Utrecht, Netherlands, 1995.

Additional Information: Alfred P. Sloan Fellow, 1989–1992; Member, Editorial Search Committee, *Journal of Mathematical Physics*, American Physical Society, 1991–1992; Associate Editor, *Journal of Statistical Physics*, 1991–1993; Advisory Panel for the NSA Mathematical Sciences Program, 1992–1994; Mortar Board Honor Society Teaching Award, University of California, Los Angeles, 1993; Distinguished Teaching Award in Mathematics, University of California, Los Angeles, 1994.

Selected Publications: 1. with M. Aizenman, L. Chayes, J. Fröhlich, and L. Russo, *On a sharp transition from area law to perimeter law in a system of random surfaces*, Comm. Math. Phys. **92** (1983), 19–69. MR **85d**:82006; 2. with L. Chayes, J. P. Sethna, and D. J. Thouless, *A mean-field spin glass with short-range interactions*, Comm.

Math. Phys. **106** (1986), 41–89. MR **88i**:82054; 3. with M. Aizenman, L. Chayes, and C. M. Newman, *Discontinuity of the magnetization in $1/|x - y|^2$ Ising and Potts models*, J. Statist. Phys. **50** (1988), 1–40. MR **89f**:82072; 4. with J. Carlson, E. Grannan, and G. Swindle, *Self-organized criticality and singular diffusion*, Phys. Rev. Lett. **65** (1990), 2547–2550. MR **91h**:82035; 5. with M. Campanino and L. Chayes, *Gaussian fluctuations of the connectivities in the subcritical regime of percolation*, Probab. Theory Related Fields **88** (1991), 269–341. MR **92b**:60096.

Statement: The Editorial Boards Committee is charged with nominating mathematicians to serve on the editorial boards of AMS publications. In my view, the Committee has a dual purpose. First, it should make nominations reflecting the high standards of the AMS publications. Second, when consistent with the first goal, it should make nominations reflecting the broad interests and diversity of the mathematics community. I intend to pursue these goals by soliciting and carefully considering suggestions from the community at large.

Andrew Granville

*David C. Barrow Professor of Mathematics,
University of Georgia.*



Born: September 7, 1962, London, England.

Ph.D.: Queen's University, Kingston, Ontario, Canada, 1987.

Selected Addresses: XXVI National Congress of the Sociedad Matematica Mexicana, Morelia, Mexico 1993; 100th Anniversary of the Birth of

Harald Cramér, Stockholm, Sweden 1993; *L*-functional Classical Problems, Isaac Newton Institute, Cambridge, England 1993; International Congress of Mathematicians, Zurich, Switzerland 1994; AMS-MAA Mathfest, Burlington, Vermont, August 1995.

Additional Information: Alfred P. Sloan Research Fellowship, 1992–1995; Presidential Faculty Fellowship, 1994–1999; Hasse Prize, MAA, 1995. Editorial Boards: *New York Journal of Mathematics*, 1993–; *Electronic Journal of Combinatorics*, 1994–; *Journal of Number Theory*, 1995–; *Maple Technical Newsletter*, 1995–; *Ramanujan Quarterly* (forthcoming); Board of Directors, The Fibonacci Association, 1992–.

Selected Publications: 1. with J. B. Friedlander, *Limitations to the equidistribution of primes. I*, Ann. of Math. **129** (1989), 363–382. MR **90e**:11125; 2. with E. Bombieri and J. Pintz,

Squares in arithmetic progressions, Duke Math. J. **66** (1992), 369–385. MR **93d**:11106; 3. *Zaphod Beeblebrox's brain and the fifty-ninth row of Pascal's Triangle*, Amer. Math. Monthly **99** (1992), 318–331 (winner of the 1995 Hasse Prize for expository writing). MR **93a**:05008; 4. with R. Alford and C. Pomerance, *There are infinitely many Carmichael numbers*, Ann. of Math. **140** (1994), 703–722; 5. with K. Ono, *The classification of defect zero p -blocks for finite simple groups*, Trans. Amer. Math. Soc., to appear.

Statement: Perhaps the biggest challenge that mathematical publishing and the AMS must face over the next few years is the inevitable changes brought on by electronic publication. Most industry experts believe that the quality of the “on-screen page” will improve to paper quality within the next few years. Moreover, electronic journals are far cheaper, more accessible (you may fetch articles without leaving your office), more flexible (for instance, you may make “links” to references and add “comments” after publication), and more immediate, allowing quicker dissemination of results and ideas. It seems inevitable that AMS journals must embrace this new era, but, at the same time, we must safeguard quality while these changes take place. Since most of its current income derives from paper publication, the Society has adopted a cautious attitude toward electronic publication, probably because it feels threatened by a deep cut in revenues. Nonetheless, the AMS's mission is to serve the interests of its members and the cause of mathematics, while also being responsible financially; and, as a founding editor of two of the existing electronic journals, I will make sure that the Editorial Boards Committee and the AMS seek to take advantage of the tremendous opportunities that electronic publication offers while maintaining the traditional high standards of its journals.

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Ph.D.: Harvard University, 1970.

AMS Committees: Program Committee for National Meetings, 1994– (chair, 1995–).

Selected Addresses: International Congress of Mathematicians, Zurich, 1994.

Additional Information: Ford Award, 1984. Co-founder and co-editor-in-chief of the journal *Random Structures and Algorithms*. Member: AMS, MAA, SIAM.

Selected Publications: 1. with N. Alon, *The probabilistic method*, Wiley, New York, 1992. MR **93h**:60002; 2. co-editor (with R. L. Graham and B. L. Rothschild), *Ramsey theory*, second ed. Wiley, New York, 1990. MR **90m**:05003.