

Biographies of Candidates 2005

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.

Candidates have 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 their research papers.

Candidates have had the opportunity to supply a photograph to accompany their biographical information.

Candidates with an asterisk (*) beside their names were nominated in response to a petition.

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 for Advanced Study (IAS), Institute of Mathematical Statistics (IMS); International Mathematical Union (IMU); London Mathematical Society (LMS); Mathematical Association of America (MAA); Mathematical Sciences Research Institute (MSRI); 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); Society for Industrial and Applied Mathematics (SIAM).

President

James G. Glimm



Applied Mathematics and Statistics and Distinguished Professor, Stony Brook University.

Born: March 24, 1934, Peoria, Illinois, USA.

Ph.D.: Columbia University, 1959.

AMS Committees: *Electronic Research Announcements* Editorial Board, 1995–2001; Committee to Select the Winner of the Bôcher Prize, 1998–1999.

Selected Addresses: International Congress of Mathematicians

Invited Addresses, Nice 1970 and Vancouver 1974; International Congress of Mathematical Physics Invited Addresses, 1972 and 1975; Plenary Address, SIAM Annual Meeting, San Diego, 2001.

Additional Information: National Science Foundation Fellowship, 1959–1960; Guggenheim Fellowships, 1963–1964 and 1965–1966; New York Academy Prize in the Physical and Mathematical Sciences, 1979; Dannie Heineman Prize for Mathematical Physics, 1980; Member, National Academy of Sciences, 1984; SIAM Board of Trustees, 1984–1992; SIAM Science Policy Committee, 1985–1999 (chair, 1988–1992); Steele Prize for a Paper of

Fundamental Importance, 1993; Chair, Engineering 2000 (Stony Brook 5 year plan); Chair, Engineering 2010 (Stony Brook 5 year plan); Chair, Stony Brook Five Year Plan Coordinating Committee; National Medal of Science, 2002.

Selected Publications: 1. Type I C^* -algebras, *Ann. of Math. (2)* **73** (1961), 572–612. MR **0124756 (23:A2066)**; 2. Solutions in the large for nonlinear hyperbolic systems of equations, *Comm. Pure Appl. Math.* **18** (1965), 697–715. MR **0194770 (33:2976)**; 3. with A. Jaffe, A $\lambda\phi^4$ quantum field theory without cutoffs, I, *Phys. Rev. (2)* **176** (1968), 1945–1951. MR **0247845 (40:1106)**; 4. with E. Isaacson, D. Marchesin, and O. McBryan, Front tracking for hyperbolic systems, *Adv. in Appl. Math.* **2** (1981), 91–119. MR **0612514 (82i:76097)**; 5. with B. Cheng and D. H. Sharp, A three-dimensional renormalization group bubble merger model for Rayleigh-Taylor mixing, *Chaos* **12** (2002), 267–274. MR **1907639 (2003d:76098)**.

Statement: Our shared beliefs are in the importance of fundamental research in mathematics; our shared concerns are for the renewal of our profession, attracting the next generation of mathematical talent to their place among us. For the young, for women and for minorities, we must make an extra effort, because they will play a large role in our future. As mathematicians occupy new roles in our society, we must take advantage of the resulting new opportunities to recruit talent to our profession.

As President of the American Mathematical Society, I would work for cooperation among the mathematical organizations, with a goal to speak to the world with a common message and voice. Generally, we also gain by forming common cause with our researchers in the sciences, and so the building of bridges is important. The AMS can promote a welcoming atmosphere for mathematical research, including an awareness of its profound importance and its sense of excitement.

The meetings of the AMS require the constant injection of energy and excitement, an issue to which the Society leadership must contribute. Publications are another fundamental service of the AMS. This is not a static issue, but a changing one, as new technologies find their way into our world. But whether with new or old technologies, we need to assure the quality of our journals and their service to our members.

We must share among ourselves and across department and university barriers the best practices for building our communities, for governing our departments, for communicating with our colleagues and our administrations, for entering into a new research area, and for reaching our students.

Fundamental advances in mathematical reasoning have seldom been as pervasively important to society as they are today, and at the same time they are more at risk of being compromised. We can welcome cautiously the new opportunities this brings, while avoiding the dangers.

Ronald J. Stern



Dean, School of Physical Sciences and Professor of Mathematics, University of California, Irvine.

Born: January 20, 1947, Chicago, Illinois, USA.

Ph.D.: University of California at Los Angeles, 1973.

AMS Committees: Western Section Speaker Selection Committee (Chair), 1986–1988, 1992–1993; *Proc. Amer. Math. Soc.* Editorial Committee, 1992–1996; Subcommittee on Prizes (CoProf),

1993–1998; Committee on the Profession, 1993–1999; Working Group on Public Awareness of Mathematics, 1996–1997; Subcommittee on Membership (CoProf), 1997–1998; AMS-SMM Joint Program Committee, Denton Meeting, May 1999, 1998–2000; LAC-UCLA Mathematical Challenges of the 21st Century, 1999–2000; Committee on Publications, 1999–2002; Graduate Studies in Mathematics, 1999–2002; Committee on Committees (Chair), 2000–2005; AMS Fellows Program Subcommittee, 2002–2005; *Mathematical Reviews* Editorial Committee, 2002–2008.

Selected Addresses: MAA Invited Address, Eugene, August 1984; AMS Invited Address, Laramie, August 1985; Joint AMS-SMM Invited Address, Oaxaca, 1997; Invited Speaker, International Congress of Mathematicians, Berlin, 1998; Plenary address, DMV Jahrestagung, Heidelberg, 2004.

Additional Information: Secretary, MSRI Board of Trustees, 1992–1996; President and Chair of the Board of Governors of the *Pacific Journal of Mathematics*, 1995–; Sloan Foundation, Mathematics Selection Committee, 2000–2005; Editor, *Geometry and Topology*, 2001–; Distinguished Alumnus, Knox College, 2002; Board of Directors, Mathematical Sciences Publishers, 2004–.

Selected Publications: 1. with D. E. Galewski, Classification of simplicial triangulations of topological manifolds, *Ann. of Math. (2)* **111** (1980), no. 1, 1–34. MR **0558395 (81f:57012)**; 2. with R. Fintushel, The blowup formula for Donaldson invariants, *Ann. of Math. (2)* **143** (1996), no. 3, 529–546. MR **1394968 (97i:57036)**; 3. with R. Fintushel, Knots, links, and 4-manifolds, *Invent. Math.* **134** (1998), no. 2, 363–400. MR **1650308 (99j:57033)**; 4. with R. Fintushel, Families of simply-connected 4-manifolds with the same Seiberg-Witten invariants, *Topology* **43** (2004), 1449–1467. MR **2081432 (2005d:57044)**; 5. with R. Fintushel, Invariants for Lagrangian tori, *Geom. Topol.* **8** (2004), 947–968. MR **2087074**.

Statement: Mathematics permeates all aspects of our lives. Every science, technology, business, and government thirsts for mathematics and mathematicians to help understand complex physical and biological systems, to advance economic development, to model and predict how humans behave and interact, and to establish secure systems. For most of us there is an internal beauty that has hooked us for life and that also holds the awe of many outside of science and mathematics. However, despite this universal need for mathematics and its underlying logic and structure, as mathematicians we often feel that we are second cousins to the other sciences, are often overlooked by government agencies and private foundations, and are underappreciated by society. In its role as the largest professional organization devoted to communicating and advocating for the interests of mathematicians, the AMS has gone a long way towards communicating our research efforts and publicizing our distinguished, dedicated, and leadership role as professionals. If elected as President of the AMS it will be an honor, as well as exciting, to continue this long and successful tradition to represent and promote mathematics.

During my many years as dean I have often felt like a graduate student learning the many interrelated aspects of science, engineering and the social sciences, as well as dealing with the inter-workings of government agencies and foundations. The consistent message given to me from those outside of mathematics is their enthusiastic respect for mathematics. I have also learned that the most efficient way for mathematics to continue to earn and enhance this high regard is for us to work together with the other sciences, technologies, businesses, and government agencies over long periods of time to advance all of our mutually dependent interests (as well as prove good theorems). However, in many arenas we have allowed others to do this work. For example, large publicly traded enterprises profit from our newly discovered and hard fought knowledge through high access fees that are threatening the future of our research libraries. Many academic math depart-

ments have not done the best job to significantly influence and resonate with institutional goals. We need to continue to actively and effectively communicate to the general public, corporations, and funding agencies the importance of and our enthusiasm for mathematics. And we need to better engage our expertise to recapture and rebuild excellence at all levels of mathematics education. As President of the AMS I hope, at worst, to enthusiastically represent the mathematical community and, at best, to actively engage all of you to place mathematics in a leadership role in the research, educational, and public spheres.

Vice President

Ruth M. Charney



Professor of Mathematics, Brandeis University.

Born: December 30, 1950, New York, New York, USA.

Ph.D.: Princeton University, 1977.

AMS Offices: Member at Large of the Council, 1992–1995.

AMS Committees: Committee on the Profession, 1993–1995; Centennial Fellowship Committee, 1995–1997; Nominating Committee, 2000–2003; Central Section Program Committee, 2002–2004

(chair, 2004); Committee on the Profession, 2004–.

Selected Addresses: AMS Invited Address, Anaheim, CA, 1984; Cornell Topology Festival, 1994; Workshop on Groups and Geometry (3 lectures), Montreal, 2001; Symposium on Geometry and Topology in Group Theory, Durham, UK, 2003; AMS Invited Address, Nashville, TN, 2004.

Additional Information: Member, AWM, 1984–; Executive Committee, AWM, 1990–1993; Board of Trustees, Mathematical Sciences Research Institute, 1993–1995; Editorial Board, *Algebraic and Geometric Topology*, 2000–; Member, U.S. National Committee for Mathematics, 2005–.

Selected Publications: 1. Homology stability for GL_n of a Dedekind domain, *Invent. Math.* **56** (1980), 1–17. MR **0557579 (81h:18010)**; 2. with M. Davis, The $K(\pi, 1)$ -problem for hyperplane complements associated to infinite reflection groups, *J. Amer. Math. Soc.* **8** (1995), 597–627. MR **1303028 (95i:52011)**; 3. with M. Davis, When is a Coxeter system determined by its Coxeter group?, *J. London Math. Soc.* (2) **61** (2000), 441–461. MR **1760693 (2001i:20078)**; 4. with A. Lytchak, Metric characterizations of spherical and Euclidean buildings, *Geom. Topol.* **5** (2001), 521–550 (electronic). MR **1833752 (2002h:51008)**; 5. with D. Peifer, The $K(\pi, 1)$ -conjecture for the affine braid groups, *Comment. Math. Helv.* **78** (2003), 584–600. MR **1998395 (2004f:20067)**.

Statement: There are several issues facing the mathematical community that require continued attention. These include the under-representation of women and minorities, the need to encourage and support talented young people, and the challenge of improving mathematics education for children and teachers. The AMS must continue to

seek creative solutions to these problems. Newer trends that affect the community, such as changes in the nature of mathematics publication, should also be monitored.

The AMS plays a crucial role in communicating the importance of mathematics to the general public, to university administrators, and to government and funding agencies. Strengthening ties with other fields and assuring that we are providing the appropriate mathematical preparation for their students will enhance the position of mathematics in this regard. At the same time, the AMS must continue to celebrate pure mathematics and to highlight its centrality in the scientific endeavor.

Carlos E. Kenig



Louis Block Distinguished Service Professor, University of Chicago.

Born: November 25, 1953, Buenos Aires, Argentina.

Ph.D.: University of Chicago, 1978.

AMS Offices: Member at Large of the Council, 1984–1986; Representative of *J. Amer. Math. Soc.*, 2000–2002.

AMS Committees: Editorial Boards Committee, 1989–1992; Committee on Cooperation with

Latin American Mathematicians, 1990–1992; Committee on Accessibility for the Handicapped, 1993–1997; *Bulletin*, Associate Editor for Research Reports, 1994–1997; AMS-MAA Committee on Mathematicians with Disabilities, 1997–2000; *J. Amer. Math. Soc.* Editorial Board, 1998–2002; Committee on Committees, 1999–2001; AMS-RSME Program Committee, June 2003, 2001–2003; *Electronic Research Announcements* Editorial Board, 2005–.

Selected Addresses: AMS Invited Address, Columbia, MO, 1985; ICM Invited Address, Berkeley, 1986; CBMS-AMS Lectures on Harmonic Analysis and Partial Differential Equations, St. Louis, MO, 1991; AMS Invited Address, Detroit, MI, 1997; ICM Invited Address, Beijing, 2002.

Additional Information: Alfred P. Sloan Research Fellow, 1981–1983; Salem Prize, 1984; John Simon Guggenheim Fellowship, 1986; Editor, *Internat. Math. Res. Notices*, 1991–; Organizing Committee, ICMS Program in Harmonic Analysis and PDE, Edinburgh, 1994; Chair, Organizing Committee, MSRI program in Harmonic Analysis and PDE, Berkeley, 1997; Executive Editor, JFAA, 1998–; Editor, *Math. Ann.*, 1998–; Managing Editor, *J. Amer. Math. Soc.*, 2000–2002; Fellow, American Academy of Arts and Sciences, 2002; Co-Organizer, PCMI Graduate Course in Harmonic Analysis and PDE, Park City, Utah, 2003; Co-Organizer, Special Year on Analysis and PDE, IAS, 2003–2004; Co-Organizer, Harmonic Analysis Trimester, Scuola Normale, Pisa, 2004; Co-Organizer, MSRI program on Nonlinear Dispersive Equations, Berkeley, 2005. Editorial boards of 14 additional journals and book series.

Selected Publications: 1. *Harmonic Analysis Techniques for Second Order Elliptic Boundary Value Problems*, CBMS Regional Conference Series in Mathematics, vol. 83, Amer. Math. Soc., Providence, 1994. MR **1282720 (96a:35040)**; 2.

with L. A. Caffarelli and D. Jerison, Global energy minimizers for free boundary problems and full regularity in three dimensions, *Noncompact Problems at the Intersection of Geometry, Analysis, and Topology*, Contemporary Mathematics, vol. 350, Amer. Math. Soc., Providence, 2004, pp. 83–97. MR 2082392 (2005e:35258); 3. with G. Ponce and L. Vega, The Cauchy problem for quasi-linear Schrödinger equations, *Invent. Math.* **158** (2004), 343–388. MR 2096797 (Review); 4. with A. Ionescu, L^p Carleman inequalities and uniqueness of solutions of nonlinear Schrödinger equations, *Acta Math.* **193** (2004), 193–239; 5. with J. Bourgain, On localization in the continuous Anderson-Bernoulli model in higher dimensions, *Invent. Math.*, Online First, March 1, 2005.

Statement: I would strive to strengthen the AMS in its role as the major organization fostering research in mathematics in the USA. In connection with this, I feel that it is vital that every effort be made to ensure the full participation in mathematical research and in the AMS, of all underrepresented groups, including minorities, persons with disabilities and women. We also need to ensure that graduate and undergraduate students, postdocs and young researchers are properly nurtured and mentored, in order to maintain and expand the current very successful research enterprise. Because of my own extensive research experience and because I have trained and mentored a number of students, postdocs and young researchers, many of them women, I feel that I would be able to make a useful contribution towards these goals.

Trustee

John B. Conway



Professor of Mathematics, University of Tennessee, and Program Officer, National Science Foundation.

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

Ph.D.: Louisiana State University, 1965.

AMS Offices: Member at Large of the Council, 1996–1999; Executive Committee, 1997–2001; Board of Trustees, 2001–2006.

AMS Committees: Committee on Publications, 1995–1997; Committee to Review the Book Publishing Program, 1999; Committee on Meetings and Conferences, 2001–2002; Committee on Education, 2002–2005.

Selected Addresses: Principal speaker at conference on operator theory; 3 lectures at the University of North Carolina, 1977; Special session on operator theory at AMS national meeting in Biloxi, 1979; Special session on operator theory at AMS national meeting in Cincinnati, 1981; Special session in operator theory at AMS national meeting in Louisville, 1984; One of the principal speakers (4 lectures) at NATO Conference “Operators and Function Theory” held at University of Lancaster, England, 1984; Invited Lecturer at American Mathematical Society Summer

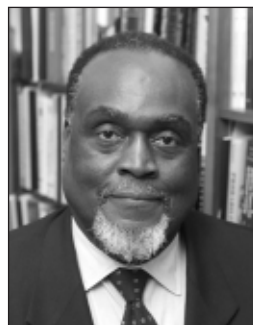
Institute in Operator Theory, 1988; Special session of the AMS national meeting, San Diego, 1997.

Additional Information: I was born, raised, and received my predoctoral education in New Orleans. I got a Ph.D. from Louisiana State University in 1965 and went to Indiana University, where I stayed until 1990. In 1990 I became head of the mathematics department at the University of Tennessee, a position I held for 13 years. In 2003 I accepted a position as a rotator at the National Science Foundation, where I remain today. I have published several papers, mainly on function theoretic operator theory, written seven books, and had 19 Ph.D. students.

Selected Publications: 1. with R. F. Olin, A functional calculus for subnormal operators. II, *Mem. Amer. Math. Soc.* **10** (1977), no. 184. MR 0435913 (55:8864); 2. with B. B. Morrel, Roots and logarithms of bounded operators on a Hilbert space, *J. Funct. Anal.* **70** (1987), 171–193. MR 0870760 (87m:47044); 3. with D. A. Herrero and B. B. Morrel, Completing the Riesz-Dunford functional calculus, *Mem. Amer. Math. Soc.* **82** (1989), Number 417. MR 0974999 (90m:47023); 4. Towards a functional calculus for subnormal tuples: the minimal normal extension, *Trans. Amer. Math. Soc.* **326** (1991), 543–567. MR 1005077 (91k:47048); 5. *On Being a Department Head, a Personal View*, Amer. Math. Soc., Providence, 1996.

Statement: The purpose of the Society is to promote research and education in mathematics. This is accomplished in a variety of ways. The role of the Board of Trustees in this endeavor is to help maintain the fiscal health of the Society, work with the officers to promote the furtherance of mathematics, and to help make sure the pursuit of the Society’s goals is never subjugated to distracting considerations.

James A. Donaldson



Professor of Mathematics and Dean of the College of Arts and Sciences, Howard University.

Born: April 17, 1941, Madison County, Florida, USA.

Ph.D.: University of Illinois at Urbana-Champaign, 1965.

AMS Offices: Member at Large of the Council, 1978–1980.

AMS Committees: Committee on Opportunities in Mathematics for Disadvantaged Groups, 1978–

1982 (chair, 1980–1982); Committee on Committees, 1979–1980; Committee on Science Policy, 1992–1994; Committee on Service to Mathematicians in Developing Countries, 1987–1993.

Selected Addresses: AMS Special Sessions: Washington, DC, January 1975, San Antonio, TX, January 1976, Washington, DC, October 1979, New Orleans, LA, January 1986; SAMS-AMS-LMS Conference, Pretoria, South Africa, June 1997; Invited Talks: Symposium on Mathematics and Computations, Ho Chi Minh City, Vietnam, April 1988, First CAARMS, MSRI, Berkeley, 1995, Third Pan African Congress of Mathematicians, Nairobi, Kenya, August 1991.

Additional Information: Chair, Department of Mathematics, Howard University, 1972–1990; Second Vice President, MAA, 1994–1995; Electorate Nominating Committee of the Mathematics Section (Section A) of AAAS, 1994–1997; Interim President, Lincoln University (PA), 1998–1999; Dean, College of Arts and Sciences, Howard University, 1999–. Visiting Positions: Courant Institute of Mathematical Sciences, University of Victoria, Università degli Studi di Ferrara, and Duke University. Member: AAAS, AWM, CAARMS, MAA, NAM, SIAM.

Selected Publications: 1. with A. G. Gibson and R. Hersh, On the invariance principle of scattering theory, *J. Functional Anal.* **14** (1973), 131–145. MR **50:2949**; 2. The Cauchy problem for a first order system of abstract operator equations, *Bull. Amer. Math. Soc.* **81** (1975), 576–587. MR **54:7985**; 3. with J. A. Goldstein, Some remarks on uniqueness for a class of singular abstract Cauchy problems, *Proc. Amer. Math. Soc.* **54** (1976), 149–153. MR **52:11234**; 4. The abstract Cauchy problem, *J. Differential Equations* **25** (1977), 400–409. MR **57:12470**; 5. with D. A. Williams III, The linear shallow water theory: A mathematical justification, *SIAM J. Math. Anal.* **24** (1993), 892–910. MR **94j:35143**.

Statement: The American Mathematical Society, through its publications and many activities, has served mathematics well by fostering research and scholarship and disseminating new mathematical ideas and results to its members and the wider community. In the present climate of economic constraints, it is imperative that current resources are used optimally in fulfilling the mission of AMS and that new sources of support are identified and pursued aggressively. As a trustee, I will work to ensure that the fiscal foundation of the Society remains strong, and to participate in AMS initiatives to expand its membership to include greater numbers of mathematicians from all groups, especially from those traditionally underrepresented in the discipline.

Member at Large of the Council

William M. Goldman



Professor of Mathematics, University of Maryland.

Born: November 17, 1955, Kansas City, Missouri, USA.

Ph.D.: University of California, Berkeley, 1980.

AMS Committees: AMS Representative to Committee on Summer Research Conferences, 2003–.

Selected Addresses: AMS Invited Address, University of Massachusetts, October 1990; “Complex Geometry,” commemorating

the fiftieth anniversary of Osaka University, December 1990; “Discrete groups, Geometry and Arithmetic,” commemorating the sixtieth birthday of M. S. Raghunathan, Tata Institute of Fundamental Research, Mumbai, December 2001; “Complex Geometry and Dynamical Systems,” commemorating the sixtieth birthday of Alberto Verjovsky,

Cuernavaca, January 2003; “Bounded cohomology, harmonic maps and Higgs bundles,” Strasbourg and Basel, March 2005.

Additional Information: NSF Graduate Fellow, 1977–1980; NSF Postdoctoral Fellow, 1980–1981; Member, MSRI, 1984–1985; Alfred P. Sloan Foundation Fellow, 1988–1990; Visiting Professor, Oxford University, Spring 1989; Board of Governors, Geometry Center, University of Minnesota, 1993–1995; Associate Chair for Graduate Studies, University of Maryland, 1995–1998; Director and Founder, Experimental Geometry Lab, University of Maryland, 2000–; Departmental Representative, MSRI Committee of Academic Sponsors, 2002–2005; Director, Maryland VIGRE program, 2004–; Editor-in-chief, *Geometriae Dedicata*, 2004–.

Selected Publications: 1. with D. Fried, Three-dimensional affine crystallographic groups, *Adv. in Math.* **47** (1983), 1–49. MR **0689763 (84d:20047)**; 2. Invariant functions on Lie groups and Hamiltonian flows of surface group representations, *Invent. Math.* **85** (1986), 263–302. MR **0846929 (87j:32069)**; 3. with J. Millson, The deformation theory of representations of fundamental groups of compact Kähler manifolds, *Inst. Hautes Études Sci. Publ. Math.* no. 67 (1988), 43–96. MR **0972343 (90b:32041)**; 4. with S. Choi, The classification of real projective structures on compact surfaces, *Bull. Amer. Math. Soc. (N.S.)* **34** (2) (1997), 161–171. MR **1414974 (97m:57020)**; 5. Ergodic theory on moduli spaces, *Ann. of Math. (2)* **146** (1997), 475–507. MR **1491446 (99a:58024)**.

Statement: The mathematical research community faces serious challenges.

Resources are needed to cultivate mathematics, especially to better involve younger mathematicians and under-represented groups. Training should emphasize versatility since the current supply of academic positions cannot keep pace with the rate we produce Ph.D.s.

Clarifying and communicating the role mathematics plays in our culture is necessary for its promotion. Mathematics differs fundamentally from experimental sciences. Fierce competition with other disciplines for research funding demands articulating our unique needs and characteristics. We must resist having our well-established and successful research practices forced into unsuitable molds. We cannot let ourselves become hostage to publishing companies who may be tempted to view us as a helplessly captive market. Publications need both the sincere commitment of researchers as well as a competent infrastructure. In particular our means of dissemination must adapt to ever-advancing technology.

Major advances in mathematics occur at a breathtaking pace. Through teaching and outreach, we can communicate the fascination and wonder which initially attracted us. The American Mathematical Society is the leading organization to ensure that mathematics continues to be vibrant and exciting. I am honored to be considered to serve on its Council.

Craig L. Huneke



Professor of Mathematics, University of Kansas.

Born: August 27, 1951, Norman, Oklahoma, USA.

Ph.D.: Yale University, 1978.

AMS Committees: Contemporary Mathematics Editorial Committee, 1991–1995 (Managing Editor, 1993–1995); *Bull. Amer. Math. Soc.* Editorial Committee, 1999–2002; Committee on Meetings and Conferences, 2002–2005; Committee to Select Steele Prize, 2003–2006;

Committee to Select the Winner of the Cole Prize (in Algebra) for 2006, 2005–2006.

Selected Addresses: AMS Invited Address, Knoxville, 1988; Invited Speaker in Algebra, International Congress of Mathematicians, Kyoto, 1990; CBMS Principal Lecturer, North Dakota State, 1995; Mid-Atlantic Algebra Conference, Main Speaker, George Mason University, 2000; Howard-Hayden Speaker, University of Kentucky, 2003; Arkansas Spring Lecture Series, 2005.

Additional Information: Michigan Jr. Fellow, 1978–1981; NSF Postdoctoral Fellowship, 1981–1982; Sloan Postdoctoral Fellowship, 1984; Fulbright Scholar, 1998; Scientific Advisory Committee, Banff International Research Station, 2001–2003. Other Editorial Boards: *Math. Research Letters*, 1993–, *J. Algebra*, 1996–2005, *Collect. Math.*, 2000–, *Ann. Fac. Sci. Toulouse Math.*, 2003–.

Selected Publications: 1. with B. Ulrich, The structure of linkage, *Ann. of Math. (2)* **126** (1987), 277–334. MR **0908149** (88k:13020); 2. with M. Hochster, Tight closure, invariant theory, and the Briançon-Skoda theorem, *J. Amer. Math. Soc.* **3** (1990), 31–116. MR **1017784** (91g:13010); 3. Uniform bounds in Noetherian rings, *Invent. Math.* **107** (1992), 203–223. MR **1135470** (93b:13027); 4. with M. Hochster, Comparison of symbolic and ordinary powers of ideals, *Invent. Math.* **147** (2002), 349–369. MR **1881923** (2002m:13002); 5. with D. Eisenbud and B. Ulrich, Heights of ideals of minors, *Amer. J. Math.* **126** (2004), 417–438. MR **2045507** (2005b:13022).

Statement: The AMS is the main public face of mathematical research in the United States. As I grow older I feel more indebted to the AMS. I am impressed by the number of activities it supports, and by the level of thought and effort which go into its decisions. It seems to me the main problems the AMS faces don't change much over time: making our profession attractive to young people, and finding ways to increase support for research are two constant challenges. I appreciate the increased attention the AMS is giving to all levels of mathematics, although I feel a partly neglected group in our profession are mid-career mathematicians. I hope to contribute to the vitality of mathematics through serving on the Council.

Judy Anita Kennedy



Professor, Department of Mathematical Sciences, University of Delaware.

Born: July 24, 1947, Mobile, Alabama, USA.

Ph.D.: Auburn University, 1975.

Additional Information: Conference Organization: Organized or Co-organized 2 NSF-supported Conferences (at UD), 3 AMS Special Sessions, 3 SIAM Mini-Symposia, 4 Special Sessions at various topology conferences. Conference Com-

mittees: Served on Executive, Steering, and Advisory Committees for the Summer Topology Conference and Spring Topology/Dynamics Conference over a period of 6 or so years. Editorships: Editor for *Topology Proceedings* and Guest Editor for *Topology and Applications*. Reviewing: Refereed for numerous journals and grant proposals, served on 5 NSF panels.

Selected Addresses: Invited Speaker, Joint Summer Research Conference in the Mathematical Sciences: Relationships Between Continuum Theory and the Theory of Dynamical Systems, Humboldt State University, Arcata, California, June 1989; Ralph Bennett Memorial Lecture, Auburn University, Alabama, May 1992; Lecture, Dinner Meeting, New York Academy of Sciences (Mathematics Section), January 1994; Invited Speaker, 8th Prague Topological Symposium, Prague, Czech Republic, August 1996; Plenary Talk, 2002 Annual Spring Topology/Dynamics Conference, University of Texas at Austin, Austin, Texas, March 2002.

Selected Publications: 1. Stable extensions of homeomorphisms on the pseudo-arc, *Trans. Amer. Math. Soc.* **310** (1988), 167–178. MR **0939804** (89d:54023); 2. with J. A. Yorke, Pseudocircles in dynamical systems, *Trans. Amer. Math. Soc.* **343** (1994), 349–366. MR **1187029** (94g:58166); 3. with J. A. Yorke, Bizarre topology is natural in dynamical systems, *Bull. Amer. Math. Soc. (N.S.)* **32** (1995), 309–316. MR **1307903** (95j:58107); 4. with S. Koçak and J. A. Yorke, A chaos lemma, *Amer. Math. Monthly* **108** (2001), 411–423. MR **1837861** (2002f:37057); 5. with E. Akin and M. Hurley, Dynamics of topologically generic homeomorphisms, *Mem. Amer. Math. Soc.* **164** (2003), no. 783. MR **1980335** (2004j:37024).

Statement: Mathematicians in academia are increasingly under pressure (1) to give “popular” courses rather than more challenging, thought-provoking ones, and (2) to do research that brings in large amounts of funding rather than follow their own hearts, both often at the expense of their own integrity and more important long-term goals. While staying relevant in our fast-changing world is important, so are the instincts (as to what is important) of the people doing the teaching and research in our institutions today. The AMS should address these problems.

William McCallum



Professor of Mathematics, University of Arizona.

Born: August 31, 1956, Sydney, New South Wales, Australia.

Ph.D.: Harvard University, 1984.

AMS Committees: Committee on Education, 2002– (chair, 2004–).

Selected Addresses: Barrett Lectures, University of Tennessee, 2002; Canadian Number Theory Association, VII Meeting, Montreal, 2002; Mathematics Education and Mathematics in the 21st Century,

University of Arizona, 2003; Congrès Iwasawa, Besançon, 2004 (all invited addresses).

Additional Information: AMS Centennial Fellowship, 1995–1996.

Selected Publications: 1. with R. Coleman, Stable reduction of Fermat curves and Jacobi sum Hecke characters, *J. Reine Angew. Math.* **385** (1988), 41–101. MR **0931215** (**89h:11026**); 2. On the Shafarevich-Tate group of the Jacobian of a quotient of the Fermat curve, *Invent. Math.* **93** (1988), 637–666. MR **0952286** (**90b:11059**); 3. On the method of Coleman and Chabauty, *Math. Ann.* **299** (1994), 565–596. MR **1282232** (**95c:11079**); 4. with R. T. Sharifi, A cup product in the Galois cohomology of number fields, *Duke Math J.* **120** (2003), 269–310. MR **2019977** (**2004j:11136**); 5. Promoting work on education in mathematics departments, *Notices Amer. Math. Soc.*, October, 2003.

Statement: The AMS is run by its members, and our common task is to affirm the position of mathematics as central to human knowledge, necessary for informed participation in society, and fundamental to scientific progress. This requires effort on many fronts: nurturing basic research, improving the quality of education, ensuring equal opportunity, and promoting public awareness. I bring to this task my experience in these areas, which includes organizing international conferences in both research and education, fostering at a national level productive discussions between mathematicians and educators, and working at my own institution to promote diversity in the sciences and public awareness of mathematics.

Ken Ono



Manasse Professor of Letters and Science, University of Wisconsin, Madison.

Born: March 20, 1968, Philadelphia, Pennsylvania, USA.

Ph.D.: University of California at Los Angeles, 1993.

Selected Addresses: Recent trends in analytic number theory, Clay Mathematics Institute Conference at the Institute for Advanced Study, April 2000; AMS Invited Address, Central Sectional Meeting, March 2001; Invited Address, 5th Annual Chinese-American Frontiers

of Sciences Symposium, U.S. National Academy of Sciences, October 2002; CBMS Distinguished Conference Lecturer (10 lectures), Urbana, Illinois, June 2003; Gauss-Dirichlet Conference, Göttingen, Germany, June 2005.

Additional Information: NSF Postdoctoral Fellowship, 1995; NSA Young Investigator, 1997; NSF CAREER Award, 1998; Alfred P. Sloan Foundation Research Fellowship, 1999; David and Lucile Packard Research Fellowship, 1999; Presidential Early Career Award (PECASE, Awarded by Pres. Clinton), 1999; Romnes Fellowship, 2002; NSF-CBMS Conference Lecturer, 2003; John S. Guggenheim Foundation Fellowship, 2003; NSF FRG Grant: Arakelov theory of modular forms (PI), 2004–2007; University of Wisconsin VIGRE Grant (Co-PI), 2004–2009; NSF Director’s Distinguished Teaching Scholar Award, 2005; Editor: *Integers*, *International Journal of Number Theory*, *Ramanujan Journal*, *International Journal of Mathematics and the Mathematical Sciences*, *Proceedings of the Amer. Math. Soc.*

Selected Publications: 1. with K. Soundararajan, Ramanujan’s ternary quadratic form, *Invent. Math.* **130** (1997), 415–454. MR **1483991** (**99b:11036**); 2. with C. Skinner, Fourier coefficients of half-integral weight modular forms modulo l , *Ann. of Math. (2)* **147** (1998), 453–470. MR **1626761** (**99f:11059a**); 3. with W. Kohlen, Indivisibility of class numbers of imaginary quadratic fields and orders of Tate-Shafarevich groups of elliptic curves with complex multiplication, *Invent. Math.* **135** (1999), 387–398. MR **666783** (**2000c:11087**); 4. Distribution of the partition function modulo m , *Ann. of Math. (2)* **151** (2000), 293–307. MR **1745012** (**2000k:11115**); 5. *The Web of Modularity: Arithmetic of the Coefficients of Modular Forms and q -Series*, CBMS Regional Conference Series in Mathematics, no. 102, Amer. Math. Soc., Providence, 2004. MR **2020489** (**2005c:11053**).

Statement: The AMS plays many important roles in promoting mathematics and mathematicians. If elected, I will assume leadership roles in both policy and outreach. If elected, I look forward to working closely with John Ewing (Executive Director of the AMS) and Samuel Rankin (Assoc. Executive Director) and the AMS Policy Committee to advocate for federal investment in the mathematical sciences. In terms of outreach, I will work to amplify efforts in K-12 outreach. I have already raised funds to help support the “Who wants to be a mathematician?” AMS program for high school students, and as a Council member I would work to cultivate further sources of financial support. I would be honored to serve the mathematical community as a member of the AMS Council, and I look forward to challenges that membership presents.

Freydoon Shahidi
Distinguished Professor of Mathematics, Purdue University.
Born: June 19, 1947, Tehran, Iran.
Ph.D.: The Johns Hopkins University, 1975.
AMS Committees: AMS/NSA Advisory Panel, 1994–1997.
Selected Addresses: AMS Invited Address, Boston, 1995; IAS/Park City Summer School, 2002; ICM Invited Address, Beijing, 2002; Special Session at India-AMS Meeting, Ban-



galore, 2003; Joseph Fels Ritt Lectures, Columbia University, 2005. **Additional Information:** Member: IAS, 1975–1976, 1983–1984, 1990–1991; Editorial Boards: *Iranian International J. Science*, 2000–; *Canadian J. Math.*, 2001–; *Canadian Math. Bull.*, 2001–; *Internat. Math. Res. Notices*, 2002–; *American J. Math.*, 2003–; *Bull. Iranian Math. Soc.*, 2004–. Honors: Clay Math. Institute Prize Fellow, 2000;

Honorary Member of Iranian Math. Society, 2000–; Guggenheim Fellow, 2001.

Selected Publications: 1. A proof of Langlands' conjecture on Plancherel measures; complementary series for p -adic groups, *Ann. of Math. (2)* **132** (1990), 273–330. MR **1070599 (91m:11095)**; 2. with S. Gelbart, Boundedness of automorphic L -functions in vertical strips, *J. Amer. Math. Soc.* **14** (2001), 79–107 (electronic). MR **1800349 (2003a:11056)**; 3. with H. H. Kim, Cuspidality of symmetric powers with applications, *Duke Math. J.* **112** (2002), 177–197. MR **1890650 (2003a:11075)**; 4. with H. H. Kim, Functorial products for $GL_2 \times GL_3$ and the symmetric cube for GL_2 , *Ann. of Math. (2)* **155** (2002), 837–893. MR **1923967 (2003m:11075)**; 5. with J. Cogdell, H. H. Kim, and I. I. Piatetski-Shapiro, Functoriality for classical groups, *Publ. Math. Inst. Hautes Études Sci.* no. 99 (2004), 163–233. MR **2075885**.

Statement: What has brought all of us together, whether as educators, researchers or administrators, is our passion for mathematics. With many striking recent developments, enriching both core and interdisciplinary mathematics, AMS is now in a strong position to emphasize the significance of mathematical research to the public as well as the community. I believe a genuine effort in this direction will attract more membership and make a stronger AMS. The issue of employment for our students and the younger members of our community is a serious matter that all of us face as either job seekers or mentors and teachers every year. The AMS has been very important in providing us with many resources in this matter, but in this day and time as many departments are losing their hiring independence, more aggressive solutions may be needed. Similar efforts should be made in dealing with funding agencies, which with all their good intentions, lack the resources to fund but the very top proposals. The AMS has been very successful in organizing conferences and forums for bringing the community together. We should try to encourage the participation of our younger members as well as women and minorities with whatever means we have. Serving at the AMS Council is a privilege and I would be honored, given the chance.

Christina Sormani

Associate Professor of Mathematics, CUNY Graduate Center and Lehman College.

Born: September 23, 1969, New York, New York, USA.

Ph.D.: Courant Institute, New York University, 1996.



Selected Addresses: Differential Geometry Seminars at Harvard, MIT, Brown, U. Pennsylvania, Johns Hopkins, U. Maryland, Columbia, and IUPUI, 1999–2004; Invited Speaker, AWM Meeting, 2000; Stony Brook Colloquia, 2001; Invited Speaker, AIM General Relativity, 2002; Invited Speaker, CRM Spectral Geometry, 2004; Dartmouth Colloquia, 2004.

Additional Information: NSF Fellow, 1991–1996; Moderator, AWM web forum, How to Increase the Number of Tenured Women in Mathematics, 1999–2000; Co-organizer, four AMS Special Sessions, 2000–2004; NSF Research Grant, 2001–2004; PSC CUNY Grant Review Board, 2003; Moderator, AWM web forum, Diverse Personal Lives of Mathematicians, 2003–2004; Coorganized CUNY Geometric Analysis Conferences, 2004 and 2005.

Selected Publications: 1. Busemann functions on manifolds with lower bounds on Ricci curvature and minimal volume growth, *J. Differential Geom.* **48** (1998), no. 3, 557–585. MR **1638053 (2000e:53041)**; 2. Nonnegative Ricci curvature, small linear diameter growth, and finite generation of fundamental groups, *J. Differential Geom.* **54** (2000), no. 3, 547–559. MR **1823314 (2003a:53047)**; 3. with Z. Shen, The codimension one homology of a complete manifold with nonnegative Ricci curvature, *Amer. J. Math.* **123** (2001), no. 3, 515–524. MR **1833151 (2002i:53048)**; 4. with G. Wei, Universal covers for Hausdorff limits of noncompact spaces, *Trans. Amer. Math. Soc.* **356** (2004), no. 3, 1233–1270 (electronic). MR **2021619**; 5. Friedmann cosmology and almost isotropy, *Geom. Funct. Anal.* **14** (2004), no. 4, 853–912. MR **2084982**; 6. with G. Wei, The covering spectrum of a compact length space, *J. Differential Geom.* **66** (2004), 647–689.

Statement: One of the primary goals of the American Mathematical Society is to enable mathematicians to conduct their research and disseminate it. Due to an increasingly tight job market, many research mathematicians are now located at universities and colleges which do not recognize their research. These mathematicians are subjected to high teaching loads, little opportunity for grant funding, decreasing access to increasingly expensive journals, and paper-counting deans that veto tenure. While MathSciNet, the arXiv and regional AMS meetings have provided significant research assistance to these mathematicians, there is a serious need to adequately recognize their contribution to mathematics.

I propose an AMS award for the top one thousand papers published each year consisting of a simple annotation next to the MathSciNet review. Unlike the “featured reviews”, these papers would be nominated by the editors of journals and reviewed by panels of experts in each field. Naturally, most papers in very selective journals would get such rewards and this would become a competition between journals, allowing new online journals the opportunity to rise in prestige.

If elected to the AMS Council, I would push for the implementation of this award and other AMS services which support mathematicians in all departments.

Ravi Vakil



Assistant Professor of Mathematics, Stanford University.

Born: February 22, 1970, Toronto, Ontario, Canada.

Ph.D.: Harvard University, 1997.

AMS Committees: Representative to the MAA Committee on Mathematical Competitions, 2004–.

Selected Addresses: Hong Kong Geometry Colloquium, 2003; Berkeley Colloquium, 2004; Park City Mathematical Institute, 2004;

Invited Plenary Lecture, Joint AMS-MAA Meetings, Atlanta, 2005; Andre-Aisenstadt Award Lecture, Centre de Recherches Mathématiques, 2005.

Additional Information: Trevor Evans Award for expository writing, 1999; G. de B. Robinson Award, 1999; AMS Centennial Fellow, 2001–2003; Sloan Research Fellowship, 2002–2005; Terman Fellow, 2003–2006; Presidential Early Career Award for Scientists and Engineers (PECASE) and NSF CAREER award, 2003–2008; Alden H. and Winifred Brown Faculty Fellow, 2004–2005; Andre-Aisenstadt Award, CRM, 2005; Associate Editor, *Canadian Journal of Mathematics* and *Canadian Mathematical Bulletin*, 2005–.

Selected Publications: 1. with K. Hori, S. Katz, A. Klemm, R. Pandharipande, R. Thomas, C. Vafa, and E. Zaslow, *Mirror Symmetry*, Amer. Math. Soc., Providence; Clay Math. Institute, Cambridge, 2003. MR 2003030 (2004g:14042); 2. A geometric Littlewood-Richardson rule, *Ann. of Math.*, to appear; 3. with T. Graber, Relative virtual localization, and vanishing of tautological classes on moduli spaces of curves, *Duke Math. J.*, to appear; 4. Schubert induction, *Ann. of Math.*, to appear; 5. Murphy’s Law in algebraic geometry: Badly-behaved deformation spaces, submitted.

Statement: It is essential that the AMS continue to provide a strong voice for mathematics and mathematicians. Young mathematicians in particular should be convinced of the benefits of joining the AMS—both to themselves, and more important, to the health of mathematics. Conversely, the AMS should represent newer members of our community by being responsive to the challenges mathematicians face at the start of their careers.

Dan-Virgil Voiculescu

Professor of Mathematics, University of California at Berkeley.

Born: June 14, 1949, Bucharest, Romania.

Ph.D.: University of Bucharest, 1977.

AMS Committees: Committee on National Meetings, 1997–1999; *Transactions* and *Memoirs* Editorial Committee, 2002–2003.

Selected Addresses: Invited Address, International Congress of Mathematicians, Warsaw, 1983; Invited Address, European Congress of Mathematics, Paris, 1992; Invited Plenary Address, International Congress of Mathematicians,



Zurich, 1994; Invited Plenary Address, AMS Meeting and Scandinavian Math Congress, Odense, 2000; Invited Plenary Address, International Congress Mathematical Physics, Lisbon, 2003.

Additional Information: Aisenstadt Chair, CRM Montreal, Spring 1991; Co-chair, Organizing Committee, MSRI Program on Operator Algebras, academic year 2000–2001; International Blaise

Pascal Research Chair, Paris, Spring 2003 and 2004; NAS Award in Mathematics, 2004.

Selected Publications: 1. A non-commutative Weyl-von Neumann theorem, *Rev. Roumaine Math. Pures Appl.* **21** (1976), 97–113. MR 0415338 (54:3427); 2. with M. Pimsner, K -groups of reduced crossed products by free groups, *J. Operator Theory* **8** (1982), 131–156. MR 0670181 (84d:46092); 3. Limit laws for random matrices and free products, *Invent. Math.* **104** (1991), 201–220. MR 1094052 (92d:46163); 4. Circular and semicircular systems and free product factors, in *Operator Algebras, Unitary Representations, Enveloping Algebras, and Invariant Theory* (Paris, 1989), Progr. Math., vol. 92, Birkhäuser Boston, Boston, MA, 1990, pp. 45–60. MR 1103585 (92e:46124); 5. Free entropy, *Bull. London Math. Soc.* **34** (2002), 257–278. MR 1887698 (2003c:46077).

Statement: A permanent role of the AMS is to help mathematicians and nonmathematicians keep a perspective of where mathematics is going. With the increase of publications and specialization, there is also an increased need for communication of essential ideas in simple form and for connecting with other fields and sciences. If elected I would emphasize the continuation of the work which the AMS has been doing in this direction.

Judy L. Walker



Associate Professor of Mathematics, University of Nebraska.

Born: April 29, 1969, Chicago, Illinois, USA.

Ph.D.: University of Illinois, 1996.

AMS Committees: Arnold Ross Lecture Series Committee, 2001–2004; Committee on the Morgan Prize for Outstanding Research in Mathematics by an Undergraduate Student, 2005–2008.

Selected Addresses: Nine AMS Special Session Invited Talks, 1997–2004; Institute for Advanced Study Program for Women (eight hour lecture series), 1999; Colloquia and/or Seminars at Wisconsin, Penn State, Notre Dame, Illinois, Colorado, 2002–2005; “Reconnect” Workshop (15 hour lecture series), Salem, MA, 2003; AMS Invited Address, Lincoln, October 2005.

Additional Information: Co-founder and co-organizer, All Girls/All Math Program, 1997–; Co-founder and co-organizer, Nebraska Conference for Undergraduate Women in Mathematics, 1999–; Editor for Rose-Hulman Under-

graduate Mathematics Journal, 1999–; Editor for *J. Pure Appl. Algebra*, 2001–; AWM Executive Committee, 2002–2004; MAA Sectional Award for Distinguished Teaching, 2003; AWM Workshop Committee, 2004–. Member: AWM, IEEE, MAA.

Selected Publications: 1. with R. Koetter, W. Li, and P. Vontobel, Pseudo-codewords of cycle codes via zeta functions, Proceedings of the IEEE Information Theory Workshop, San Antonio, TX, October 24–29, 2004; 2. with A. Silberberg and J. Staddon, Applications of list decoding to tracing traitors, *IEEE Trans. Inform. Theory* **49** (2003), 1312–1318. MR **1984829** (2004f:94075); 3. *Codes and Curves*, Student Mathematical Library, vol. 7, IAS/Park City Mathematical Subseries, Amer. Math. Soc., Providence, RI; Institute for Advanced Study (IAS), Princeton, NJ, 2000. MR **1768485** (2001f:14046); 4. with J.-F. Voloch, Euclidean weights of codes from elliptic curves over rings, *Trans. Amer. Math. Soc.* **352** (2000), 5063–5076 (electronic). MR **1778505** (2001i:94083); 5. Algebraic geometric codes over rings, *J. Pure Appl. Algebra* **144** (1999), 91–110. MR **1723194** (2001k:94075).

Statement: This is an exciting time to be a mathematician. Mathematics is the basis of breakthroughs being made across the sciences and the need for fundamental research, both for its own sake and as it relates to other areas, is becoming recognized by the public. The AMS does an excellent job of promoting mathematics. It provides a connection from the mathematics community to the government to influence legislative issues which have an impact on mathematics. Its public relations work builds support for mathematics among the general population. Its various outreach activities help to develop the next generation of mathematicians. And, of course, its work in organizing meetings and conferences, in publishing journals and books, and in providing MathSciNet is invaluable to researchers. I was pleased to be asked to stand for election to the AMS Council, and, if elected, I will be honored to serve.

Nominating Committee

William K. Allard



Professor of Mathematics, Duke University.

Born: October 29, 1941.

Ph.D.: Brown University, 1968.

Selected Addresses: Invited Speaker, 1973 AMS Annual Meeting; Invited Speaker, 1974 International Congress of Mathematicians.

Additional Information: Alfred P. Sloan Foundation Fellowship, 1970–1972; Managing Editor, *Duke Math. J.*, 1983–1985; Co-chair,

1984 AMS Summer Institute.

Selected Publications: 1. On the first variation of a varifold, *Ann. of Math. (2)* **95** (1972), 417–491. MR **0307015** (46:6136); 2. with F. J. Almgren, Jr., On the radial behavior of minimal surfaces and the uniqueness of their tangent cones, *Ann. of Math. (2)* **113** (1981), no. 2, 215–265.

MR **0607893** (83k:49069); 3. An integrality theorem and a regularity theorem for surfaces whose first variation with respect to a parametric elliptic integrand is controlled, *Geometric Measure Theory and the Calculus of Variations* (Arcata, CA, 1984), Proc. Sympos. Pure Math., vol. 44, Amer. Math. Soc., Providence, RI, 1986, pp. 1–28. MR **840267** (87j:49077); 4. Introduction to the Deferred Execution Tool, Proceedings of the 9th SIAM Conference on Parallel Processing for Scientific Computing, 1999; 5. On the regularity and curvature properties of level sets of minimizers for denoising models using total variation regularization, preprint, May 2005.

Statement: For too long now many in traditional academic mathematics departments have been unaware of scientific developments involving mathematics outside their narrow area of expertise. This has resulted not only in the isolation of mathematics departments but also in the unfortunate situation that many scientists do not have the mathematical collaborators they need to carry out their work.

For this reason, I would if elected to the Nominating Committee look for candidates for positions in the AMS with some breadth of scientific knowledge and the predisposition to consider new ways of looking at the position of mathematics within the sciences.

Michael G. Crandall



Professor of Mathematics, University of California at Santa Barbara.

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

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

AMS Offices: Member at Large of the Council, 1984–1986; Trustee, 1996–2001.

AMS Committees: Committee to Select Hour Speakers for Far Western Sectional Meetings, 1974–1975; Committee on Committees, 1985–1986; *Notices* Editorial Committee, 1989–1992; Far Western Section Program Committee, 1990, and Western Section Program Committee, 1991 (chair, 1991); Progress in Mathematics Committee, 1993–1995 (chair, 1995); AMS-MAA Committee on Cooperation, 1995; Committee to Review Operation of Journals, 1996; AMS Policy Committee on Publications, 1996–1998; Science Policy Committee, 1999; Steele Prize Committee, 2000–2003 (chair, 2003).

Selected Addresses: International Congress of Mathematicians, Vancouver, Canada, 1974; SIAM Annual Meeting, Troy, New York, 1975; AMS Invited Address, Madison, WI, 1982; University of Arkansas Lectures in Mathematics, 1986; AMS Progress in Mathematics Lecture, 1990; Plenary address, SIAM Annual Meeting, San Juan, Puerto Rico, 2000.

Additional Information:

Professor, University of California at Los Angeles, 1973–1976; Professor, Department of Mathematics and

Mathematics Research Center, University of Wisconsin, 1974–1988 (Houses Professor, 1984–1988); Professor, University of California at Santa Barbara, 1988– (director, IAC/Nonlinear Science Program, 1988–1991; chair of department, 1993–1996); Managing Editor, *Communications in Partial Differential Equations*, 1989–1993 (Editorial Board, 1994–); Miller Research Professor, University of California at Berkeley, Fall 1996; U.S. National Committee on Mathematics, 1996–2000; Distinguished Visitor, University of Wisconsin, Fall 1997; Steele Prize for Seminal Research, 1999; Docteur Honoris Causa, University of Paris-Dauphine, 1999; Trustee, Institute for Pure and Applied Mathematics, UCLA, 1999–2003; Fellow of the American Academy of Arts and Sciences (elected 2000). Editorial Boards: *Analyse non linéaire*, *Annales de IHP*, 1989–; *Evolution Equations*, 2000–; Various periods: *Nonlinear Analysis: Theory, Methods, Applications*; *Applicable Analysis*; *Differential and Integral Equations*; *Advances in Differential Equations*; *Electronic Journal of Differential Equations*.

Selected Publications: 1. Two families of periodic solutions of the plane four-body problem, *Amer. J. Math.* **89** (1967), 275–318. MR [0215599 \(35:6439\)](#); 2. with P. Rabinowitz, Nonlinear Sturm-Liouville eigenvalue problems and topological degree, *J. Math. Mech.* **19** (1969/1970), 1083–1102. MR [0259232 \(41:3874\)](#); 3. with T. Liggett, Generation of semi-groups of nonlinear transformations on general Banach spaces, *Amer. J. Math.* **93** (1971), 265–298. MR [0287357 \(44:4563\)](#); 4. with P.-L. Lions, Viscosity solutions of Hamilton-Jacobi equations, *Trans. Amer. Math. Soc.* **277** (1983), 1–42. MR [0690039 \(85g:35029\)](#); 5. with G. Aronsson and P. Juutinen, A tour of the theory of absolutely minimizing functions, *Bull. Amer. Math. Soc. (N.S.)* **41** (2004), 439–505 (electronic). MR [2083637](#).

Statement: The success of the AMS in promoting the welfare and vitality of mathematics depends on the active participation of its members in many different roles. We are blessed in that there is a wealth of very able people among us, such as the others who are standing for election to this committee. However, it is not an easy matter to make good matches between individuals and the offices to be filled, nor is everyone willing to stand for election if asked. The task of the committee is just that, to generate potential candidates for the various offices to be filled who are willing, exceptionally able and otherwise well-qualified. If elected, I will do my part in this important effort, with a particular interest in looking broadly for candidates from our marvelous community.

Henri Gillet

Professor of Mathematics, University of Illinois at Chicago.

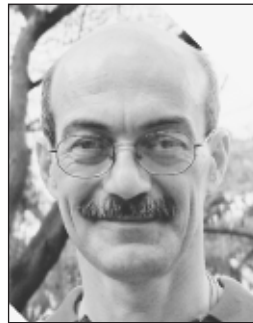
Born: July 8, 1953, Tangiers, Morocco.

Ph.D.: Harvard University, 1978.

AMS Offices: Member at Large of the Council, 2002–2005.

AMS Committees: *American Journal of Mathematics*, Society’s Representative, 1994 (chair); Member, CoProf, 2002–2005.

Selected Addresses: AMS Invited Address, Chicago, May 1989; Number Theory Section, International Congress of Mathematicians, Kyoto, 1990.



Additional Information: Organizer, AMS Special Session on K-Theory, Chicago, March 1985; Alfred P. Sloan Foundation Fellow, 1986–1989; Organizer, AMS Special Session on Arithmetic Geometry and Intersection Theory, Chicago, May 1989; Editor, *Amer. J. Math.*, 1994–1999; Head of Department of Mathematics, Statistics and Computer Science, Univ. of Illinois at Chicago, 1994–2001;

Organizing Committee, AMS Summer Research Institute on Algebraic Geometry, University of California, Santa Cruz, July 9–29, 1995; Editor, *Internat. Math. Res. Notices*, 1995–1997; Organizing Committee, AMS-IMS-SIAM Joint Summer Research Conference on Algebraic K-Theory, Seattle, July 1997; Organizing Committee, Workshop on Learning Stacks and Computational Methods through Problem-Solving, University of Illinois at Urbana-Champaign, June 12–15, 2002; Editor, *Illinois J. Math.*, 2003–; Member, Search Committee for the 16th President of the University of Illinois, February 2004–December 2004.

Selected Publications: 1. Riemann-Roch theorems for higher algebraic K-theory, *Adv. in Math.* **40** (1981), 203–289. MR [0624666 \(83m:14013\)](#); 2. with C. Soulé, Intersection theory using Adams operations, *Invent. Math.* **90** (1987), 243–277. MR [0910201 \(89d:14005\)](#); 3. with J.-M. Bismut and C. Soulé, Analytic torsion and holomorphic determinant bundles I,II,III, *Comm. Math. Phys.* **115** (1988), 49–78, 79–126, 301–351. MR [0929146 \(89g:58192a\)](#), [0929147 \(89g:58192b\)](#), [0931666 \(89g:58192c\)](#); 4. with P. Shalen, Dendrology of groups in low Q -ranks, *J. Differential Geom.* **32** (1990), 605–712. MR [1078160 \(92b:57003\)](#); 5. with C. Soulé, Descent, motives and K-theory, *J. Reine Angew. Math.* **478** (1996), 127–176. MR [1409056 \(98d:14012\)](#).

Statement: The Society plays a vital role in promoting mathematics, through its journals, its meetings and conferences, and its advocacy for the profession with government and the public at large. This requires the efforts not only of the Society’s excellent professional staff, but also the contributions of numerous mathematicians as members of committees and officers of the Society. As a member of the Nominating Committee I would seek to find the best people, representing the full diversity of the mathematical community, who are willing (or can be cajoled) into contributing their time and energy to the Society.

Richard M. Kane

Professor, Department of Mathematics, University of Western Ontario.

Born: June 27, 1944, Danbury, Connecticut, USA.

Ph.D.: University of Waterloo, 1973.

Additional Information: Canadian Mathematical Society: Chair, Research Committee, 1988–1990; Member, Executive Committee, 1993–1995, 1997–2001; Chair, Finance Committee, 1995–1997; President, 1998–2000. Fellow, Royal Society of Canada, 1988; Member, NSERC Grants Committee for Mathematics, 1988–1991; Chair, Department of Mathematics, University of Western Ontario, 1989–1993,



2003–2006; Scientific Convenor, NSERC Review of Canadian Mathematics, 1996; Program Director, The Fields Institute Emphasis Year in Homotopy Theory, 1996; Chair, Mathematics Steering Committee for NSERC Reallocation Exercises, 1997–1998, 2001–2002.

Selected Publications: 1. The BP homology of H -spaces, *Trans. Amer. Math. Soc.* **241** (1978), 99–119. MR **0478143** (57#17632);

2. Operations in connective K -theory, *Mem. Amer. Math. Soc.* **34** (1981), no. 254. MR **0634210** (82m:55025); 3. Implications in Morava K -theory, *Mem. Amer. Math. Soc.* **59** (1986), no. 340. MR **0823444** (87e:57045); 4. *The Homology of Hopf Spaces*, North-Holland Mathematical Library, vol. 40, North-Holland Publishing Co., Amsterdam, 1988. MR **0961257** (90f:55018); 5. *Reflection Groups and Invariant Theory*, CMS Books in Mathematics/Ouvrages de Mathématiques de la SMC, vol. 5, Springer-Verlag, New York, 2001. MR **1838580** (2002c:20061).

Statement: Over the past fifteen years I have had the opportunity to serve the Canadian mathematical community in a wide variety of roles. That experience has left me with a strong sense of the challenges and of the opportunities being presented to mathematics at the current moment. It has also left me with a sense of the vitality and direction which is required of our professional bodies to creatively respond to their particular challenges. To meet its many challenges and opportunities the AMS requires the active participation of its membership, more particularly it requires the presence of thoughtful, committed people in positions of responsibility. It is the mandate of the Nominating Committee to seek such participation and such people. If chosen for the Nominating Committee I would work as actively as possible to fulfil this mandate.

M. Susan Montgomery



Professor of Mathematics, University of Southern California.

Born: April 2, 1943, Lansing, Michigan, USA.

Ph.D.: University of Chicago, 1969.

AMS Offices: Member at Large of the Council, 1981–1984; Board of Trustees, 1986–January 1996 (Chair, 1989 and 1994).

AMS Committees: Member, Subcommittee to write rules for CAFTES (Committee on Academic

Freedom, Tenure, and Employment Security), 1978–1979; Editorial Committee, *Notices Amer. Math. Soc.*, 1979–1982; Selection Committee for Research Fellow, 1982–1984 (Chair, 1983–1984); Editorial Committee, *AMS Mathematical Surveys and Monographs*, 1983–1990 (Chair, 1989–1990); Coordinating Editor for Algebra and Number Theory, *Proc. Amer. Math. Soc.*, 1992–January 1996; Policy Committee on Publications, 1994–1995 (Chair, Sub-

committee on Books), 1996–1999 (Chair of the Committee, 1996–1998).

Selected Addresses: AMS Invited Hour Address, January 1984; Principal Lecturer, CBMS Conference on Hopf Algebras and their Actions on Rings, Chicago, 1992; Invited Hour Address, AMS-Israel Math Union Joint Meeting, Jerusalem, Israel, 1995; AMS-SMM Invited Hour Address, Annual Meeting of the Sociedad Matemática Mexicana, Aguas Calientes, Mexico, 1997; AMS Invited Hour Address, March 2005.

Additional Information: John S. Guggenheim Memorial Foundation Fellow, 1984–1985; Editorial Boards, *J. Algebra*, 1988– and *Adv. Math*, 1995–2002; Board on Mathematical Sciences (BMS) of the NRC, 1995–1998; Organizing Committee, Non-Commutative Algebra Year, MSRI, 1999–2000; USC Provost's Committee on Women in Science and Engineering (WiSE), 2000–2005. Member: AWM, LMS.

Selected Publications: 1. *Hopf Algebras and Their Actions on Rings*, CBMS Regional Conference Series in Mathematics, vol. 82, Amer. Math. Soc., Providence, RI, 1993. MR **1243637** (94i:16019); 2. with D. Fischman and H.-J. Schneider, Frobenius extensions of subalgebras of Hopf algebras, *Trans. Amer. Math. Soc.* **349** (1997), 4857–4895. MR **1401518** (98d:16049); 3. with H.-J. Schneider, Prime ideals in Hopf Galois extensions, *Israel J. Math.* **112** (1999), 187–235. MR **1715517** (2001e:16075); 4. with Y. Kashina and G. Mason, Computing the Frobenius-Schur indicator for abelian extensions of Hopf algebras, *J. Algebra* **251** (2002), 888–913. MR **1919158** (2003f:16061); 5. with V. Linchenko and L. W. Small, Stable Jacobson radicals and semiprime smash products, *Bull. London Math. Soc.*, to appear.

Statement: Although the primary mission of the AMS is to support research in mathematics, it also has important secondary missions in education (especially in encouraging promising young students) and in public policy (such as maintaining a Washington presence and providing a conduit between the mathematics community and government agencies, as well as other scientific societies). The Nominating Committee must find people who will serve the AMS well in all these endeavors, as well as provide a broad representation of the Society's diverse membership. In working for the Society and the wider mathematical community in past years, I met many different people who could serve the AMS themselves, as well as suggest others. Thus I believe I could do a good job in this important position.

Lisa M. Traynor

Associate Professor, Mathematics Department, Bryn Mawr College.

Born: September 23, 1964, Ironwood, MI, USA.

Ph.D.: State University of New York at Stony Brook, 1992.

AMS Committees: Member at Large of the Council, 2000–2003; Committee on Education, 2000–2003; Associate Editor, *Notices Amer. Math. Soc.*, 2000–.

Selected Addresses: AMS Special Sessions: Symplectic Geometry and Mechanics, Corvallis, April 1997; Symplectic Topology and Quantum Cohomology, Milwaukee, October 1997; Symplectic Geometry and Topology, Urbana,



March 1999; Integrable Systems, Buffalo, April 1999; Symplectic and Contact Geometry, New York, April 2003.

Additional Information: Alfred P. Sloan Doctoral Dissertation Fellowship, 1991–1992; MSRI Postdoc, 1992–1993 and Member, 1996–1997; NSF Postdoctoral Fellow, 1993–1997; Member, Centre Emile Borel, Institut Henri Poincaré, Paris, 1994; Member, Isaac

Newton Institute, Cambridge, Fall 1994; Member, Organizing Committee, Institute for Advanced Study/Park City Mathematics Institute Women’s Program, 1996–; Coorganizer with Y. Eliashberg of the Research Program for the Institute for Advanced Study/Park City Mathematics Institute on Symplectic Geometry and Topology, 1997; AIM Visitor 2000; IAS Member 2001–2002. Member: AMS, AWM, MAA.

Selected Publications: 1. Symplectic embedding trees for generalized camel spaces, *Duke Math. J.* **72** (1993), no. 3, 573–594. MR **1253616 (95a:58014)**; 2. Symplectic homology via generating functions, *Geom. Funct. Anal.* **4** (1994), no. 6, 718–748. MR **1302337 (96a:58049)**; 3. Legendrian circular helix links, *Math. Proc. Cambridge Philos. Soc.* **122** (1997), no. 2, 301–314. MR **1458235 (98f:58085)**; 4. with F. M. Maley and J. Mastrangeli, Symplectic packings in cotangent bundles of tori, *Experiment. Math.* **9** (2000), no. 3, 435–455. MR **1795876 (2002a:53111)**; 5. Generating function polynomials for Legendrian links, *Geom. Topol.* **5** (2001), 719–760 (electronic). MR **1871403 (2002i:57035)**.

Statement: The task of the Nominating Committee is to find candidates for election to various offices in the AMS. If elected, I would work hard to find candidates from a broad spectrum of career levels and employment situations. I believe that by including people with a variety of backgrounds, we can best keep the AMS vibrant and in tune with the concerns of the mathematical community. From my experiences from serving on the Council, the Committee on Education, and as an associate editor for the *Notices*, I have gained a great appreciation for the role the AMS plays in supporting mathematical research and mathematical education and in fostering general awareness and appreciation of mathematics. My motivation for serving on this committee comes from my dedication to mathematical research and my appreciation of the AMS.

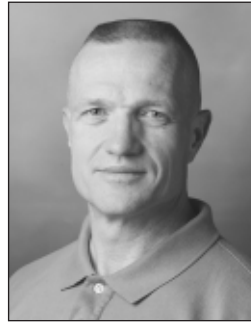
Editorial Boards Committee

Robert L. Bryant

J. M. Kreps Professor of Mathematics, Duke University.
Born: August 30, 1953, Harnett County, North Carolina, USA.

Ph.D.: University of North Carolina at Chapel Hill, 1979.

AMS Committees: Member, AMS Task Force on Membership, 1998–2000; Chair, AMS Committee on Publications, 1998–2004; Member at Large of the Council, 1999–2004; Executive Committee Member, AMS Council, 2000–2004.



Selected Addresses: The Idea of Curvature for Differential Equations, Invited Address, AMS Annual Meeting, Baltimore, MD, January 8, 1998; Finsler metrics of constant flag curvature, Seventh Annual Kemeny Lectures, Dartmouth University, May 15, 2003; Closed G_2 structures, AMS-MSRI von Neumann Symposium, MSRI, September 2, 2003; Gradient Kähler Ricci solitons, Second Yamabe

Memorial Symposium (U-Minn), September 18, 2004; Calibrations in Geometry and Topology, Second Ruth and Irving Adler Expository Lecture, Institute for Advanced Study, Princeton, NJ, October 22, 2004.

Additional Information: Editorial Board Member: *Trans. Amer. Math. Soc.*, 1992–1997; *Duke Mathematical J.*, July 1997; *Differential Geom. Appl.*, May 1999; *Communications in Analysis and Geometry*, November 2002. Associate Editor, *J. Amer. Math. Soc.*, February 2005. Chair, Board of Trustees, MSRI, 1999–2004; MAA Southeastern Section Lecturer, 2001–2003; Fellow of the American Academy of Arts and Sciences, 2002.

Selected Publications: 1. Classical, exceptional, and exotic holonomies: a status report, in *Actes de la Table Ronde de Géométrie Différentielle (Luminy, 1992)*, Sémin. Congr., vol. 1 (1996), pp. 93–165, Soc. Math. France, Paris. MR **1427757 (98c:53037)**; 2. On surfaces with prescribed shape operator. Dedicated to Shiing-Shen Chern on his 90th birthday, *Results Math.* **40** (2001), no. 1–4, 88–121. MR **1860364 (2002i:53010)**; 3. Bochner-Kähler metrics, *J. Amer. Math. Soc.*, **14** (2001), no. 3, 623–715 (electronic). MR **1824987 (2002i:53096)**; 4. with P. Griffiths and D. Grossmann, *Exterior Differential Systems and Euler-Lagrange Partial Differential Equations*, Chicago Lectures in Mathematics, University of Chicago Press, Chicago, IL, 2003. MR **1985469 (2004g:58001)**; 5. with D. Bao, S.-S. Chern, Z. Shen, eds., *A Sampler of Riemann-Finsler Geometry*, Mathematical Sciences Research Institute Publications, vol. 50, Cambridge Univ. Press, Cambridge, MA, 2004.

Statement: The AMS has a long-standing tradition of excellence in publishing for the benefit of the mathematical community, both in research and exposition. To maintain this tradition while the world of publishing is changing so rapidly is a great challenge. It absolutely requires the engagement of our best researchers and expositors if we are to continue to be responsive to the needs and practices of mathematicians as they evolve in response to changes in the ways we communicate and disseminate our mathematics. I will do my best to seek out individuals to nominate for editorial board service who are not only knowledgeable in their research areas but who are also committed to helping increase the efficiency with which the AMS editorial boards perform their editorial services, thereby lessening the burden on all of us.

Allan L. Edmonds



Professor of Mathematics, Indiana University.

Born: November 4, 1946, Bartlesville, Oklahoma, USA.

Ph.D.: University of Michigan, 1973.

Selected Addresses: Approximately 50 invited lectures over 32 years.

Additional Information: Member, MAA; Book Review Co-editor, *American Math. Monthly*, 1982–1987.

Selected Publications: 1. with J. Ewing, Topological realization of equivariant intersection forms, *Amer. J. Math.* **114** (1992), 1103–1126; 2. Systems of curves on a closed orientable surface, *Enseign. Math. (2)* **42** (1996), 311–339. MR **1426442 (97j:57018)**; 3. Automorphisms of the E_8 four-manifold, *Geometric Topology (Athens, GA, 1993)*, AMS/IP Stud. Adv. Math., vol. 2.1, Amer. Math. Soc., Providence, RI, 1997, pp. 282–299. MR **1470733 (98i:57066)**; 4. Tori in certain aspherical four-manifolds, *Proc. Amer. Math. Soc.* **126** (1998), 1253–1255. MR **1443382 (98f:57034)**; 5. Periodic maps of composite order on positive definite 4-manifolds, *Geom. Topol.* **9** (2005), 315–339. **Statement:** Publishing is a core activity of the Society. The usefulness, reliability, and success of its journals and other publications depend in significant measure on the quality of its editorial boards. I will strive to recommend knowledgeable, wise, and efficient editors, who will represent the broad interests of the full membership of the AMS.

Stephen Lichtenbaum



Professor of Mathematics, Brown University.

Born: August 24, 1939, Brooklyn, New York, USA.

Ph.D.: Harvard University, 1964.

AMS Committees: Colloquium Publications Committee, 1997–2000.

Selected Addresses: Abraham Robinson Memorial Lectures, Yale University, April 1997; Plenary Lecture, AMS Conference on Algebraic K-Theory, Seattle, July 1997; Dis-

tinguished Lecture Series, University of Waterloo, March 2000; Kuwait Foundation Lecture, Cambridge University, October 2000; Colloquium, University of Paris, June 2003.

Additional Information: Guggenheim Fellow, 1973–1974; Member, Editorial Board, *Documenta Mathematica*.

Selected Publications: 1. On the values of zeta and L -functions, I, *Ann. of Math. (2)* **96** (1972), 338–360. MR **0360527 (50:12975)**; 2. with J. Coates, On l -adic zeta functions, *Ann. of Math. (2)* **98** (1973), 498–550. MR **0330107 (48:8445)**; 3. The construction of weight-two arithmetic cohomology, *Invent. Math.* **88** (1987), 183–215. MR **0877012 (88d:14011)**; 4. with T. Goodwillie, A cohomological bound

for the h -topology, *Amer. J. Math.* **123** (2001), 425–443. MR **1833147 (2002h:14029)**; 5. The Weil-étale topology on schemes over finite fields, *Compositio Math.* **141** (2005), 689–702.

Statement: I hope to be able to aid in appointing people to editorial boards who have both excellent taste in mathematics and sufficient organizational skills to assure speedy publication of articles.

Maciej Zworski



Professor of Mathematics, University of California at Berkeley.

Born: October 8, 1963, Wrocław, Poland.

Ph.D.: Massachusetts Institute of Technology, 1989.

Selected Addresses: Coxeter-James Lecture, CMS Meeting, Montreal, 1999; ICM, Beijing, PDE section invited talk, 2002; Hommage à la mémoire de Laurent Schwarz, invited talk, 2003.

Additional Information: Experience: Benjamin Peirce Lecturer, Assistant Professor of Mathematics, Harvard University, 1989–1992, Associate Professor of Mathematics, The Johns Hopkins University, 1992–1993, Professor of Mathematics, The Johns Hopkins University, 1994–1996, Professor of Mathematics, University of Toronto, 1995–2000, Professor of Mathematics, University of California, Berkeley, 1998–; Professional Activities: Associate Editor, *Duke Math. J.*, 1992–2000, Editor, *Internat. Math. Res. Notices*, 1998–, Editor, *Amer. J. Math.*, 2000–, Editor, *Methods and Applications of Analysis*, 2001–, Associate Editor, *Canad. J. Math.*, 2001–; Fellowships and Honors: Jon A. Bucsele Prize in Mathematics, MIT, 1985, Alfred P. Sloan Doctoral Dissertation Fellow, 1988–1989, Alfred P. Sloan Research Fellow, 1991–1993, Coxeter-James Prize of the Canadian Mathematical Society, 1999, Fellow of the Royal Society of Canada, 1999–; Visiting Positions: Université de Paris-Sud, Institute des Hautes Études Scientifiques, Université de Paris-Nord, Institut Fourier, Université de Nantes, CNRS, École Polytechnique, Université de Bordeaux I, Erwin Schrödinger Institute, MSRI.

Selected Publications: 1. Distribution of poles for scattering on the real line, *J. Funct. Anal.* **73** (1987), no. 2, 277–296. MR **0899652 (88h:81223)**; 2. with J. Sjöstrand, Complex scaling and the distribution of scattering poles, *J. Amer. Math. Soc.* **4** (1991), no. 4, 729–769. MR **1115789 (92g:35166)**; 3. with C. Robin Graham, Scattering matrix in conformal geometry, *Invent. Math.* **152** (2003), no. 1, 89–118. MR **1965361 (2004c:58064)**; 4. with W. Lu and S. Sridhar, Fractal Weyl laws for chaotic open systems, *Phys. Rev. Lett.* **91** (2003), 154101; 5. with N. Burq, Geometric control in the presence of a black box, *J. Amer. Math. Soc.* **17** (2004), no. 2, 443–471 (electronic). MR **2051618 (2005d:47085)**.