

# Biographies of Candidates 2003

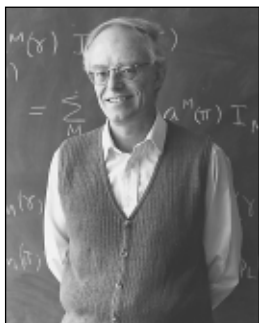
Biographical information about the candidates has been verified by the candidates, although in a few instances prior travel arrangements of the candidate at the time of assembly of the information made communication difficult or impossible. A candidate had the opportunity to make a statement of not more 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 her or his biographical information. A candidate with an asterisk (\*) beside her or his name was nominated in response to a petition.

## President

James G. Arthur



*University Professor of Mathematics, University of Toronto.*

**Born:** May 18, 1944, Hamilton, Ontario.

**Ph.D.:** Yale University, 1970.

**AMS Offices:** Member at Large of the Council, 1986–1988; Vice President, 1999–2001.

**AMS Committees:** Program Committee for National Meetings, 1989–1991; Committee on Committees, 1991–1992; Committee on Meetings and Conferences,

1999–2001.

**Selected Addresses:** Invited Speaker, International Congress of Mathematicians, Warsaw, 1983; Symposium on the Mathematical Heritage of Hermann Weyl, Durham, 1983; Jeffery-Williams Lecture, AMS-CMS-MAA Joint Mathematics Meetings, Vancouver, August 1993; Invited Speaker, International Congress of Mathematicians, Berlin, August 1998; Invited Address, AMS Conference on Mathematical Challenges of the 21st Century, Los Angeles, August 2000.

**Additional Information:** Alfred P. Sloan Fellowship, 1975–1977; Elected Fellow, Royal Society of Canada, 1980;

E.W.R. Steacie Memorial Fellowship, 1982; Synge Award, Royal Society of Canada, 1987; Elected Fellow, Royal Society of London, 1992; CRM-Fields Institute Prize, 1997; Henry Marshall Tory Medal, Royal Society of Canada, 1997; Canada Gold Medal for Science and Engineering, Natural Sciences and Engineering Research Council of Canada, 1999; Wilbur Lucius Cross Medal, Yale University Graduate School Alumni Association, 2000; Guggenheim Fellowship, 2000–2001; Elected Fellow, American Academy of Arts and Sciences, 2003.

**Selected Publications:** 1. The trace formula in invariant form, *Ann. of Math.* **114** (1981), 1–74. MR **84a**:10031; 2. A Paley-Wiener theorem for real reductive groups, *Acta Math.* **150** (1983), 1–89. MR **84k**:22021; 3. with L. Clozel, Simple algebras, base change, and the advanced theory of the trace formula, *Ann. of Math. Stud.*, vol. 120, Princeton University Press, Princeton, NJ, 1989. MR **90m**:22041; 4. The  $L^2$ -Lefschetz numbers of Hecke operators, *Invent. Math.* **97** (1989), 257–290. MR **91i**:22024; 5. A local trace formula, *Inst. Hautes Études Sci. Publ. Math.* **73** (1991), 5–96. MR **92f**:22029.

**Statement:** In some ways, mathematics is flourishing more than ever. Discoveries are being made across a wide range of seemingly unrelated mathematical areas, reinforcing the fundamental beauty and unity of the subject. Sophisticated mathematical ideas are being applied to all

parts of science and beyond in ways that would not have been thought possible. Highly motivated undergraduate and graduate students, inspired by recent advances, are bringing new energy to the subject. We are even the beneficiaries of newfound public sympathy for mathematics, which seems to stem from an intrinsic curiosity and fascination with the subject.

However, mathematics also faces serious challenges. Despite all of the recent advances in the subject, we continue to struggle for adequate support from granting agencies, universities, and industry. Support often comes at the price of increased demands upon the time of mathematicians, sometimes limiting their capacity to participate fully in the development of the subject. There remain talented students of mathematics, particularly among women and minorities, who do not receive the encouragement they deserve. For the majority of students who do not gravitate naturally toward mathematics, we need to do much more to help them meet increasing standards of mathematical literacy. The public goodwill we presently enjoy cannot be taken for granted. It will have to be nurtured by all of us if it is not to depend solely on the latest images from Hollywood.

The American Mathematical Society is the largest and most ambitious mathematical organization in the world. It is a major contributor to the vitality of mathematics on the national and international stages. In playing this role, the Society is dependent at any given time on very real contributions from many hundreds of mathematicians. That some of our most talented colleagues are prepared to commit their time and energy is a tribute to their pride in the Society and their belief in its ability to strengthen mathematics. The president has a responsibility to encourage all members to take pride in the Society and, indeed, in the enormous achievements of mathematics itself. With its large membership, the AMS can be a powerful force for bringing mathematical concerns to the attention of the broader community.

I feel deeply honored to have been nominated to stand for election as president. If I am elected, I will serve the AMS to the utmost of my ability. I would enjoy the opportunity to work within the Society on the challenges we face. I would also welcome the chance to represent mathematics to other scientists, as well as leaders of government, business, and education.

#### Donald G. Saari



*Distinguished Professor and Director, Institute for Mathematical Behavioral Sciences, University of California, Irvine.*

**Born:** March 9, 1940, Ironwood, Michigan.

**Ph.D.:** Purdue University, 1967.

**AMS Offices:** Member at Large of the Council, 1999–2001.

**AMS Committees:** Publications Committee, 1999–2001; *Bulletin* Editorial Committee, 1999– (chief

editor); Committee on Science Policy, 2000–2001; AMS-MAA-SIAM Joint Policy Board for Mathematics, 2000–2002; AMS-SIAM Committee to Select the Winner of the Birkhoff Prize, 2002 (chair).

**Selected Addresses:** AMS Invited Address, South Bend, March 1991; Invited Address, MAA Mathfest, Toronto, July 1998; Plenary Speaker, Mathematical and Experimental Physics, El Colegio Nacional, Mexico, 2001; 37th Netherlands Mathematisch Congress, Amsterdam, 2001; Inaugural Duncan Black Lecture, Public Choice Society, 2001; Principal Lecturer, CBMS Conference on the *N*-Body Problem, June 2002; *N*-Body Problem, Banff Research Center Opening Ceremony, 2003; Invited Address, MAA Mathfest, Boulder, August 2003.

**Additional Information:** *Academic positions:* Yale University Astronomy Department, 1967–1968 (postdoctoral); Northwestern University Mathematics Department: Assistant Professor, 1968–1970; Associate Professor, 1970–1974; Professor, 1974–2000; Department Chair, 1981–1984; Pancoe Professor of Mathematics, 1995–2000.

*Visiting positions:* Instituto Nacional de Matematica Pura e Aplicada, Université de Caen, Université de Paris, and numerous others; *Awards and honors:* MAA Ford Prize, 1985; Duncan Black Research Prize, Public Choice Society, 1991; Chauvenet Prize, 1995; Honorary Professor, Nanjing University, Nanjing, China, 1995; Guggenheim Fellow, 1998–1999; Allendoerfer Prize, 1999; Member, National Academy of Sciences, 2001; *Honorary doctorates:* Purdue University, 1989; Université de Caen, Caen, France, 1998; Michigan Technological University, 1999; *Editor:* *Celestial Mechanics and Dynamical Astronomy* (associate editor, 1972–1985, 1989–1996); *SIAM Journal on Mathematical Analysis*, 1973–1978 (associate editor), 1981–1986 (editor); *Economic Theory* Editorial Board, 1990; *Social Choice and Welfare*, 1997–2003 (associate editor). *American Astronomical Society:* Council, Division on Dynamical Astronomy, 1985–1987; Consultant, Commission on Celestial Mechanics, International Astronomical Union, 1985–1991. *MAA:* Chauvenet Prize Committee, 1996–1999 (chair, 1998–1999). *NRC:* U.S. National Committee on Mathematics for IMU, 1997–2002 (chair, 2000–2002); U.S. Delegation to the 2002 IMU General Assembly (chair); Mathematical Sciences Education Board, 2001–; Board on International Scientific Organizations, 2001–2003. *SIAM:* Publication Committee, 1981–1986; Organizing Committee, 1988 National Meeting (chair); Committee on Committees, 1995–1997. *Social Choice & Welfare:* Council, 2000–. Trustee: MSRI; Member: AMS, MAA, SIAM.

**Selected Publications:** 1. Improbability of collisions in Newtonian gravitational systems. II, *Trans. Amer. Math. Soc.* **181** (1973), 351–368. MR **47**:9919; 2. with Z. Zia, Off to infinity in finite time, *Notices Amer. Math. Soc.* **42** (1995), 538–546. MR **95m**:70002; 3. A chaotic exploration of aggregation paradoxes, *SIAM Rev.* **37** (1995), 37–52. MR **97a**:90008; 4. Mathematical structure of voting paradoxes. I: Pairwise votes, and II: Positional voting, *Econom. Theory* **15** (2000), 1–53, 55–102; MR **2001e**:91063 and MR **2001e**:91064; 5. *Chaotic Elections! A Mathematician Looks*

at *Voting*, Amer. Math. Soc., Providence, RI, 2001. MR 2002g:91001.

**Statement:** What an exciting time to be a mathematician! Consider what has happened over the last couple of decades: Several named problems have been answered and new mathematical areas and directions have been developed. Beyond important advances in core mathematics, applied mathematics has blossomed in previously unimaginable directions while other parts of the scientific and engineering establishments are becoming mathematically more sophisticated.

Thanks to the efforts of the AMS and its sister organizations working with the NSF Division of Mathematical Sciences, there is encouraging news about funding. However, as the evening news consistently reminds us, this is also a time of changing needs and priorities within society. So to ensure that this period of mathematical growth and excitement continues, it is crucial that the AMS remain strong, active, and alert.

To meet the shifting challenges of the time while seeking new opportunities, our objectives must be clear. As demonstrated by my activities, my concerns include: addressing the need for better support for fundamental research in core and applied mathematics; encouraging mathematical extensions and connections to other sciences and applications; finding ways to redirect highly talented undergraduates, women, and minorities toward the study of mathematics; enhancing the public image, understanding, and support of mathematics; paying more attention to the funding and future employment needs of our graduate students; working to improve mathematics education at all levels.

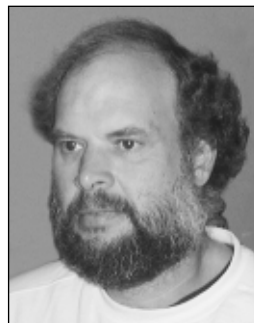
As the AMS's international membership illustrates, mathematics is a discipline without boundaries. The free flow of ideas and people must be promoted—and protected. Although we welcome the lead taken by organizations outside of mathematics on issues of importance to us (e.g., electronic publication and suggested changes in graduate education), I agree with concerns expressed at our recent AMS Council meeting that mathematicians must remain in control of that part of the agenda that pertains to us.

Perhaps it is because mathematics has been very good to me (so I try to repay her whenever and however I can) or perhaps it is my family background of community activism, but I have always enjoyed working with the three main professional mathematical societies to advance these goals. In addition to gaining leadership experience, I have had the opportunity to discuss these issues with mathematicians from a wide variety of departments across North America and throughout the world. What I have learned is encouraging: There is so much talent and so many good ideas within our community, and it all must be used. When promoting mathematics to the general public, whether on TV, radio, or in print, I've learned that the public wants to know more about what we do; they are curious. It is important to our discipline that we work harder to explain who we are, what we do, and why it is so crucial.

The AMS, perhaps the leading group in the mathematical sciences in the world, has done an excellent job in advancing our field. I am deeply honored to have been nominated for the presidency. But rather than a ceremonial post, this position is a responsibility and promised commitment to the mathematical community. If elected, I hope that my love affair with mathematics, my experience in promoting mathematics professionally and to the general public, my experience in working both in core and applications, my work within the AMS and other organizations, and my interests in education will help advance our Society.

## Vice President

Vaughan F. R. Jones



*Professor of Mathematics, University of California, Berkeley.*

**Born:** December 31, 1952, Gisborne, New Zealand.

**Ph.D.:** Université de Geneve, Switzerland, 1979.

**AMS Committees:** *Transactions and Memoirs* Editorial Committee, 1986–1987; Committee on Science Policy, 1987; Committee on Steele Prizes, 1992–1993; Nominating Committee, 1993–1995.

**Selected Addresses:** International Association of Mathematical Physicists, Swansea, 1988; Plenary Address, International Congress of Mathematicians, Kyoto, 1990; International Association of Mathematical Physicists, Brisbane, 1997.

**Additional Information:** F. W. W. Rhodes Memorial Scholarship, 1973; Alfred P. Sloan Research Fellowship, 1983; Guggenheim Fellowship, 1986; Fellow of the Royal Society, 1990; Fields Medal, 1990; New Zealand Government Science Medal (now Rutherford Medal), 1991; Honorary Fellow, Royal Society of New Zealand, 1991; Executive Committee, International Association of Mathematical Physics, 1991–1994; Honorary Vice President for Life, International Guild of Knot Tyers, 1992; Honorary D.Sc., University of Auckland, 1992; Corresponding Member, Australian Academy of Sciences, 1992; Elected Member, American Academy of Arts and Sciences, 1993; Honorary D.Sc., University of Wales, 1993; Elected Member, National Academy of Sciences, 1999; Onsager Medal, Trondheim University, 2000; Elected Foreign Member, Norwegian Royal Society of Letters and Sciences, 2001; Elected Honorary Member, London Mathematical Society, 2002; Director, New Zealand Mathematics Research Institute; **Past or present editor or associate editor:** *Advances in Mathematics*; *Annals of Mathematics*; *Geometry and Topology Journal*; *Journal of Mathematical Chemistry*; *Journal of Operator Theory*; *L'Enseignement Mathématique*; *New Zealand Journal of Mathematics*; *Pacific Journal of Mathematics*; *Reviews in Mathematical Physics*; *Russian Journal of Mathematical Physics*; **Scientific advisory boards:** Center for Communications Research; Erwin Schrödinger Institute; Fields Institute of Mathematics; Institut Henri Poincaré;

Mathematical Sciences Research Institute; Miller Institute for Basic Research in Sciences.

**Selected Publications:** 1. Index for subfactors, *Invent. Math.* **72** (1983), 1–25. MR **84d**:46097; 2. A polynomial invariant for knots via von Neumann algebras, *Bull. Amer. Math. Soc.* **12** (1985), 103–111. MR **86e**:57006; 3. with K. Schmidt, Asymptotically invariant sequences and approximate finiteness, *Amer. J. Math.* **109** (1987), 91–114. MR **88h**:28021; 4. On knot invariants related to some statistical mechanical models, *Pacific J. Math.* **137** (1989), 311–334. MR **89m**:57005; 5. Planar algebras, I, preprint, to appear in *New Zealand J. Math.*

**Statement:** I view mathematics as part of a continuous spectrum of science. Mathematics is important both in its own right and as a tool for the sciences. In chemistry and physics the role of mathematics is familiar to all. In biology its importance is increasing as the revealing of the genetic code in all its complexity creates a demand for a new branch of combinatorics and new algorithms to handle huge data sets.

I see it as important that the AMS should, in addition to looking after its members' interests in mathematics for its own sake and mathematics education, make all efforts to strengthen connections with the rest of science. This is not always easy, because questions as simple as vocabulary can create a huge gulf and a perception by the rest of the scientific community that mathematicians do not want to take time to think about anything other than mathematics.

#### Nolan R. Wallach



*Professor of Mathematics, University of California, San Diego.*

**Born:** August 3, 1940, Brooklyn, New York.

**Ph.D.:** Washington University, St. Louis, Missouri, 1966.

**AMS Offices:** Member at Large of the Council, 1999–2001.

**AMS Committees:** Editorial Boards Committee, 1991–1993 (chair, 1992); *Bulletin* Editorial Committee (associate editor, Research–Expository Surveys),

1995–1996; Committee on Science Policy, 1999–2001.

**Selected Addresses:** AMS Invited Address, Washington, DC, January 1975; International Congress of Mathematicians, Helsinki, August 1978; AMS-MAA Invited Address, Louisville, January 1990; Plenary Address, Japan Mathematical Society, September 1990; Invited Lecture, MSRI Special Session on Quantum Computing, June 2000.

**Additional Information:** Alfred Sloan Fellowship, 1972–1974; Visiting Professor, University of Paris, 1973; Linback Award for Research Excellence, Rutgers University, 1977; National Mathematics Committee, 1985–1992; Honorary Professor, University of Cordoba, Argentina, 1989; Visiting Professor, University of Tokyo, 1990; NSF Postdoctoral Selection Committee, 1992–1994 (chair, 1994); NSF

Young Investigator Selection Committee, 1993; Associate Editor, *Annals of Mathematics*, 1997–2003; Visiting Professor, Poitiers University, 2001; Member: AMS.

**Selected Publications:** 1. with S. Aloff, An infinite family of distinct 7-manifolds admitting positively curved Riemannian structures, *Bull. Amer. Math. Soc.* **81** (1975), 93–97. MR **51**:6851; 2. The analytic continuation of the discrete series. I, II, *Trans. Amer. Math. Soc.* **251** (1979), 1–17, 19–37. MR **81a**:22009; 3. with B. Gross, On quaternionic discrete series representations, and their continuations, *J. Reine Angew. Math.* **481** (1996), 73–123. MR **98f**:22022; 4. with R. Goodman, *Representations and Invariants of the Classical Groups*, Encyclopedia Math. Appl., vol. 68, Cambridge University Press, Cambridge, 1998. MR **99b**:20073; 5. with D. Meyer, Global entanglement in multiparticle systems, *J. Math. Phys.* **43** (2002), 4273–4278.

**Statement:** The leadership of the AMS has become an excellent advocate for the mathematical sciences in society through tireless networking at all levels of government in cooperation with other scientific societies.

There is another advocacy that is just as important but does not necessarily affect directly the normal leadership of the AMS. Mathematics departments are the poor relations of the other sciences. Compared with other scientists, mathematicians have higher teaching loads, larger classes, and lower salaries. The AMS has done a commendable job of averting catastrophic problems (such as the situation at the University of Rochester). However, AMS policies have done little to improve the working environment of mathematicians. My appeal is not for my own generation but for future generations for whom the situation will almost certainly become worse without some intervention.

In my professional career there have been two types of success that have given me the greatest pleasure. The first is when a mathematical idea explodes in my mind. The second is when I see the gleam of understanding in a student. I hope that I can be of help to future generations so that they may sample the same pleasures.

#### Trustee

##### Lenore Blum



*Distinguished Career Professor, Computer Science Department, Carnegie Mellon University.*

**Born:** December 18, 1942, New York, New York.

**Ph.D.:** Massachusetts Institute of Technology, 1968.

**AMS Offices:** Member at Large of the Council, 1978–1980; Vice President, 1990–1992.

**AMS Committees:** Committee on Opportunities in Mathematics for

Disadvantaged Groups, 1978–1980; Committee on the Human Rights of Mathematicians, 1984–1986; Strategic Planning Task Force, 1991; Committee on Committees, 1991–1994 (chair, 1991–1992); Committee on International Affairs, 1993–1995; Liaison Committee with AAAS,



1995–2003; Short Course Subcommittee, 1996–1998; Program Committee for National Meetings, 2002–; AMS-MAA Joint Program Committee for the January 2004 Phoenix Meeting.

**Selected Addresses:** AMS Invited Address, Phoenix, 1989; International Congress of Mathematicians, Kyoto, 1990; MAA Invited Address, San Francisco, 1995; European Logic Colloquium, Sorbonne, Paris, 2000; AWM Emmy Noether Lecture, San Diego, 2001.

**Additional Information:** Founding Head, Department of Mathematics and Computer Science, Mills College; President, AWM, 1975–1978; Founding Co-Director, Math/Science Network and its Expanding Your Horizons conferences, 1975–1981; Elected Fellow, AAAS, 1979; U.S. Delegate, International Mathematics Union, Kobe, 1990; AMS Representative, Pan-African Congress of Mathematicians, Nairobi, 1991; Deputy Director, MSRI, 1992–1996; Chair, Mathematics Section, AAAS, 1998–1999; Doctor of Law, Honoris Causa, Mills College, 1999.

**Selected Publications:** 1. Differentially closed fields: A model theoretic tour, *Contributions to Algebra: A Collection of Papers Dedicated to Ellis Kolchin* (Bass, Cassidy, and Kovacic, eds.), Academic Press, New York, 1977, pp. 37–61. MR 58:10415; 2. with M. Blum and M. Shub, A simple unpredictable pseudorandom number generator, *SIAM J. Comput.* **15** (1986), 364–383. MR 87k:65007; 3. with M. Shub, Evaluating rational functions: Infinite precision is finite cost and tractable on average, *SIAM J. Comput.* **15** (1986), 384–398. MR 87k:68060; 4. with F. Cucker, M. Shub, and S. Smale, Algebraic settings for the problem  $P \neq NP?$ , *The Mathematics of Numerical Analysis*, Lectures in Appl. Math., vol. 32, Amer. Math. Soc., Providence, RI, 1996, pp. 125–144. MR 98a:68064; 5. with F. Cucker, M. Shub, and S. Smale, *Complexity and Real Computation*, Springer-Verlag, New York, 1998. MR 99a:68070.

**Statement:** The ongoing and future health of the mathematics community and the AMS, in particular, depends on the many multifaceted and diverse contributions and vision of its members—in research, education, communication, leadership, and public understanding. Throughout my own professional career, I have worked to create innovative and exciting ways to encourage broad appreciation of, and involvement in, mathematics.

As AWM president, I helped to create programs to increase women’s participation in mathematics and served on panels on mathematics in government, business and industry. During my term as AMS vice president, I worked to open communication with the African mathematics community. As deputy director of MSRI I helped to establish the Human Resources Advisory Committee (HRAC) and the “Conversations” between mathematics researchers and mathematics teachers. My other outreach efforts to the public-at-large and to the wider science community include my involvement in MSRI’s Fermat Fest and (while chair of the AAAS Mathematics section) my work as organizer of the AAAS sessions on the “Reasonable Effectiveness of Mathematics”.

I would bring this experience and perspective, along with considerable enthusiasm for the enterprise, to the role of Trustee.

## Linda Keen



*Professor of Mathematics, Herbert H. Lehman College (CUNY).*

**Born:** August 9, 1940, New York, New York.

**Ph.D.:** New York University, 1964.

**AMS Offices:** Member at Large of the Council, 1981–1983; Vice President, 1992–1995; Board of Trustees, 1999– (chair, 2002).

**AMS Committees:** Nominating Committee, 1983–1984 (chair, 1984); Committee on Professional Ethics, 1987–1989, 1999 (chair,

1988–1989); Program Committee for National Meetings, 1987–1988; Undergraduate Mathematics Education (UME) Trends Editorial Committee, 1989–1991; Editorial Boards Committee, 1989–1992 (chair, 1991); Committee to Select the Winner of the Satter Prize, 1991 (chair); Representative, Joint Policy Board on Mathematics, 1992–1995; Committee on Committees, 1992–1996; Science Policy Committee, 1993–1995; Advisory Committee on Professional Ethics, 1993–1994 (chair), and Committee on Procedures for the Committee on Professional Ethics, 1995 (chair); Meetings and Conferences Committee, 1994; Ad Hoc Committee on Governance, 1994; Federal Policy Agenda Statement, 1994–1995; *Proceedings* Editorial Committee, 1994– (coordinating editor); *Conformal Geometry and Dynamics: An Electronic Journal of the AMS*, 1997– (managing editor and chair of editorial committee); Committee on Publications, 2001–2003; Long Range Planning Committee, 2002; Investment Committee, Board of Trustees, 2003.

**Selected Addresses:** AMS Invited Address, Washington, DC, January 1975; MAA Invited Hour Address, Boulder, August 1989; Emmy Noether Lecturer, January 1993; AIM Conference in Honor of Lars Ahlfors, Stanford University, September 1997; London Mathematical Society-Irish Mathematical Society Invited Hour Address, May 1998.

**Additional Information:** AWM Executive Committee, 1978–1981; Charter Member, NYC Mayor’s Commission for Science and Technology, 1985–1986; AWM President, 1985–1986; CBMS Executive Committee, 1985–1987; Steering Committee, International Congress of Mathematicians, 1986; U.S. National Committee on Mathematics, 1988–1993 (chair, 1990–1993); NSF Visiting Professorship for Women, 1989–1990; Edwin S. Webster-Abby Rockefeller Mauze Award, MIT, 1990; AWM Long Range Planning Committee, 1992–1993; AWM Nominating Committee, 1993.

**Selected Publications:** 1. Intrinsic moduli on Riemann surfaces, *Ann. of Math.* **84** (1966), 404–420. MR 34:2859; 2. with L. Goldberg, The mapping class group of a generic quadratic rational map and automorphisms of the 2-shift, *Invent. Math.* **101** (1990), 335–372. MR 91h:30041; 3. with P. Blanchard and R. Devaney, The dynamics of complex polynomials and automorphisms of the shift, *Invent. Math.* **104** (1991), 545–580. MR 92f:58150; 4. with C. Series, Pleating coordinates for the Maskit embedding of the Teichmüller space of punctured tori, *Topology* **32** (1993), 719–749. MR 95g:32030; 5. with C. Series, Pleating

invariants for quasifuchsian groups: punctured tori, *Topology*, 2003 (to appear).

**Statement:** The AMS is a multifaceted organization whose primary mission is to foster good mathematics. It does this primarily as a publisher and as a sponsor for meetings and conferences. Another of the AMS's very important responsibilities is to recognize mathematics as a profession by giving prizes and by reaching outside the profession to get support.

Finally, the AMS has a responsibility for encouraging all those who want to do mathematics to take part. This includes presenting ourselves and our work to the broadest possible audience.

I've been involved with the Society in many different roles over the years: as a Council member, as a member of committees (such as the one on professional ethics), and as an editor. I have worked hard to make the AMS effective on all fronts. As a trustee I have had the responsibility for making decisions on all matters with financial implications. The Society's finances reflect the complexity of its responsibilities, and in each year of my term, I have learned about new parts of that structure. As a second term trustee I will bring this knowledge and perspective to guide me in helping set policy that best supports both our people and our work as researchers and educators.

### Member at Large of the Council

James W. Cannon



*Orson Pratt Professor of Mathematics, Brigham Young University.*

**Born:** January 30, 1943, Bellefonte, Pennsylvania.

**Ph.D.:** University of Utah, 1969.

**Selected Addresses:** AMS Invited Address, Seattle, August 1977; International Congress of Mathematicians, Helsinki, 1978; MAA Hedrick Lecturer, Toronto, 1982.

**Additional Information:** Professor, University of Wisconsin,

Madison, 1977–1985; Trustee and Vice Chair, Board of Trustees, MSRI, 1994–1998; Governor, MAA Intermountain Section, 1999–2001.

**Selected Publications:** 1. with C. E. Burgess, Embeddings of surfaces in  $E^3$ , *Rocky Mountain J. Math.* **1** (1971), 259–344. MR **43**:4008; 2. The recognition problem: What is a topological manifold? *Bull. Amer. Math. Soc.* **84** (1978), 832–866. MR **58**:13043; 3. The combinatorial structure of cocompact discrete hyperbolic groups, *Geom. Dedicata* **16** (1984), 123–148. MR **86j**:20032; 4. The combinatorial Riemann mapping theorem, *Acta Math.* **173** (1994), 155–234. MR **95k**:30046; 5. with G. R. Conner and A. Zastrow, One-dimensional sets and planar sets are aspherical, *Topology Appl.* **120** (2002), 23–45.

**Statement:** Please bend my ear; I will listen. I love the mathematical enterprise. I want people of all sorts, nationalities, sizes, genders, and persuasions to know about it, appreciate it, and participate in it.

Sylvain E. Cappell



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

**Born:** September 10, 1946, Brussels, Belgium.

**Ph.D.:** Princeton University, 1969.

**AMS Committees:** Contemporary Mathematics Editorial Committee, 1989–1991; Committee on Steele Prizes, 1991–1992 (chair, 1992); Nominating Committee, 1996–1998; Committee on Professional Ethics, 1999–2001.

**Selected Addresses:** International Congress of Mathematicians, Helsinki, 1978; AMS Invited Address, Syracuse, October 1978; Principal Speaker, CBMS Lecture Series, Virginia Polytechnical University, 1987; Clifford Lectures, Tulane University, 1990; Conference on Symplectic Geometry and Its Applications, Cambridge University, 1994; AMS-MAA Invited Address, Seattle, August 1996.

**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, The action of the Torelli group on the homology of representation spaces is nontrivial, *Topology* **39** (2000), 851–871. MR **2001g**:57034; 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, Surgery theoretic methods in group actions, *Surveys on Surgery Theory* (S. Cappell, A. Ranicki, and J. Rosenberg, eds.), Ann. of Math. Stud., vol. 149, Princeton Univ. Press, Princeton, NJ, 2001, pp. 285–317. MR **2002a**:57046.

**Statement:** My experiences have familiarized me with some of the concerns of AMS members, and I hope that could help me if I serve as Member at Large. During my student years, I worked in both government and industrial labs. I have since been working in academic institutions where my experience includes chairing (now and for many years) Courant Institute's Math Appointments and Promotions Committee, chairing (now and for many years) my university's Research Challenge Fund Committee (awarding research support in all areas), chairing or serving on many math department external review committees at public and private institutions, and serving on public and private foundation review committees in the U.S. and abroad. I have long been coordinating the mathematics outreach efforts and faculty development workshops of the Faculty Resource Network (linked to the National Leadership Alliance) and have long been actively involved in mentoring in and aiding precollege math education programs in New York area schools.

**Beverly E. J. Diamond**



*Professor of Mathematics, College of Charleston.*

**Born:** July 5, 1956, Charlottetown, Prince Edward Island, Canada.

**Ph.D.:** University of Manitoba, 1982.

**Selected Addresses:** Six AMS Special Sessions, 1992–2000; Southeast Spring Topology Conference, 1996; Midwest Dynamics Conference, Florida, 2000; University of Maryland–Penn State Workshop on Dynamical Systems, 2001.

**Additional Information:** AAUW Fellowship, 1988; NSF Program Director, 1996–1998; Grant selection panels: AAUW, 1995; NSF, 1999; AWM, 2001; Associate Editor, *The American Mathematical Monthly*, 2001–.

**Selected Publications:** 1. with M. Barge, Dynamics on one-dimensional branched manifolds via inverse limit spaces, *Trans. Amer. Math. Soc.* **334** (1994), 773–790; 2. with M. Barge, Homeomorphisms of inverse limit spaces of one-dimensional maps, *Fund. Math.* **146** (1995), 171–187. MR **96b**:54048; 3. with M. Barge, Subcontinua of the closure of the unstable manifold at a homoclinic tangency, *Ergodic Theory Dynam. Systems* **19** (1999), 289–307. MR **2000f**:37025; 4. with M. Barge, Stable and unstable manifold structures in the Hénon family, *Ergodic Theory Dynam. Systems* **19** (1999), 309–338. MR **2000i**:37057; 5. with M. Barge, A complete invariant for the topology of one-dimensional substitution tiling spaces, *Ergodic Theory Dynam. Systems* **21** (2001), 1333–1358. MR **2002k**:37026.

**Statement:** The AMS has the broad mandate of furthering the interests of mathematical research and scholarship. Over the last two decades, the organization has met that mandate in two ways. It has continued to contribute in traditional ways with its very successful meetings and publication programs. At the same time, it has met the challenge of communicating and integrating with several other communities.

With an uncertain economy in our immediate future, issues of policy and priorities, both internal and external, will arise. I would enjoy having an opportunity to contribute to that discussion and to the ongoing work of the AMS.

**Mark Goresky**

*Member, Institute for Advanced Study, Princeton, New Jersey.*

**Born:** December 27, 1950, Regina, Canada.

**Ph.D.:** Brown University, 1976.

**AMS Committees:** AMS representative, NSF Postdoctoral Selection Committee, 1996–1998 (chair, 1998).

**Selected Addresses:** AMS Invited Address, Atlanta, January 1988; Plenary Address, 50th Anniversary Meeting, Canadian Mathematical Society, 1995; Zabrodsky Memorial Lectures, Jerusalem, 1996.

**Additional Information:** Sloan Foundation Fellowship, 1981; Fellow of the Royal Society of Canada, 1986; Jeffery-Williams Prize, Canadian Mathematical Society, 1996; AMS

Steele Prize for Seminal Contribution to Research (jointly received with Robert MacPherson), 2002; Member: European Mathematical Society, IEEE, International Association for Cryptologic Research, SIAM, SMF. Homepage: <http://www.math.ias.edu/~goresky>.

**Selected Publications:** 1. with R. MacPherson, Intersection homology theory, *Topology* **19** (1980), 135–162. MR **82b**:57010; 2. with R. MacPherson, *Stratified Morse Theory*, *Ergeb. Math. Grenzgeb.* (3), vol. 14, Springer-Verlag, Berlin, 1988. MR **90d**:57039; 3. with R. Kottwitz and R. MacPherson, Equivariant cohomology, Koszul duality, and the localization theorem, *Invent. Math.* **131** (1998), 25–83. MR **99c**:55009; 4. with A. Klapper, Fibonacci and Galois representations of feedback-with-carry shift registers, *IEEE Trans. Inform. Theory* **48** (2002), 2826–2836; 5. with R. MacPherson, The topological trace formula, *Crelle's Journal*, to appear.

**Statement:** The ability of an individual Council member to influence the direction of the AMS is somewhat less than epsilon. And there are so many things the AMS does really well. The computerization of *Mathematical Reviews*, for example, has changed the way we search the literature. The AMS is one of the few reliable and affordable mathematics publishers left in the world.

The program of AMS regional meetings is excellent. If elected, I will use whatever little influence I might have to see that the AMS continues to support and encourage high-quality basic research in mathematics, perhaps by reducing the cost of some of its pricier books, by maintaining the quality of its journals and their editorial boards, and by strengthening its ties to other mathematical organizations such as the European Mathematical Society, SIAM, MAA, NSF, NSA, and IEEE.

**Jacques Hurtubise**



*Professor of Mathematics, McGill University.*

**Born:** March 12, 1957, Montreal, Quebec, Canada.

**Ph.D.:** Oxford University, 1982.

**Selected Addresses:** Seven AMS Special Sessions, 1986–2003; Coxeter–James Lecture, 1993 Canadian Mathematical Society Winter Meeting; AMS Invited Address, Cincinnati, January 1994; Séminaire de Mathématiques Supérieures, 1995 and 1999.

**Additional Information:** Member, Institute for Advanced Study, 1987–1988; Visiting Professor, Stanford University, spring 1992; Associate Editor, *Canadian Mathematical Bulletin* and *Canadian Journal of Mathematics*, 1994–1999; Vice President, Canadian Mathematical Society, 1997–1999; Director, Centre de recherches mathématiques, Montreal, 1999–; President, Network for Computing and Mathematical Modelling, Montreal, 1999–.

**Selected Publications:** 1. with M. K. Murray, On the construction of monopoles for the classical groups, *Comm. Math. Phys.* **122** (1989), 35–89. MR **91d**:58037; 2. with



C. P. Boyer, B. M. Mann, and R. J. Milgram, The topology of instanton moduli spaces. I. The Atiyah–Jones conjecture, *Ann. of Math. (2)* **137** (1993), 561–609. MR **94h**:55010; 3. with C. P. Boyer, B. M. Mann, and R. J. Milgram, The topology of the space of rational maps into generalized flag manifolds, *Acta Math.* **173** (1994), 61–101. MR **95h**:55007; 4. Integrable systems and algebraic surfaces, *Duke Math. J.* **83** (1996), 19–50. MR **97c**:14032a; 5. with E. Markman, Rank 2-integrable systems of Prym varieties, *Adv. Theor. Math. Phys.* **2** (1998), 633–695. MR **99k**:14073.

**Statement:** These are exciting times for mathematics, with all sorts of new ties being forged, both within the discipline and with other fields. A professional society such as the AMS has an important role to play in developing the discipline. The AMS has a unique role in that it provides an essential service not only to American mathematicians but also to the world's. For all of these reasons it will be a pleasure and an honor to serve on the AMS Council.

#### Kevin P. Knudson\*



Assistant Professor of Mathematics,  
Mississippi State University.

**Born:** October 7, 1969, Wausau,  
Wisconsin.

**Ph.D.:** Duke University, 1996.

**Selected Addresses:** Great Lakes  
K-Theory Conference, Evanston,  
April 1997; Colloquium, Depart-  
ment of Mathematics and Statistics,  
University of Nebraska-Lincoln,  
September 2001; Ontario Topology  
Seminar, London, ON, October 2001;  
AMS Special Sessions: Arrangements

in Topology and Algebraic Geometry, and Algebraic Number Theory and K-Theory, Baton Rouge, March 2003.

**Additional Information:** Alfred P. Sloan Foundation Doctoral Dissertation Fellowship, 1995–1996; NSF Mathematical Sciences Postdoctoral Fellowship, August 1996–August 1999; Wayne State University Board of Governors Faculty Recognition Award, May 2002; Co-organizer, AMS Special Sessions: Algebraic K-Theory and Motivic Cohomology, Chicago, September 1998; and Group Cohomology in Algebra and Geometry, Chapel Hill, October 2003; Member: AMS.

**Selected Publications:** 1. The homology of special linear groups over polynomial rings, *Ann. Sci. École Norm. Sup. (4)* **30** (1997), 385–415. MR **98c**:20087; 2. On the K-theory of elliptic curves, *J. Reine Angew. Math.* **507** (1999), 81–91. MR **2000b**:20056; 3. Relative completions of linear groups over  $\mathbb{Z}[t]$  and  $\mathbb{Z}[t, t^{-1}]$ , *Trans. Amer. Math. Soc.* **352** (2000), 2205–2216. MR **2000j**:20081; 4. Homology of linear groups, *Progress in Mathematics*, vol. 193, Birkhäuser-Verlag, Basel, 2001. MR **2001j**:20070; 5. Relative completions and the cohomology of linear groups over local rings, *J. London Math. Soc. (2)* **65** (2002), 183–203. MR **2002m**:20077.

**Statement:** As mathematicians we have two primary tasks—research and education. The AMS is no different. As government budgets shrink and student enthusiasm

wanes, it is the Society's mission to remind everyone that mathematics is the queen of the sciences. This includes lobbying funding agencies to support mathematical research and reaching out to young people and their teachers to excite them about our field, to remind them that they loved to count once upon a time.

Getting people in the door is only part of the job, however. The AMS must take steps to retain them by promoting education at the undergraduate and graduate levels and by pushing for expanded job opportunities for young mathematicians. The 1990s were, by and large, a dismal time to be a new Ph.D. in mathematics; many talented individuals left the field. The Society's lobbying efforts should include an emphasis on this problem. A few programs (VIGRE, Centennial Fellowships, etc.) deal with this issue, but more needs to be done to ensure the future health of our discipline.

I am committed to improving the state of American mathematics. I would be honored to pursue this end as a Member at Large of the Council.

#### Michael T. Lacey



Professor and Associate Chair for  
Undergraduate Studies, Georgia  
Institute of Technology.

**Born:** September 26, 1959, Abilene,  
Texas.

**Ph.D.:** University of Illinois at  
Urbana-Champaign, 1987.

**Selected Addresses:** AMS Invited  
Address, Atlanta, October 1997;  
Invited Address, International  
Congress of Mathematicians,  
Berlin, 1998; Plenary Address,  
Young Analysts Meeting, Furman

University, South Carolina, 2001; Invited Address, Oberwolfach, Germany, 2002; Short Course on Harmonic Analysis, Erwin Schrödinger Institute, Vienna, Austria, 2003.

**Additional Information:** Raphael Salem Prize (with Christoph Thiele), 1997.

**Selected Publications:** 1. with C. Thiele,  $L^p$  estimates on the bilinear Hilbert transform for  $2 < p < \infty$ , *Ann. of Math.* **146** (1997), 693–724. MR **99b**:42014; 2. with C. Thiele, On Calderón's conjecture, *Ann. of Math.* **149** (1999), 475–496. MR **2000d**:42003; 3. The bilinear maximal functions map into  $L^p$  for  $2/3 < p \leq 1$ , *Ann. of Math.* **151** (2000), 35–57. MR **2001b**:42015; 4. with C. Thiele, A proof of boundedness of the Carleson operator, *Math. Res. Lett.* **7** (2000), 361–370. MR **2001m**:42009; 5. with P. Auscher, S. Hofmann, A. McIntosh, and Ph. Tchamitchian, The solution of the Kato square root problem for second order elliptic operators on  $\mathbb{R}^n$ , *Ann. of Math.* **156** (2002), 633–654.

**Statement:** My central concerns as a member of the mathematics community are creating beautiful mathematics and fostering the next generation of mathematicians. Current issues and problems facing the American Mathematical Society are diverse. External funding for a broader range



of currently active research mathematicians remains at challenging levels. Funding of programs designed to promote graduate students through the Ph.D. are having an important effect on the manner and methods used to train these students. Fascinating applications of deep mathematics to a range of applied and computational areas continue to grow and point to solutions of new computationally difficult problems. The role of U.S. mathematicians in the development of a worldwide discipline should also be maintained and improved.

It would be a privilege to contribute to the Council's deliberations as a Member at Large of the Council.

**Fred S. Roberts**



*Professor of Mathematics, Rutgers University, New Brunswick, and Director, DIMACS (Center for Discrete Mathematics and Theoretical Computer Science), a consortium of Rutgers and Princeton Universities, AT&T Labs, Bell Labs, NEC Laboratories America, and Telcordia Technologies.*

**Born:** June 19, 1943, New York, New York.

**Ph.D.:** Stanford University, 1968.

**AMS Committees:** Cooperative

Symposia Committee, 1991–1992; Liaison Committee with the AAAS, 1997–.

**Selected Addresses:** Invited Address, SIAM National Meeting, California Institute of Technology, 1974; MAA National Meeting, Biloxi, 1979; International Congress on Mathematics Education, Berkeley, 1980; Beijing Mathematical Society, 1985; Plenary Speaker and Organizing Committee Member, Second International Conference on Ordinal Data Analysis, Amherst, October 1993; Royal Nepal Academy of Science and Technology, Nepal, 1998.

**Additional Information:** *Societal Institute for the Mathematical Sciences:* Board of Directors, 1983–1992; Secretary, 1987–1992; **Recent prizes:** ACM-SIGACT Distinguished Service Award, 1999; NSF Science and Technology Centers Pioneer Award, 2001; **Publications:** Author of some 145 scientific articles and 4 books, and editor of 14 books covering such varied topics as energy modeling, reliability of computer and communication networks, mathematical psychology, computational biology, and precollege discrete mathematics.

**Selected Publications:** 1. *Discrete Mathematical Models with Applications to Social, Biological and Environmental Problems*, Prentice-Hall, Englewood Cliffs, 1976 (Russian Translation, “Nauka”, Moscow, 1986). MR 88e:00020; 2. *Graph Theory and Its Applications to Problems of Society*, CBMS-NSF Regional Conf. Ser. Appl. Math., vol. 29, SIAM, Philadelphia, 1979. MR 80g:90036; 3. *Measurement Theory, with Applications to Decisionmaking, Utility and the Social Sciences*, Encyclopedia Math. Appl., vol. 7, Addison-Wesley, Reading, MA, 1979. MR 81b:90003; 4. *Applied Combinatorics*, Prentice-Hall, Englewood Cliffs, 1984. MR 85h:05001;

5. *Contemporary Trends in Discrete Mathematics* (R. Graham, J. Kratochvil, J. Nešetřil, and F. Roberts, eds.), DIMACS Ser. Discrete Math. Theoret. Comput. Sci., vol. 49, Amer. Math. Soc., Providence, RI, 1999. MR 2000d:00009.

**Statement:** I would bring to the Council interests in a wide range of applications of mathematics in the social, behavioral, biological, and environmental sciences and to problems of communication and transportation. In the past two years, my own work has turned to uses of mathematical methods in homeland security, specifically defense against bioterrorist attacks, and more generally to problems of epidemiology and public health, and I believe that mathematics has a very useful role to play in these fields.

I have organized almost fifty scientific meetings and several multiyear programs of workshops and research working groups on mathematical support for molecular biology and computational and mathematical epidemiology, so I know a lot about what makes meetings work and also about interdisciplinary activities. I have extensive connections with mathematical sciences groups in industry and feel I understand both the needs of mathematicians in industry and the role that they can play in furthering the mathematical sciences enterprise. Having been involved in programs ranging from K–12 education to interdisciplinary postdoctoral training, I also have a long-standing interest in mathematics education at all levels and believe that AMS involvement in educational programs and activities is important.

**Alejandro Uribe**



*Professor, Mathematics Department, University of Michigan, Ann Arbor.*

**Born:** 1955, Mexico City, Mexico.

**Ph.D.:** Massachusetts Institute of Technology, 1982.

**AMS Committees:** Centennial Fellowships Committee, 2000–2002.

**Selected Addresses:** Colloquium, University of Wisconsin-Madison, November 1998; AMS Special Session on Hamiltonian Mechanics: Applications to Celestial Mechanics and Chemistry, San Antonio, January 1999; AMS Special Session on Functional Analysis and Its Applications, Denton, May 1999; Colloquium, University of Toronto, fall 1999; Colloquium, Purdue University, fall 1999; Invited Lecture Series Speaker, Aspects of Quantization, Centre de Recherches Mathématiques, Montreal, August 2001.

**Additional Information:** Invited Professor, École Normale Supérieure, Paris, June 2000; Associate Chair for Education, University of Michigan Mathematics Department, 2000–2001; Interim Chair, University of Michigan Mathematics Department, 2001–2002; Plenary Session Panelist, Michigan Mathematics Forum on the Mathematical Preparation of Elementary School Teachers, March 2002; Member: AMS, IAS (1989–1990), MSRI (fall 1998, March 2001, and May 2003), Société Mathématique de France, Sociedad Matemática Mexicana.

**Selected Publications:** 1. with V. Guillemin, Circular symmetry and the trace formula, *Invent. Math.* **96** (1989), 385–423. MR **90e**:58159; 2. with D. Borthwick and T. Paul, Legendrian distributions with applications to relative Poincaré series, *Invent. Math.* **122** (1995), 359–402. MR **97a**:58188; 3. with D. Borthwick and T. Paul, Semiclassical spectral estimates for Toeplitz operators, *Ann. Inst. Fourier (Grenoble)* **48** (1998), 1189–1229. MR **2000c**:58048; 4. with D. Borthwick, Nearly Kählerian embeddings of symplectic manifolds, *Asian J. Math.* **4** (2000), 599–620. MR **2001m**:53166; 5. with A. Bloch, F. Golse, and T. Paul, Dispersionless Toda and Toeplitz operators, *Duke Math J.* **117** (2003), 157–196.

**Statement:** I consider excellence in research (both pure and interdisciplinary) and in education to be the fundamental goals of our profession. In these uncertain times it is especially important to work to maintain these goals sharply in focus, both within academia and in our society at large. I would work in the direction of these goals, if elected, especially in supporting the research of young mathematicians, promoting the development of sound pedagogical tools, and fighting against the “math phobia” so pervasive outside mathematics departments.

## Nominating Committee

### Annalisa Crannell



Associate Professor of Mathematics, Franklin & Marshall College.

**Born:** March 26, 1966, Palo Alto, California.

**Ph.D.:** Brown University, 1992.

**AMS Committees:** AMS-MAA-SIAM Joint Committee on Employment Opportunities, 1994 (consultant), 2003–; Committee on the Profession, 1994–2000; Short Course Subcommittee, 2000–2002.

**Selected Publications:** 1. The role of transitivity in Devaney’s definition of chaos, *Amer. Math. Monthly* **102** (1995), 788–797. MR **96j**:58107; 2. The existence of many periodic non-travelling solutions to the Boussinesq equation, *J. Differential Equations* **126** (1996), 169–183. MR **97a**:35197; 3. with M. Martelli, Dynamics of quasicontinuous systems, *J. Differ. Equations Appl.* **6** (2000), 351–361. MR **2001d**:37012; 4. with B. Shanfelder, Chaotic results for a triangular map of the square, *Math. Mag.* **73** (2000), 13–20. MR **2002c**:37063; 5. with R. Kopperman, Setwise quasi-continuity and  $\Pi$ -related topologies, *Real Anal. Exchange* **26** (2000/01), 609–622. MR **2002d**:54021.

**Statement:** The Nominating Committee has the task of proposing candidates for election to various offices of the Society. This means, of course, that the Nominating Committee should have a good knowledge of the membership and of potential candidates. It also means that the Nominating Committee should pay careful attention to balance and diversity—not merely in the sociological sense of “diversity” (although certainly that, too), but also to diversity among academic institutions, geography, aca-

demical rank, and previous service to the AMS. For example, experienced officers provide a sense of history that keeps committees from duplicating failed efforts; recruiting newer officers with a fresh perspective avoids the “usual suspects” problem and keeps the AMS from becoming cliquish. Above all, the Nominating Committee plays an important role in drawing together a pool of people who will continue to support and promote mathematics and mathematical research.

### Dennis DeTurck



Professor, University of Pennsylvania.

**Born:** July 15, 1954, Philadelphia, Pennsylvania.

**Ph.D.:** University of Pennsylvania, 1980.

**AMS Committees:** Pi Mu Epsilon Liaison Committee, 1994–1997 (chair, 1995–1997); Task Force to Review AMS Primary Journals, 1996–1997; Contemporary Mathematics Editorial Committee, 1996– (chair); Centennial Fellow-

ship Selection Committee, 2003–.

**Selected Addresses:** Special Session on Variational Problems in Riemannian Geometry, New York, April 1983; Special Session on Geometric Methods for Partial Differential Equations, San Luis Obispo, November 1983; AMS Invited Address, Mobile, May 1985; Special Session on Recent Results in Gauge Field Theory and Riemannian Geometry, San Antonio, January 1987; Special Session on Geometry, Physics and Nonlinear PDEs, Fayetteville, March 1990; Special Session on Ricci Curvature and Related Topics, Philadelphia, October 1991; AMS-MAA Invited Address, San Diego, January 2002.

**Additional Information:** Reviewer, *Mathematical Reviews*, 1982–1992; Sloan Fellow, 1985–1987; Associate Editor, *American Mathematical Monthly*, 1986–1991; Member, Institute for Advanced Study, 1989–1990; Editorial Board, *Studies in Advanced Mathematics*, 1990–; CBMS Panelist, 1991–1992; JPBM Public Information Resources Committee, 1992–; MAA Haimo Award for Distinguished Teaching, 2002; Director, “Access Science”, an NSF-supported outreach program in West Philadelphia.

**Selected Publications:** 1. Existence of metrics with prescribed Ricci curvature: Local theory, *Invent. Math.* **65** (1981/1982), 179–207. MR **83b**:53019; 2. with C. Gordon, Isospectral Riemannian metrics and potentials, *Bull. Amer. Math. Soc. (N.S.)* **17** (1987), 137–139. MR **88m**:58185; 3. with H. Goldschmidt and J. Talvacchia, Connections with prescribed curvature and Yang-Mills currents: The semi-simple case, *Ann. Sci. École Norm. Sup. (4)* **24** (1991), 57–112. MR **92a**:53034; 4. with H. Gluck, C. Gordon, and D. Webb, The inaudible geometry of nilmanifolds, *Invent. Math.* **111** (1993), 271–284. MR **93k**:58222; 5. with J. Cantarella and H. Gluck, Upper bounds for the writhing of knots and the helicity of vector fields, *Knots, Braids, and*

*Mapping Class Groups—Papers Dedicated to Joan S. Birman* (J. Gilman, X.-S. Lin, and W. Menasco, eds.), AMS/IP Stud. Adv. Math., vol. 24, Amer. Math. Soc., Providence, RI, 2001. **Statement:** The Society must maintain its focus on the vitality of the mathematical research enterprise. At the same time, it should encourage the involvement of research mathematicians in K–12 education, and work to safeguard the status of the profession and to ensure that it welcomes and nurtures a diverse cohort of new members.

**Arthur M. Jaffe**



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

**Ph.D.:** Princeton University, 1966  
**AMS Offices:** Executive Committee of the Council, 1991–1994, 1996–1999; President, 1997–1998; Board of Trustees, 1997–1998.

**AMS Committees:** Committee to Monitor Problems in Communication, 1986–1991 (chair, 1991); Committee to Select the Gibbs Lecturers for 1987 and 1988 (chair);

Committee on Steele Prizes, 1989–1992; Long Range Planning Committee, 1993 (chair), 1997–1998; Agenda and Budget Committee, 1994, 1997–1998; Rochester Task Force, 1996–1997 (chair); Science Policy Committee, 1996–2002 (chair, 1999–2000); Committee on Meetings and Conferences, 1997–1998; Committee on the Profession, 1997–1998; Committee on Publications, 1997–1998; Committee on Education, 1997– .

**Selected Addresses:** AMS Summer Research Institute on Partial Differential Equations, Berkeley, August 1971; AMS Invited Address, New York, April 1977; Invited Address, International Congress of Mathematicians, Helsinki, 1978; AMS Symposium on the Mathematical Heritage of Henri Poincaré, Bloomington, April 1980; AMS Retiring Presidential Address, Washington, DC, January 2000.

**Additional Information:** Guggenheim Fellow, 1977, 1992; New York Academy of Sciences Prize for the Mathematical and Physical Sciences, 1979; Dannie Heinemann Prize for Mathematical Physics, American Institute of Physics and the American Physical Society, 1980; Member, David Committee: Committee’s work led to the report *Renewing American Mathematics* (1981–1984); Chief Editor, *Communications in Mathematical Physics*, 1981–2000, and associate editor for several other journals; Chair, Harvard University Mathematics Department, 1987–1990; Trustee, MSRI, Berkeley, 1991–1995; Founding Member and President, Clay Mathematics Institute, 1998–2002; Fellow: American Academy of Arts and Sciences, AAAS; Member, NAS.

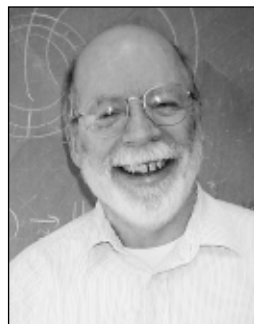
**Selected Publications:** 1. with J. Glimm, The  $\lambda(\phi^4)_2$  quantum field theory without cutoffs, III. The physical vacuum, *Acta Math.* **125** (1970), 203–267. MR **42**:4130; 2. with J. Glimm and T. Spencer, The Wightman axioms and particle structure in the  $\mathcal{P}(\phi)_2$  quantum field model, *Ann. of Math.* **100** (1974), 585–632. MR **50**:15694; 3. with A.

Lesniewski and K. Osterwalder, Quantum  $K$ -theory, I. The Chern character, *Comm. Math. Phys.* **118** (1988), 1–14. MR **90a**:58170; 4. Twist fields, the elliptic genus, and hidden symmetry, *Proc. Natl. Acad. Sci. U.S.A.*, **97** (2000), 1418–1422. MR **2001h**:58039; 5. Derivatives with twists, *Rev. Math. Phys.* **14** (2002), 887–895.

**Statement:** This has been a banner year for mathematics. Among many advances, we witnessed the discovery of a polynomial-time primality test and learned new ideas about gradient flows that appear to illuminate the Poincaré conjecture. This evidence suggests that we live in a golden age of mathematics.

In this environment the AMS remains a powerful force, assisting us to disseminate our results and to communicate both inside and outside our community. The AMS also helps inspire a new generation of students to develop their mathematical talents. It acts in various ways to help shape the profession and to explain mathematics to a wide audience. The Nominating Committee provides a link between the past and the future; it provides an opportunity to encourage participation and positive change.

**Robion C. Kirby**



*Professor of Mathematics, University of California, Berkeley.*

**Born:** February 25, 1938, Chicago, Illinois.

**Ph.D.:** University of Chicago, 1965.

**AMS Offices:** Member at Large of the Council, 1974–1976, 1988–1990; Executive Committee of the Council, 1976–1977.

**AMS Committees:** Committee to Select the Winner of the Veblen Prize, 1976, 1999–2000; AMS-

MAA-SIAM Joint Projects Committee for Mathematics, 1978–1980; Committee on Graduate Studies in Mathematics, 1993–1995; *Notices* Editorial Board, 2001–2003 (associate editor).

**Selected Addresses:** AMS Invited Address, Eugene, August 1969; Invited Address, International Congress of Mathematicians, Nice, 1970.

**Additional Information:** Veblen Prize, 1971; Deputy Director, Mathematical Sciences Research Institute, 1985–1987; Award for Scientific Reviewing, National Academy of Sciences, 1995; Member, National Academy of Sciences, 2001.

**Selected Publications:** 1. Stable homeomorphisms and the annulus conjecture, *Ann. of Math.* **89** (1969), 575–582. MR **39**:3499; 2. with L. C. Siebenmann, On the triangulation of manifolds and the Hauptvermutung, *Bull. Amer. Math. Soc.* **75** (1969), 742–749. MR **39**:3500; 3. A calculus for framed links in  $S^3$ , *Invent. Math.* **45** (1978), 35–56. MR **57**:7605; 4. *The Topology of 4-Manifolds*, Lecture Notes in Math., vol. 1374, Springer-Verlag, Berlin, 1989. MR **90j**:57012; 5. Editor, Problems in low dimensional topology, *Geometric Topology* (William Kazez, ed.), AMS/IP Stud.



Adv. Math., vol. 2.2, Amer. Math. Soc., Providence, RI, 1997, pp. 35-473.

**Statement:** As I write this during the early days of the conflict in Iraq, it is worthwhile to recall that the AMS was founded in 1888 to further the interests of mathematical research and scholarship. The AMS should do this with the participation of all mathematicians, irrespective of race, gender, citizenship, language, or political stance.

### Thomas G. Kurtz



*Professor of Mathematics and Statistics, University of Wisconsin-Madison.*

**Born:** July 14, 1941, Kansas City, Missouri.

**Ph.D.:** Stanford University, 1967.

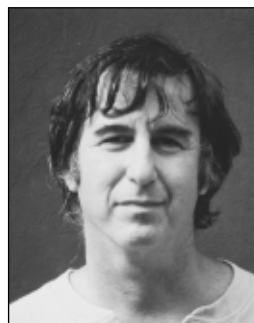
**AMS Committees:** *Proceedings* Editorial Committee, 1978-1982 (associate editor); Committee on Academic Freedom, Tenure, and Employment Security, 1988-1991; AMS-SIAM Birkhoff Prize Selection Committee, 1994 (chair).

**Selected Addresses:** Principal Lecturer, CBMS-NSF Regional Conference, Missoula, Montana, 1979; IMS Special Invited Paper, Davis, California, 1980; IMS Special Invited Paper, Washington, DC, 1989; Keynote Lecture, INFORMS Applied Probability Conference, Atlanta, 1995; AMS Special Session on Stochastic Models, San Diego, January 1997; AMS-SMM Special Session on Stochastic Analysis and Probability, Morelia, May 2001; AMS Special Session on Stochastic Analysis with Applications, Bloomington, April 2003.

**Additional Information:** NSF Division of Mathematical Sciences Advisory Committee, 1987-1990 (chair, 1988-1989); Council of the Bernoulli Society, 1987-1991, 2001-; Committee on Conferences on Stochastic Processes, 1987-1999 (chair, 1995-1997); NRC Committee on Applied and Theoretical Statistics, 1998-2000; Editor, *Annals of Probability*, 2000-2002; IMA Board of Governors, 2001- (chair, 2003); Fellow, Institute of Mathematical Statistics; Member: AMS, IMS, INFORMS, ISI, MAA, SIAM.

**Selected Publications:** 1. *Approximation of Population Processes*, CBMS-NSF Regional Conf. Ser. Appl. Math., vol. 36, SIAM, Philadelphia, 1981. MR **82j**:60160; 2. with S. N. Ethier, *Markov Processes: Characterization and Convergence*, Wiley Ser. Probab. Math. Stat., John Wiley and Sons, Inc., New York, 1986. MR **88a**:60130; 3. with P. E. Protter, Weak convergence of stochastic integrals and differential equations. I and II, *Probabilistic Models for Nonlinear Partial Differential Equations* (D. Talay and L. Tubaro, eds.), Lecture Notes in Math., vol. 1627, Springer-Verlag, Berlin, 1996, pp. 1-41 and 197-285. MR **98h**:60073 and MR **98h**:60074; 4. with P. Donnelly, Particle representations for measure-valued population models, *Ann. Probab.* **27** (1999), 166-205. MR **2000f**:60108; 5. with R. H. Stockbridge, Stationary solutions and forward equations for controlled and singular martingale problems, *Elec. J. Probab.* **6** (2001), no. 17 (electronic). MR **2002j**:60128.

### Joel H. Spencer



*Professor of Mathematics and Computer Science and Chair, Department of Mathematics, New York University, Courant Institute of Mathematical Sciences.*

**Born:** April 20, 1946, New York, New York.

**Ph.D.:** Harvard University, 1970.

**AMS Offices:** Member at Large of the Council, 1997-1999; Executive Committee of the Council, 1998-2001 (chair, 2000).

**AMS Committees:** Program Committee for National Meetings, 1994-1996 (chair, 1995-1996); Meetings and Conferences Committee, 1997-1999 (chair); Committee on Committees, 1999-2000; Interim Committee on the Young Scholars Program, 1999-2003 (chair).

**Selected Addresses:** Invited Speaker, International Congress of Mathematicians, Zurich, 1994; Plenary Speaker, Paul Erdős and His Mathematics, Budapest, 1999; AMS Invited Address, Chattanooga, October 2001; Invited Speaker, CombinaTexas: Combinatorics in the South-Central U.S., Denton, March 2002; Three Lecture Series, ICTP, Trieste, 2002.

**Additional Information:** Putnam Competition Winner, 1962; Sloan Fellow, 1977-1981; Ford Award, 1984; CBMS Lecturer, 1986. Extended Visits: Budapest (1976-1977, 1984), Rehovot (1980), Reading (1981), MIT (1987, 1990, 2001), IAS (1997, 1998), Melbourne (1998). Member: AMS, MAA, SIAM.

**Selected Publications:** 1. with R. L. Graham and B. L. Rothschild, *Ramsey Theory*, John Wiley & Sons, New York, 1980. MR **82b**:05001; Second Edition, 1990. MR **90m**:05003; 2. with N. Alon, *The Probabilistic Method*. With an appendix by Paul Erdős, John Wiley & Sons, New York, 1992. MR **93h**:60002; Second Edition, 2000; 3. with S. Shelah, Zero-one laws for sparse random graphs, *J. Amer. Math. Soc.* **1** (1988), 97-115. MR **89i**:05249; 4. with B. Pittel and N. Wormald, Sudden emergence of a giant  $k$ -core in a random graph, *J. Combin. Theory Ser. B* **67** (1996), 111-151. MR **97e**:05176; 5. *The Strange Logic of Random Graphs*, Springer-Verlag, Berlin, 2001. MR **2003d**:05196.

**Statement:** I am continually impressed by the commitments of time and energy of so many mathematicians in their work for the AMS. We have an enormous pool of talent in our membership. The key function of the Nominating Committee, as I see it, is to find the right person for the right position so that this talent may be best used for the betterment of our profession as a whole.

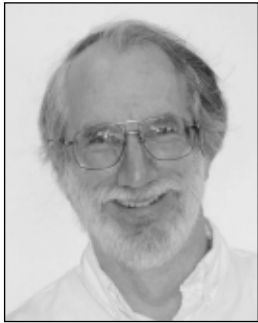
### Editorial Boards Committee

#### David L. Colton

*Unidel Professor of Mathematical Sciences, University of Delaware.*

**Born:** March 14, 1943, San Francisco, California.

**Ph.D.:** University of Edinburgh, 1967; D.Sc.: University of Edinburgh, 1977.



**Selected Addresses:** Plenary Lecture, GAMM Annual Meeting, Göttingen, Germany, 2000; Four lectures, MSRI Introductory Workshop in Integral Geometry and Inverse Problems, Berkeley, 2001; Four lectures, INRIA School on Direct and Inverse Scattering Problems, Paris, 2003.

**Additional Information:** Editorial Boards: *SIAM Journal on Applied Mathematics*; *Inverse Problems*;

*Society for the Interaction of Mathematics and Mechanics Book Series*, Springer-Verlag, 2003–.

**Selected Publications:** 1. *Analytic Theory of Partial Differential Equations*, Monogr. Stud. Math., vol. 8, Pitman Publishing, Boston–London, 1980. MR 82j:35001; 2. with R. Kress, *Integral Equation Methods in Scattering Theory*, Wiley-Interscience, New York, 1983. MR 85d:35001; Russian translation, “Mir”, Moscow, 1987. MR 88g:35002; 3. *Partial Differential Equations: An Introduction*, The Random House/Birkhäuser Math. Ser., Random House, New York, 1988. MR 89j:35002; 4. with R. Kress, *Inverse Acoustic and Electromagnetic Scattering Theory*, Appl. Math. Sci., vol. 93, Springer-Verlag, Berlin, 1992. MR 93j:35124; Second Edition, 1998. MR 99c:35181; 5. with J. Coyle and P. Monk, Recent developments in inverse acoustic scattering theory, *SIAM Rev.* 42 (2000), 369–414. MR 2001f:76066.

**Statement:** I am a firm believer in the need for mathematics to have a close connection with applications and have served on the editorial boards of a variety of journals, both pure and applied, over the past twenty years. I would hope to bring this type of expertise to the AMS Editorial Boards Committee.

### Emma Previato



*Professor of Mathematics, Boston University.*

**Ph.D.:** Harvard University, 1983.

**AMS Committees:** Committee on Human Rights of Mathematicians, 2003–.

**Selected Addresses:** AMS Invited Address, Williamstown, October 2001.

**Additional Information:** Member, IAS, 1984–1985, 2002–2003; Fellow, Royal Academy of Sweden, Mittag-Leffler Institute, 1986–1987;

UK Research Council, fall 1987; Bunting Institute, 1995–1996; MAA/NES Teacher of the Year Award, 2003; Member: AWM, MAA; Reciprocity Member: LMS; AAAS, 1988; Institute of Physics (UK), 2000.

**Selected Publications:** 1. with G. Wilson, Vector bundles over curves and solutions of the KP equations, *Theta Functions—Bowdoin 1987, Part 1*, Proc. Sympos. Pure Math., vol. 49, Part 1, Amer. Math. Soc., Providence, RI, 1989, pp. 553–569. MR 90i:14018; 2. Seventy years of spectral curves: 1923–1993,

*Integrable Systems and Quantum Groups* (R. Donagi, B. Dubrovin, E. Frenkel, and E. Previato), Lecture Notes in Math., vol. 1620, Springer, Berlin, 1996, pp. 419–481. MR 97e:58119; 3. with B. van Geemen, On the Hitchin system, *Duke Math. J.* 85 (1996), 659–683. MR 97k:14010; 4. with W. M. Oxbury and C. Pauly, Subvarieties of  $SU_C(2)$  and  $2\theta$ -divisors in the Jacobian, *Trans. Amer. Math. Soc.* 350 (1998), 3587–3614. MR 98m:14034; 5. *Advances in Algebraic Geometry Motivated by Physics* (E. Previato, ed.), Contemp. Math., vol. 276, Amer. Math. Soc., Providence, RI, 2001. MR 2001m:14002.

**Statement:** To the primary committee charge, that of soliciting nominations for editorial committees, I would bring special emphasis in four areas. One, the need and pleasure of rediscovering the classics, republishing early mathematics with expert interpretation in modern language and novel applications. Two, the need to serve members of the Society and the larger community by hearing from them; for example, instituting a prize for school students to produce an essay on what kind of mathematics books they would read. Three, advancing the Mathematics Digital Project hand in hand with publication, especially to bring mathematics literature to those who may be at an economic or physical disadvantage. Four, the need to establish links with other disciplines: the face of mathematics is changing rapidly in view of breakthroughs in the sciences. Mathematics publishing today is one of the most exciting places to be, and I would be most honored to serve the Society in this area.

To the committee’s other charge, that of promoting women’s participation, I would bring a vast network of personal acquaintances who have excelled in their field.

### Daniel Ruberman



*Professor of Mathematics, Brandeis University.*

**Born:** May 12, 1955, New York, New York.

**Ph.D.:** University of California, Berkeley, 1982.

**AMS Committees:** *Bulletin* Editorial Committee, 1995–2001 (associate editor for research reports).

**Additional Information:** Chair, Mathematics Department, Brandeis University, 1998–2000.

**Selected Addresses:** Séminaire

Arthur Besse, École Polytechnique, Palaiseau, June 2001; Conference on Holomorphic Curves and Low-Dimensional Topology, Institute for Advanced Studies, March 2002; William J. Spencer Lecture, Kansas State University, May 2002; Ontario Topology Conference, October 2002; AMS Special Session on Geometric Topology, Bloomington, April 2003.

**Selected Publications:** 1. Mutation and volumes of knots in  $S^3$ , *Invent. Math.* 90 (1987), 189–215. MR 89d:57018; 2. with J. Morgan and T. Mrowka, *The  $L^2$ -Moduli Space and a Vanishing Theorem for Donaldson Polynomial Invariants*, Monogr. Geom. Topol., Vol. II, International Press, Cam-

bridge, 1994. MR **95h**:57039; 3. with D. Jaffe, A sextic surface cannot have 66 nodes, *J. Algebraic Geom.* **6** (1997), 151–168. MR **98m**:14035; 4. An obstruction to smooth isotopy in dimension 4, *Math. Res. Lett.* **5** (1998), 743–758. MR **2000c**:57061; 5. Positive scalar curvature, diffeomorphisms and the Seiberg-Witten invariants, *Geom. Topol.* **5** (2001), 895–924. MR **2002k**:57076.

**Statement:** The AMS plays an important role in producing high-quality journals that give access to important mathematics at a reasonable price. My experience as an associate editor of *Bulletin* showed me that the strength of a journal is determined by the discrimination and breadth of its editors and by their energy in pursuing good papers. As a member of the Editorial Boards Committee, I would work to enhance the Society’s journals by appointing knowledgeable mathematicians who will take an active role as editors.

**Karl Rubin**



*Professor of Mathematics, Stanford University.*

**Born:** January 27, 1956, Urbana, Illinois.

**Ph.D.:** Harvard University, 1981.

**AMS Committees:** Centennial Fellowships Committee, 1990–1991; Central Section Program Committee, 1993–1994 (chair, 1994); Committee to Select the Winner of the Cole Prize, 1995–1996 (chair); Arnold Ross Lecture Series Committee, 1995–1997.

**Selected Addresses:** AMS Invited Addresses: East Lansing, March 1988; Worcester, April 1989; AAAS Topical Lecture, San Francisco, January 1994; AMS-MAA-SIAM Invited Address, Washington, DC, January 2000; International Congress of Mathematicians, Beijing, 2002.

**Additional Information:** AMS Cole Prize in Number Theory, 1992; Editor: *Journal of Number Theory*, 1987–1999; *Compositio Mathematica*, 1993–1998; *Journal für die reine und angewandte Mathematik*, 1994–2001.

**Selected Publications:** 1. Tate-Shafarevich groups and  $L$ -functions of elliptic curves with complex multiplication, *Invent. Math.* **89** (1987), 527–559. MR **89a**:11065; 2. The “main conjectures” of Iwasawa theory for imaginary quadratic fields, *Invent. Math.* **103** (1991), 25–68. MR **92f**:11151; 3. with A. Silverberg, A report on Wiles’ Cambridge lectures, *Bull. Amer. Math. Soc. (N.S.)* **31** (1994), 15–38. MR **94k**:11062; 4. *Euler Systems*, Ann. of Math. Stud., vol. 147, Princeton University Press, Princeton, 2000. MR **2001g**:11170; 5. with A. Silverberg, Ranks of elliptic curves, *Bull. Amer. Math. Soc. (N.S.)* **39** (2002), 455–474.

**Statement:** AMS journals are an important service to the mathematical community, and the primary responsibility for maintaining their quality lies with their editorial boards. A good editor should be conscientious, well organized, and fair and must have a broad and deep knowledge of relevant subject areas. In addition, the editorial committees should be representative of the mathematical community.