

Biographies of Candidates 2009

Biographical information about the candidates has been supplied and verified by the candidates.

Candidates have had the opportunity to make a statement of not more than 200 words (400 words for presidential candidates) 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

Eric M. Friedlander



Dean's Professor of Mathematics, University of Southern California.

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

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

AMS Offices: Board of Trustees, 2000–2010.

AMS Committees: Member of Committee on Summer Institutes, 1985–1987; Committee on the Publication Program, 1989–1992;

Committee on Science Policy, 1991–1993, 2000–2005; Nominating Committee, 1995–1998 (Chair, 1997); Chair, Committee on Committees, 2005–2007; Committee on Publications, 2005–2008; Chair, University Lecture Series, 2005–2011; Selection Committee for Cole Prize; Task Force for AMS Prizes (2009–); Committee on the Profession (2009–); Past member of the editorial boards of the *Bulletin* and the *Proceedings of the AMS*.

Selected Addresses: Invited Address, AMS Sectional Meeting, 1985; International Congress of Mathematicians, 1986 (surrogate for Andrei Suslin's plenary lecture); Invited Address, International Congress of Mathematicians, 1998; Plenary Addresses, AMS-Mexico international meeting, 2001, Morelia (Mexico); Plenary Addresses, AMS-Spain international meeting, 2003, Sevilla (Spain).

Additional Information: U.S.-France Exchange of Scientists Fellow, 1974; Senior Visiting Fellow, U. K. Science Research Council, 1977–1978; Chair, Northwestern University Department of Mathematics, 1987–1990, 1999–2003; Associate Dean of Science, Northwestern University, 1995–1998; Humboldt Senior Scientist Research Prize, 1996–1998;

Noyes Professor of Mathematics, Northwestern University, 1999–2008; Currently, co-Managing Editor of *Journal of Pure and Applied Algebra*; member of editorial boards of *Algebra and its Applications*, *American Journal of Mathematics*, and *Journal of K-Theory*; Visiting Member: E.T.H.-Zurich, Fields Inst-Toronto, I.A.S.-Princeton, I.H.E.S.-Bures-sur-Yvette, I.H.P.-Paris, M.P.I.-Bonn, M.S.R.I.-Berkeley, Mittag-Leffler-Stockholm, Newton Inst-Cambridge, Tata Inst-Mumbai; Fellow of American Academy of Arts & Sciences, 2005–.

Selected Publications: 1. with H. B. Lawson, A theory of algebraic cocycles, *Ann. of Math. (2)*, **136** (1992), No. 2, 361–428. MR1185123 (93g:14013); 2. with C. Bendel and A. Suslin, Infinitesimal 1-parameter subgroups and cohomology, *J. Amer. Math. Soc.*, **10** (1997), No. 3, 693–728. MR1443546 (98h:14055b); 3. with V. Franjou, A. Scorichenko, and A. Suslin, General linear and functor cohomology over finite fields, *Ann of Math. (2)*, **150** (1999), No. 2, 663–728. MR1726705 (2001b:14076); 4. with M. Walker, Rational isomorphisms between K -theories and cohomology theories, *Invent. Math.*, **154** (2003), No. 1, 1–61. MR2004456 (2004j:19002); 5. with J. Pevtsova and A. Suslin, Generic and maximal Jordan types, *Invent. Math.*, **168** (2007), No. 3, 485–522. MR2299560 (2008e:20072).

Statement: It is a great honor to be nominated for the position of President of the American Mathematical Society, especially since my mathematical grandfather Oscar Zariski and mathematical father Michael Artin led the society in earlier years. The many activities of the AMS well serve the mathematical community: disseminating mathematics through its journals and books; promoting mathematics by organizing meetings at regional, national, and international venues; encouraging public awareness and support of mathematics; improving the conditions, fairness, and diversity of the profession; reaching out to

other disciplines as well as the general public; and advancing mathematical education. I have been fortunate to participate in some of these activities, to watch as the AMS has grown in strength and impact, and to serve as a member of the Board of Trustees overseeing the financial well-being of the Society.

Thanks to the efforts of many within the AMS, our Society benefits all of us mathematicians. The Executive Director and the professional staff in Providence/Washington do an excellent job in efficiently and cost-effectively realizing the objectives articulated by the membership. The staff of Math Reviews, as well as the journal/book publication program, provides marvelous resources for us all. Direction is provided by the officers and the Council of the AMS, informed by AMS policy committees. The President of the AMS serves as a constructive spokesperson for the mathematical community and helps to prioritize the many efforts of our Society.

Here are a few of the topics which we in the AMS must continue to address: i.) the impact upon our profession of the stresses of academic financing and external funding; ii.) the necessity to diversify our profession in order to assure its long-term relevance; iii.) the ever-present need to promote mathematics and its vital links to other disciplines; iv.) the changing business and intellectual landscape of mathematics publications; v.) the encouragement of international ties and cooperation; and vi.) the constructive involvement in mathematical education. I would welcome the opportunity to serve as President of the AMS to work with and for the members of the AMS to advance our Society's diverse goals.

Wilfried Schmid



Dwight Parker Robinson Professor of Mathematics, Harvard University.

Born: May 28, 1943, Hamburg, Germany.

Ph.D.: University of California, Berkeley, 1967.

AMS Offices: Member of the Council ex officio, 1991-1994.

AMS Committees: Editorial Committee, *Journal of the AMS*, 1987-1994 (Chair, 1991-1994); Committee on Education, 2006-2009.

Selected Addresses: Invited Addresses, International Congress of Mathematicians, Nice, 1970, Vancouver, 1974, Plenary Address, Helsinki, 1978; Invited Address, International Congress of Mathematical Physics, Berlin, 1980; Morningside Lecture, International Congress of Chinese Mathematics, Hong Kong, 2004.

Additional Information: Alfred P. Sloan Fellowship, 1968-1970; Simon F. Guggenheim Memorial Fellowship, 1975-1976, 1988-1989; Prix Scientifique de l'UAP, 1986; Honorary Professor, University of Cordoba (Argentina), 1989; American Academy of Arts and Sciences 2003-; National Mathematics Advisory Panel, 2006-2008.

Selected Publications: 1. On a conjecture of Langlands, *Ann of Math. (2)*, **93** (1971), 1-42. MR0286942 (44 #4149);

2. Variation of Hodge structure: The singularities of the period map, *Invent. Math.*, **22** (1973), 211-319. MR0382272 (52 #3157); 3. with Michael F. Atiyah, A geometric construction of the discrete series for semisimple Lie groups, *Invent. Math.*, **42** (1977), 1-62. MR0463358 (57 #3310); 4. with Kari Vilonen, Characteristic cycles and wave front cycles of representations of reductive Lie groups, *Ann of Math. (2)*, **151** (2000), No. 3, 1071-1118. MR1779564 (2001j:22017); 5. with Stephen Miller, Automorphic distributions, L -functions, and Voronoi summation for GL_3 , *Ann of Math. (2)*, **164** (2006), 423-488. MR2247965 (2007j:11065).

Statement: The academic world around us has changed since the last election of an AMS President. Budgets are being slashed, at both public and private universities. Mathematics is not immune to this process of retrenchment. Under conditions like these, the AMS needs to vigorously defend the interests of our profession. In 1996, then AMS President Arthur Jaffe intervened when the University of Rochester announced plans to reduce its mathematics department to a mere provider of service teaching; in cooperation with others, he managed to get the decision reversed. The next AMS President may have to deal with similar emergencies. I am prepared to act energetically if elected.

The current economic conditions are accelerating a trend that started years ago: the role of refereed journals is gradually eroding. A number of universities are instituting open access policies, at least in part to defend against the rapid escalation of journal costs. We do not yet know how the commercial publishers will react. It seems inevitable, however, that the pattern of publication of mathematical research will change significantly in the medium term. The tenure and promotion process at many universities relies on publications in refereed journals, and elite journals in particular, as an important measure of a candidate's research. What else can serve this function if and when journals fade from the scene? I have no ready answer, but want to make sure that the question is thoroughly examined.

On a less gloomy note, I would like to strengthen the influence of the AMS in K-12 mathematics education. Ten years ago I personally became intensely interested, in response to my daughter's experiences with elementary school mathematics. I recently served on the National Mathematics Advisory Panel (NMP). Among its main recommendations, it asked for a greater involvement of mathematicians on many levels. Curriculum guidelines, textbooks, teacher licensure requirements, state and national assessment tests need to be examined thoroughly, not just by administrators and educators, but also by mathematicians. Anyone who doubts this need should look through a typical high school mathematics textbook! When I first became active in mathematics education, I sensed a general reluctance to let mathematicians participate in the process. That has definitely changed—our expertise is now really welcome. The AMS, through its Committee on Education, can help to establish contacts between interested mathematicians and those who seek our advice.

Vice President

Sylvain Cappell



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

Born: September 10, 1946, Brussels, Belgium.

Ph.D.: Princeton University, 1969.

AMS Offices: Member at Large of the Council, 2004–2010.

AMS Committees: *Contemporary Mathematics* Editorial Committee, 1989–1992; Member and Chair, Steele Prize Committee, 1990–

1993; Nominating Committee, 1996–1998; Committee on Professional Ethics, 1999–2002; Committee on Education, 2005–2007; Executive Committee, 2006–2010; Long Range Planning Committee, 2007–2009; Nominating Committee of Executive Committee and Board of Trustees, 2008–2009.

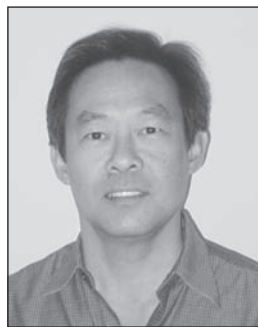
Selected Addresses: Invited Address, International Congress of Mathematicians, Helsinki, 1978; Invited Address, American Mathematical Society, 1980; Principal Speaker, Conference Board of the Mathematical Sciences lectures, Blacksburg, VA, 1987; AMS-MAA Invited Address, Seattle, August, 1996; Kervaire Memorial Conference, Geneva, Switzerland, 2009.

Additional Information: Sloan Foundation Fellow, 1972–1973; Member, Editorial Board of *Communications in Pure and Applied Math.*, 1988–; Guggenheim Foundation Fellow, 1989–1990; Chair of NYU Faculty Senate, 2007–.

Selected Publications: 1. A splitting theorem for manifolds, *Invent. Math.*, **33** (1976), No. 2, 69–170. MR0438359 (55 #11274); 2. with J. Shaneson, Nonlinear similarity, *Ann. of Math.*, **113** (1981), No. 2, 315–355. MR0607895 (83h:57060); 3. with A. Ranicki and J. Rosenberg, C. T. C. Wall's contributions to the topology of manifolds. Surveys on surgery theory, Vol. 1, 3–15, *Ann. of Math. Stud.*, **145**, Princeton Univ. Press, Princeton, NJ, 2000. MR1747526; 4. with S. Weinberger, Surgery theoretic methods in group actions. Surveys on surgery theory, Vol. 2, 285–317, *Ann. of Math. Stud.*, **149**, Princeton Univ. Press, Princeton, NJ, 2001. MR1818776 (2002a:57046); 5. with L. Maxim and J. Shaneson, Hodge genera of algebraic varieties. I, *Comm. Pure Appl. Math.*, **61** (2008), No. 3, 422–449. MR2376848.

Statement: The American Mathematical Society should both maintain its great role in supporting and advancing mathematical research across the spectrum and its educational efforts, as well as make special efforts advocating for the mathematical community in the present economic environment. In my current work on the AMS Council and its Executive Committee, I've had the opportunity to learn from extraordinary colleagues about the distinctive contributions of the AMS to mathematical life, both nationally and internationally, and its future projects and hope to see these carried forward, enhanced and made ever more inclusive, even through challenging times.

Peter Li



Chancellor's Professor, University of California, Irvine.

Born: April 18, 1952, Hong Kong, China.

Ph.D.: University of California, Berkeley, 1979.

AMS Offices: Member at Large of the Council, 1993–1996.

AMS Committees: AMS-IMS-SIAM Committee on Joint Summer Research Conferences in the Mathematical Sciences, 1990–1993;

Progress in Mathematics Committee, 1991–1993; Editor, *Proc. Amer. Math. Soc.*, 1991–1992; Coordinating Editor, *Proc. Amer. Math. Soc.*, 1992–1999; Committee on Committees, 1993–1995; Policy Committee on Meetings and Conferences, 1993–1996, Committee on Accessibility for Handicapped (Chair), 1994–1996; Committee on Special Donations of Publications, 1996; Committee to Select the Winner of the Veblen Prize for 1996; Panel for ICM-98 Travel Grants, 1997; Program Committee for the Joint AMS-HKMS meeting in Hong Kong (Chair), 2000; Books and Journal Donations Steering Committee, 2001–2004; Panel for ICM-2002 Travel Grants (Chair), 2001; Committee on Human Rights of Mathematicians, 2002–2005 (Chair, 2003–2004); Committee on Publications, 2005–2008.

Selected Addresses: Hour Address, AMS Regional Meeting, Logan, 1986; Plenary Speaker, First International Congress of Chinese Mathematicians, Beijing, 1998; International Congress of Mathematicians, Beijing, 2002; Plenary Speaker, Third International Congress of Chinese Mathematicians, Hong Kong, 2004.

Additional Information: Alfred P. Sloan Fellowship, 1982; John Simon Guggenheim Fellowship, 1989; Fellow, American Academy of Arts and Sciences, 2007; Faculty Mentor Award, Department of Mathematics, UCI, 2008.

Selected Publications: 1. with S.-T. Yau, On the parabolic kernel of the Schrödinger operator, *Acta Math.*, **156** (1986), No. 3–4, 153–201. MR0834612 (87f:58156); 2. with L.-F. Tam, Harmonic functions and the structure of complete manifolds, *J. Differential Geom.*, **35** (1992), No. 2, 359–383. MR1158340 (93b:53033); 3. Harmonic sections of polynomial growth, *Math. Res. Lett.*, **4** (1997), No. 1, 35–44. MR1432808 (98i:53054); 4. with J. Wang, Weighted Poincaré inequality and rigidity of complete manifolds, *Ann. Sci. École Norm. Sup. (4)*, **39** (2006), No. 6, 921–982. MR2316978 (2008d:53053); 5. with L. Ji and J. Wang, Ends of locally symmetric spaces with maximal bottom spectrum, *J. Reine Angew. Math. (Crelles J.)*, to appear.

Statement: I will be honored to serve as Vice President of the American Mathematical Society. This will be a valuable opportunity to help promote mathematical research as well as mathematical education. As one of the most influential professional organizations of its kind, it is important for the AMS to take a worldwide leadership role in the fostering of the profession.

Trustee

Mark L. Green



Professor of Mathematics and Director Emeritus, Institute for Pure and Applied Mathematics, University of California, Los Angeles.

Born: October 1, 1947.

Ph.D.: Princeton University, 1972.

AMS Committees: Committee on the Profession, 2000–2003 (Chair, 2002–2003).

Selected Addresses: CIME Lecture Series (8 lectures), Torino, Italy, 1993; Invited talk (45 min.), International Congress of Math-

ematicians, Berlin, Germany, 1998; AMS Invited Address, Joint Mathematics Meetings, New Orleans, 2001; Plenary Speaker, Abel Bicentennial, Oslo, 2002; Plenary Speaker, Hodge Centennial, Edinburgh, 2003.

Additional Information: Alfred P. Sloan Fellowship, 1976; Director, Institute for Pure and Applied Mathematics, 2001–2008.

Selected Publications: 1. Quadrics of rank four in the ideal of a canonical curve, *Invent. Math.*, **75** (1984), No. 1, 85–104. MR0728141 (85f:14028); 2. Griffiths' infinitesimal invariant and the Abel-Jacobi map, *J. Differential Geom.*, **29** (1989), No. 3, 545–555. MR0992330 (90c:14006); 3. with R. Lazarsfeld, Higher obstructions to deforming cohomology groups of line bundles, *J. Amer. Math. Soc.*, **4** (1991), No. 1, 87–103. MR1076513 (92i:32021); 4. Higher Abel-Jacobi maps, Proceedings of the International Congress of Mathematicians, Vol. II (Berlin, 1998). *Doc. Math.* 1998, Extra Vol. II, 267–276 (electronic). MR1648077 (99k:14012); 5. with P. Griffiths, *On the Tangent Space to the Space of Algebraic Cycles on a Smooth Algebraic Variety*, Annals of Mathematics Studies, Princeton University Press, Princeton (2005). MR2110875 (2005m:14013).

Statement: A Trustee needs to be a good listener, have an open mind, be committed to serving the needs of the entire mathematical community, and believe passionately in the importance of Mathematics as a discipline. The central role of a Trustee is to look out for the financial interests of the AMS and to ensure that its funds are used wisely, so as to maximize the positive impact that it can have on the mathematical community. My experience as Director of a start-up institute, the Institute for Pure and Applied Mathematics (IPAM), has given me considerable experience with balancing a budget, managing an organization, and with how to assess new programs and figure out how much funding they will need. The AMS has an enviable record of developing new programs and activities and of extending public awareness of Mathematics, and continuing to move forward will be especially challenging in the present difficult fiscal environment. Starting with attending an AMS summer meeting shortly after receiving my Ph.D., I have been the beneficiary of many of the AMS's important activities, and I would be honored to have an opportunity to give something back to this excellent organization.

Robion Kirby

Professor of Mathematics, University of California, Berkeley.

Born: February 25, 1938.

Ph.D.: University of Chicago, 1965.

AMS Offices: Member at Large of the Council, 1974–1976, 1988–1991; Executive Committee, 1976–1977.

AMS Committees: Veblen Prize Committee, 1975–1976, 1999–2000; *Graduate Studies in Mathematics* Editorial Committee, 1993–1995; Committee on Education, Subcommittee on Graduate and Postdoctoral Affairs, 1996–1997; *Notices* Editorial Board Committee, 2001–2009; Library Committee, 2005–2008; Program Committee for National Meetings, 2007–2010 (Chair, 2009–2010).

Selected Addresses: AMS Hour speaker, August, 1969; International Congress of Mathematicians, Nice, 1970.

Additional Information: Deputy Director, MSRI, 1985–1987; Member, National Academy of Sciences, 2001–; co-founder, *Geometry & Topology*; co-founder, Mathematical Sciences Publishers.

Selected Publications: 1. Stable homeomorphisms and the annulus conjecture, *Ann. of Math.* (2), **89** (1969), 575–582. MR0242165 (39 #3499); 2. with L. C. Siebenmann, On the triangulation of manifolds and the Hauptvermutung, *Bull. Amer. Math. Soc.*, **75** (1969), 742–749. MR0242166 (39 #3500); 3. A calculus for framed links in S^3 , *Invent. Math.*, **45** (1978), No. 1, 35–56. MR0467753 (57 #7605); 4. with Paul Melvin, The 3-manifold invariants of Witten and Reshetikhin-Turaev for $sl(2, C)$, *Invent. Math.*, **105** (1991), No. 3, 473–545. MR1117149 (92e:57011); 5. with D. Gay, Constructing Lefschetz-type fibrations on four-manifolds, *Geom. Topol.*, **11** (2007), 2075–2115. MR2350472 (2009b:57048).

Statement: Given the current financial crunch, of uncertain duration, the AMS is likely to have at least some financial difficulties in the coming years. The AMS relies considerably on income from its publications, both journals and books, and libraries are being hard hit by cutbacks which must impact the AMS. My experience in co-founding and running Mathematical Sciences Publishers, a non-profit company that publishes over 10,000 pages of excellent mathematics at very low prices, should help me understand the difficulties that the AMS is facing. The publication business is a peculiar one in which great savings can be made, although the AMS is already outdoing almost all other publishers in low-cost, excellent math journals. The AMS serves the math community very well, and it is the duty of the Trustees to make sure that the AMS remains financially healthy so that it can continue to serve us well.

Member at Large

Alejandro Adem



Professor of Mathematics, Department of Mathematics, University of British Columbia.

Born: November 24, 1961, Mexico City, Mexico.

Ph.D.: Princeton University, 1986.

AMS Committees: Selection Committee for Summer Research Conferences, 1997–2000; Committee on the Profession (Chair), 2008–.

Selected Addresses: Plenary Address, AMS Central Section, Co-

lumbia, Missouri, 1996; Plenary Address, Mexican Mathematical Society, Guadalajara, 1999; Bourbaki Seminar, Paris, 2001; Special Lecture, Latin American Congress, Cancun, 2004; Plenary Address, Korean Mathematical Society, Jeju, 2008.

Additional Information: A. P. Sloan Doctoral Dissertation Fellowship, 1985; NSF Young Investigator Award, 1992; Wisconsin Alumni Research Foundation Romnes Fellowship, 1995; NSERC Canada Research Chair (Tier I), 2004; Chair, Department of Mathematics, University of Wisconsin-Madison, 1999–2002; Co-Chair, Scientific Advisory Committee, MSRI, 2003–2007; Director, Pacific Institute for the Mathematical Sciences, 2008–; Visiting Professor: ETH, 1994, Princeton, 2004; Editor, *Trans. Amer. Math. Soc.*, 2004–.

Selected Publications: 1. with W. Browder, The free rank of symmetry of $(S^n)^k$, *Invent. Math.*, **92** (1988), No. 2, 431–440. MR0936091 (89e:57034); 2. Characters and K -theory of discrete groups, *Invent. Math.*, **114** (1993), No. 3, 489–514. MR1244911 (95j:55006a); 3. with R. J. Milgram, *Cohomology of finite groups*, Grundlehren Math. Wiss., 309, Springer-Verlag, Berlin, 1994. viii+324 pp. MR1317096 (96f:20082); 4. with J. H. Smith, Periodic complexes and group actions, *Ann. of Math.* (2), **154** (2001), No. 2, 407–435. MR1865976 (2002i:57031); 5. with J. Leida and Y. Ruan, *Orbifolds and stringy topology*, Cambridge Tracts in Mathematics, 171, Cambridge University Press, Cambridge, 2007. xii+149 pp. MR2359514 (2009a:57044).

Statement: In my view the AMS is the most important mathematical organization in the world. Through its collective efforts it has fostered the development of the mathematical sciences in the United States as well as internationally. As someone who has worked and studied at a variety of institutions in the United States, Canada, and Mexico, I have a broad perspective on how the AMS can contribute to strengthening our community. In addition my administrative experience as department chair at Wisconsin and now as director of a research institute have made me aware of many issues as well as opportunities that require our attention, especially given the current highly uncertain financial situation which we are facing. I would be honored to serve the mathematics community as a Member at Large of the Council if elected.

James H. Curry

J. R. Woodhull/Logicon Teaching Professor of Applied Mathematics, Chair of the Department of Applied Mathematics, University of Colorado at Boulder.

Born: 1948, Oakland, California, USA.

Ph.D.: University of California, Berkeley, 1976.

AMS Committees: Committee on Exemplary Mathematics Departments, 2005–2007; Morgan Prize Selection Committee, 2005–2011; Committee on the Profession, 2006–2009.

Additional Information: David Blackwell Lecture, 1995; Lectures in Vietnam (2005, 2007); SIAM Committee on Education; National Research Council (NRC) Fellowship Advisory Panel; NRC, Vietnam Education Foundation Fellowship Selection Committee.

Selected Publications: 1. with L. Billings and E. Phipps, Lyapunov exponents, singularities and a riddling bifurcation, *Phys. Rev. Lett.*, Vol. 79, No. 6, 1997; 2. with L. Billings and E. Phipps, Symmetric functions and exact Lyapunov exponents, *Phys. D*, **121** (1998), No. 1–2, 44–64. MR1644390 (99h:58132); 3. with S. Wild and A. Dougherty, Seeding non negative matrix factorization, *Pattern Recognition* (2004), vol. 37; 4 with B. J. Klingenberg and A. Dougherty, On the ill-posedness of non negative matrix factorization, *Pattern Recognition* (2009).

Statement: During my six-year tenure as Chair a major goal has been in promoting the excellence of the faculty so that it achieves its expectations of research growth and its goal of becoming a world class mathematical sciences enterprise. Promoting faculty excellence to the administration and better educating students in the subtleties, opportunities and possibilities present in the mathematical sciences and at all levels, is part of the AMS' mission. As an AMS Member at Large I would continue to promote excellence in research and excellence in teaching, but at a national and international level. The Mathematical Sciences community must prepare its constituents for the world stage. I believe that this is an imperative! I further understand that while teaching our students well is vital, it is not the only imperative we have to embrace. We must also educate the campus, state and national administration on the importance of excellence in the mathematical sciences: teaching, service and most importantly research.

Richard Hain



Professor of Mathematics, Duke University.

Born: August 15, 1953, Sydney, Australia.

Ph.D.: University of Illinois, 1980.

AMS Committees: Centennial Fellowship Committee, 1991–1993; Southeastern Section Program Committee, 2000–2001; Program Committee for National Meetings, 2003–2006 (Chair, 2005–2006); Nominating Committee, 2003–

2005; AMS-MAA Joint Program Committee, 2004–2005; Advisory Board for Employment Services, 2009–2011.

Selected Addresses: Two plenary talks, International Conference on Algebraic Topology, Evanston, 1988;

Arbeitstagung, Bonn, 1988; AMS Invited Hour Address, Memphis, TN, 1997; Frontiers in Mathematics Lectures, Texas A&M University, 1997; Current Developments in Mathematics, Harvard-MIT, 2002.

Additional Information: Member, Institute for Advanced Study (1985–1986, Fall 1994), MSRI (Spring, 2009); AMS Research Fellowship, 1987; Japan Society for the Promotion of Science Fellow, May, 1998; Organizer of the first *Math Day for High School Students*, University of Washington, March, 1991; Organizer of a conference on mapping class groups and moduli spaces of curves, Seattle, August, 1991; Special session organizer, AMS meeting, Memphis, 1997; Co-organizer of *Duke Mathematical Journal* Conferences, 1998, 2001, 2004; Special session co-organizer, AMS meeting, Melbourne, Australia, 1999; Department Chair (Duke University), 1999–2002, 2004–2006; Editor, *Illinois Journal of Mathematics*, 2002–2006; Director, IAS/Park City Mathematics Institute, September 2009–.

Selected Publications: 1. with S. Zucker, Unipotent variations of mixed Hodge structure, *Invent. Math.*, **88** (1987), No. 1, 83–124. MR0877008 (88i:32035); 2. Infinitesimal presentations of the Torelli groups, *J. Amer. Math. Soc.*, **10** (1997), No. 3, 597–651. MR1431828 (97k:14024); 3. with E. Looijenga, Mapping class groups and moduli spaces of curves, *Algebraic Geometry—Santa Cruz 1995*, Proc. Sympos. Pure Math., vol. 62, part 2, Amer. Math. Soc, Providence, RI, 1997, 97–142. MR1492535 (99a:14032); 4. with M. Matsumoto, Weighted completion of Galois groups and Galois actions on the fundamental group of $\mathbb{P}^1 - \{0, 1, \infty\}$, *Compositio Math.*, **139** (2003), No. 2, 119–167. MR2025807 (2005c:14031); 5. Relative weight filtrations on completions of mapping class groups, in *Groups of Diffeomorphisms*, *Advanced Studies in Pure Mathematics*, **52** (May, 2008), 309–368, Mathematical Society of Japan.

Statement: This is a critical time for the AMS and the profession. Shrinking budgets and declining endowments have resulted in constrained university budgets and a shortage of jobs, both academic and non-academic, particularly for younger mathematicians. It is important that the AMS provide tools to help those seeking employment and graduate support to available funding. It is also important that the AMS not lose sight of its long-term goals, such as the publishing of high quality and affordable books and journals, the support of mathematics research through quality meetings, its advocacy for increased funding of the mathematical sciences, and the continuation of its outreach and educational activities.

Evans M. Harrell



Professor of Mathematics and Associate Dean of Sciences, Georgia Institute of Technology.

Born: July 26, 1950, Indianapolis, IN.

Ph.D.: Princeton University, 1976.

AMS Committees: Member of AMS Liaison Committee with American Association for the Advancement of Science, 1995–2001 (Chair, 1998–2001).

Selected Addresses: Spectral Theory and Mathematical Physics, California Institute of Technology, Pasadena, 2006; Operator Theory and Quantum Mechanics, Prague, Czech Republic, 2006; CIMPA-UNESCO Morocco School on Riemannian Geometry, Pseudo-Riemannian Geometry and Mathematical Physics, Marrakech, Morocco, 2008; International Conference on Global Analysis and Differential Geometry, Saga, Japan, 2009.

Additional Information: NSF National Needs Fellow, Massachusetts Institute of Technology, 1978–1979; Sloan Fellow, 1983–1985; Chercheur du C.N.R.S., 1998–1999; Eichholz Fellow (a teaching award), 2006; Fellow of American Association for the Advancement of Science, 2006; Scholar visits: University of Vienna, 1977–1978; Luminy, France, 1993; Schrödinger Institute, Vienna, 1993, 1998, 2009; Rennes, France, 1998; Toulouse, France, 1998–1999; University of Tokyo, 2003; Tours, France, 2004; Tata Institute for Fundamental Research, Bangalore, 2004. Memberships: International Association of Mathematical Physics, American Physical Society (Elected to Executive Committee of the Forum on Physics and Society, 1986–1988), American Association for the Advancement of Science. Service on scientific assessment panels for National Science Foundation, Department of Energy, Science Foundation Ireland, and various universities.

Selected Publications: 1. with J. Stubbe, On trace identities and universal eigenvalue estimates for some partial differential operators, *Trans. Amer. Math. Soc.*, **349** (1997), No. 5, 1797–1809. MR1401772 (97i:35129); 2. A direct proof of a theorem of Blaschke and Lebesgue, *J. Geom. Anal.*, **12** (2002), No. 1, 81–88. MR1881292 (2002k:52009); 3. Commutators, eigenvalue gaps, and mean curvature in the theory of Schrödinger operators, *Comm. Partial Differential Equations* **32** (2007), No. 1–3, 401–413. MR2304154 (2008i:35041); 4. Perturbation theory and atomic resonances since Schrödinger's time, *Spectral theory and mathematical physics: A Festschrift in honor of Barry Simon's 60th Birthday*, pp. 227–248. Proc. Sympos. Pure Math., **76**, Part 1, Amer. Math. Soc., Providence, RI, 2007. MR2310205 (2008c:81200); 5. with L. Hermi, Differential inequalities for Riesz means and Weyl-type bounds for eigenvalues, *J. Funct. Anal.*, **254** (2008), No. 12, 3173–3191. MR2418623.

Statement: The community of mathematicians has two important needs that the Council of the AMS can help to address. One of these is to maintain the high level of our intellectual product. As an interdisciplinary mathematician with wide contacts in the scientific community and experience developing and overseeing research and graduate educational programs at Georgia Tech, I am well positioned to connect mathematicians with research in other disciplines and to help gather the resources needed for research programs to succeed. The second great need is for society to better understand mathematics and how to benefit from it. An important part of this is to ensure the continued entry into mathematics of young talent, drawn from diverse populations. I have been an innovator in college curricula and in ways of delivering education. My experience with other scientific societies, with the recruitment and mentoring of graduate students, and my extensive contacts with mathematics in developing

countries have further informed my perspectives on this need. I welcome the challenge of serving on the Council and will devote the time and effort it will take. I can be a forceful and articulate advocate for mathematics.

Alexander R. Its



Distinguished Professor of Indiana University, Indiana University-Purdue University, Indianapolis.

Born: January 1, 1952, Leningrad, USSR.

Ph.D.: Leningrad State University, USSR, 1977.

Selected Addresses: Invited Address, Joint Mathematics Meetings, Washington, DC, 2000; Invited Speaker, British Mathematical Colloquium, Leeds, UK, 2000; Hardy

Lecture, London Mathematical Society, London, UK, 2002; Hardy Lecture, Edinburgh Mathematical Society, Edinburgh, UK, 2002; Plenary Talk, 2008 Conference on Foundations of Computation Mathematics, Hong Kong, 2008.

Additional Information: Co-Editor-in-Chief, *Mathematical Physics, Analysis and Geometry*; Member of the Editorial Board, *Nonlinearity*. Awards: The Prize of Moscow Mathematical Society, 1976, The Prize of the Leningrad Mathematical Society, 1981, 2002 Hardy Fellow of the London Mathematical Society, 2009 Batsheva de Rothschild Fellow of the Israel Academy of Sciences and Humanities. Visiting Positions: Visiting Professor, Rennes University, France, 1995; Visiting Professor, Department of Mathematics, Imperial College, London, UK, 2000, 2002, 2007–2008; Visiting Faculty, Department of Mathematics, University of Pennsylvania, 2000; Visiting Professor, Université Louis Pasteur, Strasbourg, France, 2001, 2007; Visiting Professor, Université de Bourgogne, Dijon, France, 2003; Member, Isaac Newton Institute, 2004, 2007; Visiting Professor, Université Paris VII, Paris, France, 2005; Visiting Professor and Research Fellow, Brunel University, West London, UK, 2007–2008. Conference Co-organizer (selected): AMS-SIAM-IMS Summer Research Conference on Random Matrices, Statistical Mechanics, and Painlevé Transcendents, Mt. Holyoke College, MA, 1996 (Co-Chair); MSRI semester on Random Matrix Models and Their Applications, Berkeley, Spring, 1999 (Co-Chair); International Congress in Mathematical Physics, Rio de Janeiro, 2006 (Member of the International Scientific Committee); Workshop on the Theory of Highly Oscillatory Problems, Isaac Newton Institute, 2007; Associate Member of the CRM Math Phys Lab, Montreal, Canada; Honorary Visiting Professor of the Imperial College, London, UK, 2006–2009; Honorary Visiting Professor of Brunel University, London, UK, 2008–2009.

Selected Publications: 1. with A. S. Fokas and A. V. Kitaev, The isomonodromy approach to matrix models in 2D quantum gravity, *Comm. Math. Phys.*, **147** (1992), 395–430. MR1174420 (93h:81115); 2. with P. A. Deift and X. Zhou, A Riemann-Hilbert approach to asymptotic problems arising in the theory of random matrix models, and also in the theory of integrable statistical mechanics, *Ann. of Math.* (2), **146** (1997), No. 1, 149–235. MR1469319 (98k:47097);

3. with P. Bleher, Semiclassical asymptotics of orthogonal polynomials, Riemann-Hilbert problem, and universality in the matrix model, *Ann. of Math.* (2), **150** (1999), No. 1, 185–266. MR1715324 (2000k:42033); 4. The Riemann-Hilbert problem and integrable systems, *Notices Amer. Math. Soc.*, **50** (2003), No. 11, 1389–1400. MR2011605 (2004m:30065); 5. with P. A. Deift and I. Krasovsky, Asymptotics of the Airy-kernel determinant, *Comm. Math. Phys.*, **278** (2008), No. 3, 643–678. MR2373439 (2008m:47061).

Statement: A striking aspect of the unity of mathematics is the remarkable fact that the most fundamental breakthroughs in the development of mathematics very often result from the fusion of ideas and techniques from different mathematical areas. Hence the importance of the old but somewhat under-appreciated idea that it is extremely advantageous for a mathematician to understand the basic goals, results and techniques of areas outside of the “epsilon-neighborhood” of his’r field. I think that the strengthening of this idea should be one of the key objectives of scientific policy at AMS. The fulfillment of this objective is impossible without simultaneous and coordinated efforts in the field of education. It is my strong belief that the AMS should (1) promote research and educational activities (e.g., summer workshops), (2) encourage relevant NSF funding and postdoctoral fellowships (3) promote undergraduate and graduate mathematical curriculum development, all of the kind that would help to build a new generation of American mathematicians imbued with the truly universal character of mathematical research. Due to the strong interdisciplinary nature of my own research field, I am already been involved in such activities and, if elected, I will strive to further such activities as a Member at Large of the Council.

Venkatramani Lakshmibai



Professor of Mathematics, Northeastern University.

Born: December 15, 1944, Trichy, India.

Ph.D.: Tata Institute, India, 1976.

Selected Addresses: 1-hour invited address, AMS meeting, Stillwater, OK, 1994; C. M. S. Conference on “Representations of Groups”, Banff, Alberta, Canada, 1994; Conference on “Algebraic Groups”, Oberwolfach, Germany,

1995; Conference on “Algebraic Groups & their Representations”, Cortona, Italy, 1995; A prime speaker (5 lectures on “Flag Variety”), *Women and Mathematics*, Institute for Advanced Study, Princeton, 2007.

Selected Publications: 1. Singular loci of Schubert varieties, *Bull. Amer. Math. Soc. (N.S.)*, **16** (1987), No. 1, 83–90. MR0866020 (87m:14059); 2. with N. Reshetikhin, Quantum deformations of SL_n/B and its Schubert varieties, *Special Functions*, ICM-90, Satellite Conference Proceedings, Springer-Verlag, Tokyo, 1991, pp. 149–168. MR1166816 (93g:17028); 3. Tangent spaces to Schubert varieties, *Math. Res. Lett.*, **2** (1995), No. 4, 473–477. MR1355708

(96k:14039); 4. with M. Brion, A geometric approach to standard monomial theory, *Represent. Theory, Electronic Journal* (2003), 651–680. MR2017071 (2004m:14106); 5. with P. Littelmann, Equivariant K -theory and Richardson varieties, *J. Algebra*, **260** (2003), No. 1, 230–260. MR1973584 (2004e:14077).

Statement: It is beyond anybody's doubt that AMS has been doing an excellent service to the mathematical community in U. S. as well as all over the world in various capacities and has become an indispensable mathematical organization for the global mathematical community. It would be a great honor for me to serve the mathematical community in the capacity as a Member at Large of the AMS council, if elected.

Jennifer Schultens



Professor, University of California, Davis.

Born: January 26, 1965, Goettingen, Germany.

Ph.D.: University of California, Santa Barbara, 1993.

AMS Committees: Western Section Program Committee, 2007–2010.

Selected Addresses: PIMS, Banff Research Centre, Canada, 2003; Topology seminar, University of California, Berkeley, 2004; Wasatch Topology Conference, Park City, UT, 2005; Oberseminar Topologie, MPIM-Bonn, Germany, 2006; Workshop on 3-manifold geometry and topology, University of Warwick, 2007.

Selected Publications: 1. The stabilization problem for Heegaard splittings of Seifert fibered spaces, *Topology Appl.*, **73** (1996), No. 2, 133–139. MR1416756 (97h:57039); 2. with M. Scharlemann, The tunnel number of the sum of n knots is at least n , *Topology*, **38** (1999), No. 2, 265–270. MR1660345 (2000b:57013); 3. Heegaard splittings of graph manifolds, *Geom. Topol.*, **8** (2004), 831–876. MR2087071 (2005f:57031); 4. with R. Weidman, On the geometric and the algebraic rank of graph manifolds, *Pacific J. Math.*, **231** (2007), No. 2, 481–510. MR2346507 (2009a:57030); 5. Width complexes for knots and 3-manifolds, *Pacific J. Math.*, **239** (2009), No. 1, 135–156. MR2449015.

Statement: The AMS plays an important role in the safeguarding of the professional interests of mathematicians. It is uniquely positioned to act on behalf of individual mathematicians and groups of mathematicians. On an individual level, mathematicians require very little to operate. Nevertheless, the institutions that employ mathematicians play a crucial role in shaping the profession. Institutional policies can inhibit the work of individual mathematicians or allow them to flourish. Institutional policies can create troubled departments or allow them to blossom. The current economic situation brings the usual challenges, especially for budding mathematicians. Not all news is dire, however, for as the fat is trimmed off of our universities, they will be called upon to focus on their core mission. This means that departments of mathematics, a core academic discipline, have a chance to become more

involved in policy decisions. The AMS is in a position to foster a discussion of the institutional role of departments of mathematics and to advocate on behalf of mathematics departments and individual mathematicians within and outside of academia.

Janet Talvacchia



Professor of Mathematics, Swarthmore College.

Ph.D.: University of Pennsylvania, 1989.

AMS Committees: Pi Mu Epsilon, 1996–1999.

Additional Information: Visiting Positions: Bunting Institute of Harvard University, 1992–1993; Institute for Advanced Study, Princeton, 1997–1998, 2001–2002; General Member, Mathematical

Sciences Research Institute, Berkeley, 2003, 2006; The Fields Institute for Research in the Mathematical Sciences, 2005–2006.

Selected Publications: 1. with D. DeTurck and H. Goldschmidt, Connections with prescribed curvature and Yang-Mills currents: The semi-simple case, *Ann. Sci. École Norm. Sup. (4)*, **24** (1991), No. 1, 57–112. MR1088271 (92a:53034); 2. with D. DeTurck and H. Goldschmidt, Local existence of connections with prescribed curvature, *Differential geometry, global analysis, and topology (Halifax, NS, 1990)*, pp. 13–25, CMS Conf. Proc., 12, Amer. Math. Soc., Providence, RI, 1991. MR1158466; 3. with D. DeTurck and H. Goldschmidt, Existence of connections with prescribed Yang-Mills currents, *Differential geometry: Geometry in mathematical physics and related topics (Los Angeles, CA, 1990)*, pp. 173–182, Proc. Sympos. Pure Math., 54, Part 2, Amer. Math. Soc., Providence, RI, 1993. MR1216536 (94c:53037); 4. with L. Sibner, The existence of nonminimal solutions of the Yang-Mills-Higgs equations over R^3 with arbitrary positive coupling constant, *Comm. Math. Phys.*, **162** (1994), 331–351. MR1276551 (95b:58041); 5. with S. Singer and N. Watson, Nontoric Hamiltonian circle actions on four-dimensional symplectic orbifolds, *Proc. Amer. Math. Soc.*, **127** (1999), No. 3, 937–940. MR1487340 (99f:57043).

Statement: The role of the AMS is to support research and education in the mathematical sciences as well as to foster awareness and appreciation of mathematics in the society at large. I believe that the integration of these activities is crucial and that the AMS council can play a helpful role in facilitating this. To achieve its goals, the AMS must engage a broad audience. This is vital in order to train a diverse population as the next generation of mathematicians, encourage sophisticated and creative uses of mathematics in a broad spectrum of applied fields, and help convey the value and relevance of mathematics to the general population. Outreach to underrepresented groups is key and as is outreach to areas not traditionally partnered with mathematics.

Christoph Thiele



Professor of Mathematics and Chair, Department of Mathematics, University of California, Los Angeles.

Born: September 10, 1968, Darmstadt, Germany.

Ph.D.: Yale University, 1995.

Selected Addresses: Invited speaker, International Congress of Mathematicians, Beijing, 2002; Invited address, AMS Western Sectional Meeting, University of

Southern California, 2004; Principal speaker, Conference Board of the Mathematical Sciences Conference, Atlanta, 2004.

Additional Information: Salem Prize, 1996.

Selected Publications: 1 with M. Lacey, L^p estimates for the bilinear Hilbert transform for $2 < p < \infty$, *Ann. of Math. (2)*, **146** (1997), No. 3, 693–724. MR1491450 (99b:42014); 2. A uniform estimate, *Ann. of Math. (2)*, **156** (2002), No. 2, 519–563. MR1933076 (2003i:47036); 3. with T. Tao, Non-linear Fourier Analysis, Lecture notes to appear IAS Park City Mathematics, Series 2003, Vol 13; 4. with C. Muscalu and T. Tao, A Carleson theorem for a Cantor group model of the scattering transform, *Nonlinearity*, **16** (2003), No. 1, 219–246. MR1950785 (2004i:34227); 5. with C. Demeter, M. Lacey, and T. Tao, Breaking the duality in the return times theorem, *Duke Math. J.*, **143** (2008), No. 2, 281–355. MR2420509.

Statement: The AMS is an outstanding organization that offers superb services to the mathematics community. It affects mathematicians' daily lives and is a public face of the profession. If elected Member at Large of the Council, I would view my service as a chance to give back to this wonderful organization and to help extend its mission in to the future. Building on its strong programs, and wisely following new initiatives, I envision a bright future for the AMS, and a critical role for mathematics as an ever growing and increasingly vital component of modern life.

Maciej Zworski



Professor of Mathematics, University of California, Berkeley.

Born: October 8, 1963, Wroclaw, Poland.

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

AMS Committees: National Meetings Committee, 2005–2007.

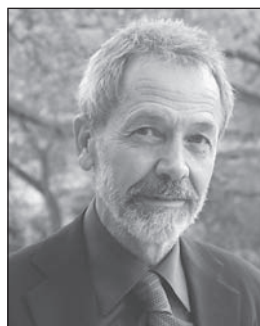
Statement: The organization of mathematical research seems to be moving in the direction of “big science”. In my view, this under-

mines the special role that our subject should play. Among other things, this direction is reflected in funding trends with more institutes and more group initiatives taking up a larger share of available research funds. I am all for interdisciplinary research and interaction with other fields but big initiatives might not be the best way to achieve

this. In the current economic situation we are in danger of losing a generation of young researchers and they, as individuals, need our support. The AMS should stand up for the role of independent research.

Nominating Committee

William Beckner



Montgomery Professor of Mathematics and Chair, Department of Mathematics, University of Texas at Austin.

Born: September 15, 1941, Kirksville, Missouri, USA.

Ph.D.: Princeton University, 1975.

AMS Offices: Member at Large of the Council, 2000–2005.

AMS Committees: Committee on the Profession, 1999–2003.

Selected Addresses: AMS Annual Meeting, St. Louis, 1977; International Congress of Mathematicians, Helsinki, 1978; Centre Emile Borel, Institut Henri Poincaré, Paris, 1998; British Mathematics Colloquium, Swansea, 2007.

Additional Information: Salem Prize, 1975; Sloan Fellow, 1977–1979; Managing Editor, *Trans. Amer. Math. Soc.*, 2000–2005.

Selected Publications: 1. Inequalities in Fourier analysis, *Ann. of Math. (2)*, **102** (1975), 159–182. MR0385456 (52 #6317); 2. Sharp Sobolev inequalities on the sphere and the Moser-Trudinger inequality, *Ann. of Math. (2)*, **138** (1993), 213–242. MR1230930 (94m:58232); 3. Geometric inequalities in Fourier analysis, *Essays on Fourier analysis in honor of Elias M. Stein*, Princeton, NJ, 1991, Princeton Math. Ser., 42, Princeton University Press, Princeton, NJ (1995), 36–68. MR1315541 (95m:42004); 4. Geometric asymptotics and the logarithmic Sobolev inequality, *Forum Math.*, **11** (1999), 105–137. MR1673903 (2000a:46049); 5. On the Grushin operator and hyperbolic symmetry, *Proc. Amer. Math. Soc.*, **129** (2001), 1233–1246. MR1709740 (2001g:35009).

Statement: The American Mathematical Society is an important voice in representing our mathematical community at large. It's essential that we continually draw new representatives for our committees and our administrative structures that reflect the diversity of the Society.

Richard T. Durrett



Professor, Department of Mathematics, Cornell University.

Born: August 17, 1951, Anniston, Alabama, USA.

Ph.D.: Stanford University (Operations Research), 1976.

AMS Committees: Centennial Fellowship, 1998–2000, 2007–2009; Associate Editor, *Notices Amer. Math. Soc.*, 2001–2006.

Selected Addresses: One hour lecture, Joint Mathematics Meetings, San Antonio, 1987; 45 minute address, International

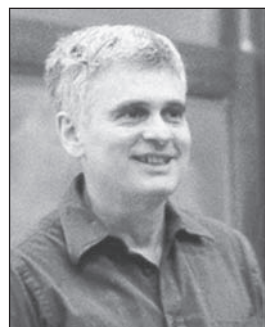
Congress of Mathematicians, 1990; Wald Lectures (Institute of Mathematical Statistics), 2008.

Additional Information: Guggenheim Fellowship, 1988–1989; Elected to American Academy of Arts and Sciences, 2002; Elected to National Academy of Science, 2007.

Selected Publications: 1. *Stochastic Calculus: A Practical Introduction*, CRC Press, Boca Raton, FL, 1996. MR1398879 (97k:60148); 2. *Essentials of Stochastic Processes*, Springer Texts in Statistics, Springer-Verlag, New York, 1998. MR1703359 (2002i:60001); 3. *Probability: Theory and Example*, third edition, Duxbury Press, Belmont, California, 2004; 4. *Random Graph Dynamics*, Series in Statistical and Probabilistic Mathematics, Cambridge University Press, Cambridge, 2006. MR2271734 (2008c:05167); 5. *Probability Models for DNA Sequence Evolution*, Springer-Verlag, New York, second edition, 2008. MR2439767.

Statement: The Nominating Committee must be concerned with diversity: not just of gender and ethnicity, but also to make sure that nominees represent the broad spectrum of AMS members, pure and impure.

Dorian Goldfeld



Professor of Mathematics, Columbia University, New York, NY.

Born: January 21, 1947, Marburg, Germany.

Ph.D.: Columbia University, 1969.

Selected Addresses: One Hour Address, AMS Annual Meeting, 1985; Forty Five Minute Address, International Congress of Mathematicians, 1986; AMS/DMV Joint International Meeting, Mainz, Germany, 2005; Distinguished Lecture

Series, Brown University, 2007; Third Ramanujan Colloquium, University of Florida, 2008.

Additional Information: Sloan Fellow, 1977–1979; Vaughn Prize, 1985; Cole Prize in Number Theory, 1987; Editor: *Acta Arithmetica*, *Ramanujan Journal*; American Academy of Arts and Sciences, 2009.

Selected Publications: 1. with A. Diaconu and J. Hoffstein, Multiple Dirichlet series and moments of zeta and L -functions, *Compositio Math.*, **139** (2003), No. 3, 297–360. MR2041614 (2005a:11124); 2. The Gauss class number problem for imaginary quadratic fields, Heegner points and Rankin L -series, *Math. Sci. Res. Inst. Publ.*, **49**, H. Darmon, S.-W. Zhang (eds.), Cambridge Univ. Press (2004). MR2083209 (2005f:11251); 3. with A. Lubotzky, N. Nikolov, and L. Pyber, Counting primes, groups, and manifolds, *Proc. Nat. Acad. Sci. USA*, **101** (2004), No. 37, 13428–13430. MR2226643 (2007b:11144); 4. with X. Li, The Voronoi formula for $GL(n, \mathbf{R})$, *IMRN*, 2008, Article ID rnm144 (2008). MR2418857 (2009b:11077); 5. *Automorphic forms and L -functions for the group $GL(n, \mathbf{R})$* , Cambridge Studies in Advanced Mathematics, Vol. 99 (2006), Cambridge University Press. MR2254662 (2008d:11046).

Brian Marcus



Professor of Mathematics, University of British Columbia, Vancouver.

Born: August 29, 1949, Los Angeles, California.

Ph.D.: University of California, Berkeley, 1975.

AMS Offices: Member at Large of the Council, 2003–2006.

AMS Committees: Committee to Monitor Problems in Communication, 1993.

Selected Addresses: AMS Short Course Lecture on Constrained Coding, 1995; Plenary Lecture, IEEE International Symposium on Information Theory, 1995; Short course on Symbolic Dynamics, University of Padova, 2001; AMS Short Course Lecture on Symbolic Dynamics, 2002; Plenary Lecture, Workshop on Symbolic Dynamics and Coding, Université Marne la Vallée, Paris, 2007.

Additional Information: IBM Almaden Research Staff Member, 1984–2002; shared with P. Siegel and J. Wolf, Leonard G. Abraham Prize Paper Award, IEEE Communications Society, 1993; 12 U. S. patents; Consulting Associate Professor of Electrical Engineering, Stanford University, 2000–2003; Mathematics Department Head, University of British Columbia (2002–2007).

Selected Publications: 1. Ergodic properties of horocycle flows for surfaces of negative curvature, *Ann. of Math. (2)*, **105** (1977), 81–105. MR0458496 (56#16696); 2. with S. Tuncel, Matrices of polynomials, positivity, and finite equivalence of Markov chains, *J. Amer. Math. Soc.*, **6** (1993), 131–147. MR1168959 (93e:28022); 3. with D. Lind, *An Introduction to Symbolic Dynamics and Coding*, Cambridge University Press, Cambridge, 1995. MR1369092 (97a:58050); 4. with P. Chaichanavong, Stabilization of block-type-decodability properties for constrained systems, *SIAM J. Discrete Math.*, **19** (2005), 321–344. MR2178106 (2006i:94112); 5. with G. Han, Asymptotics of input-constrained binary symmetric channel capacity, to appear in *Ann. Appl. Probab.*, 2009.

Statement: My broad experience in academia, industry and administration, has given me a solid understanding of the skills needed for strong leadership. I would use the networks that I have established to identify and recruit mathematicians, who have these skills, to serve the AMS.

Carla D. Savage



Professor, North Carolina State University.

Born: November 11, 1951, Baltimore, MD.

Ph.D.: University of Illinois, Urbana-Champaign, 1977.

AMS Committees: Southeastern Section Program Committee, 2000–2002.

Selected Addresses: Invited Talk, Twentieth Clemson Mini-Conference on Discrete Mathematics,

Clemson University, 2005; Invited Talk, Harvey Mudd

Conference on Enumerative Combinatorics, Harvey Mudd College, 2006; Invited Hour Address, AMS Southeastern Section Meeting, Murfreesboro, Tennessee, 2007; Invited Talk, 20th Annual International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 08), Valparaiso, Chile, 2008; Invited Talk, MAA Mathfest, Madison, Wisconsin, 2008.

Additional Information: Chair, Steering Committee, ACM/SIAM Symposium on Discrete Algorithms, 1995–1999; Editorial Board, *SIAM Journal on Discrete Mathematics*, 1995–; Chair, Program Committee, Tenth SIAM Conference on Discrete Mathematics, Minneapolis, 2000; Chair, SIAM Activity Group on Discrete Mathematics, 2008–2010; Program Chair, Second Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM), Montreal, 2009.

Selected Publications: 1. A survey of combinatorial Gray codes, *SIAM Rev.*, **39** (1997), No. 4, 605–629. MR1491049 (98m:94052); 2. with S. Corteel, B. Pittel, and H. S. Wilf, On the multiplicity of parts in a random partition, *Random Structures Algorithms*, **14** (1999), No. 2, 185–197. MR1667320 (2000g:05017); 3. with J. Griggs and C. E. Killian, Venn diagrams and symmetric chain decompositions in the Boolean lattice, *Electron. J. Combin.*, **11** (2004), No. 1, Research Paper 2 (electronic). MR2034416 (2004j:06004); 4. with S. Corteel, Lecture hall theorems, q -series and truncated objects, *J. Combin. Theory Ser. A* **108** (2004), No. 2, 217–245. MR2098842 (2005h:05018); 5. with A. J. Yee, Euler’s partition theorem and the combinatorics of l -sequences, *J. Combin. Theory Ser. A*, **115** (2008), No. 6, 967–996. MR2423343 (2009c:05019).

Statement: The current political and economic climate presents unique challenges and opportunities for mathematicians and for mathematics research. Through its activities and committees, the AMS is strategically positioned to utilize this climate to promote public awareness of the critical importance of mathematics; to identify scientific challenges requiring a mathematical breakthrough; to secure increased funding for mathematical research; and to improve mathematics education. If elected, I will strive to recruit candidates with talent, energy, and imagination, who will pursue these goals.

Julius L. Shaneson

Class of 1939 Professor, Mathematics Department, University of Pennsylvania.

Born: July 24, 1944, Richmond, Virginia.

Ph.D.: University of Chicago, 1968.

AMS Committees: Joint Summer Research Conference Committee, 1980–1982; Chair, Committee on Committees, 1989–1990; Committee to Select Winner of Steele Prizes, 2006–2009 (Chair, 2008–2009).

Selected Addresses: AMS Annual Meeting, Biloxi, MS, 1979; International Congress of Mathematicians, Warsaw, 1983; Indiana University Distinguished Lecture Series, 1991; International Congress of Mathematicians, Zurich, 1994; Namboodiri Lecture Series, University of Chicago, 1994.

Additional Information: A. P. Sloan Foundation Fellowship, 1971–1973; J. S. Guggenheim Foundation Fellowship,

1981–1982; Chair, Department of Mathematics, University of Pennsylvania, 2002–2006.

Selected Publications: 1. Wall’s surgery obstruction groups for $Z \times G$, *Ann. of Math. (2)*, **90** (1969), 296–334. MR0246310 (39#7614); 2. with S. Cappell, The codimension two placement problem and homology equivalent manifolds, *Ann. of Math. (2)*, **99** (1974), 277–348. MR0339216 (49#3978); 3. with S. Cappell, Nonlinear similarity, *Ann. of Math. (2)*, **113** (1981), No. 2, 315–355. MR0607895 (83h:57060); 4. with S. Cappell, Stratifiable maps and topological invariants, *J. Amer. Math. Soc.*, **4** (1991), 521–551. MR1102578 (92d:57024); 5. with S. Cappell and L. Maxim, Hodge genera of algebraic varieties. I. *Comm. Pure Appl. Math.*, **61** (2008), No. 3, 422–449. MR2376848.

Statement: The elected officers of the AMS represent American Mathematics to the public at large, and help the Math community to identify and address many issues in the pursuit of research and education. The nominating committee should seek out the most talented individuals for the many tasks involved, keeping in mind the need for officers that can address the needs of different components of the community of mathematicians and can speak to different parts of the wider public.

Editorial Boards Committee

Diego Ernesto Dominici



Assistant Professor, SUNY New Paltz, New Paltz, New York.

Born: February 18, 1972, Buenos Aires, Argentina.

Ph.D.: University of Illinois at Chicago, 2003.

Selected Addresses: Invited Speaker, 9th Conference on Orthogonal Polynomials Special Functions and Applications (OPSFA07), Marseille, France, 2007; Chair, Session on Asymptotics, 6th International Congress

on Industrial and Applied Mathematics (ICIAM07), Zurich, Switzerland, 2007; Co-organizer (with S. Cooper and S. Ole Warnaar), Special Session on Special Functions and Orthogonal Polynomials, Joint Meeting of the AMS-NZMS, 2007, Victoria University of Wellington, New Zealand, 2007; Invited Speaker, Workshop on Asymptotic Analysis, Foundations of Computational Mathematics, City University of Hong Kong, Hong Kong, China, 2008; Co-organizer (with R. Paris), Minisymposium on Asymptotic Analysis, The European Consortium For Mathematics In Industry (ECMI 2008), University College London, London, UK, 2008. **Additional Information:** Richard C. DiPrima Prize for outstanding research in applied mathematics, SIAM, 2004; Humboldt Research Fellowship for experienced researchers, Alexander von Humboldt Foundation, 2008–2011. Editorial boards: Associate Editor, *Journal of Mathematics, Statistics and Allied Fields*, 2008–; Advisory Board Member, *Scientific Journals International (SJI)*, 2006–; Co-Editor, *The Electronic News Net of the SIAM Activity Group on Orthogonal Polynomials and Special Functions (OP-SF NET)*,

2006–; Associate Editor, *International Journal of Applied Mathematics & Statistics (IJAMAS)*, 2005–. Member, SIAM. **Selected Publications:** 1. with C. Knessl, Geometrical optics approach to Markov-modulated fluid models, *Stud. Appl. Math.*, **114** (2005), No. 1, 45–93. MR2117327 (2005h:34011); 2. with C. Knessl, Ray solution of a singular perturbed elliptic PDE with applications to computer network models, *SIAM J. Appl. Math.*, **66** (2006), No. 6, 1871–1894. MR2262956 (2008e:35046); 3. Asymptotic analysis of the Krawtchouk polynomials by the WKB method, *Ramanujan J.*, **15** (2008), No. 3, 303–338. MR2390273; 4. Asymptotic analysis of generalized Hermite polynomials, *Analysis (Munich)*, **28** (2008), No. 2, 239–261. MR2401156 (2009c:33020); 5. with C. Knessl, Asymptotic analysis of a fluid model modulated by an $M/M/1$ queue, *Adv. Appl. Prob.*, **40** (2008), No. 3, 856–881. MR2454036.

Statement: The publication of articles in scientific areas, especially in mathematics, is about to enter a new era. Modern typesetting software, electronic journals and e-print archives are revolutionizing the way in which we write and share our mathematical ideas. I believe that in order to keep up with these changes a review of the roles of publisher, editor and referee is needed. As a member of the AMS Editorials Board Committee, I will put all my energy into creating a bridge between the wonderful traditions that the AMS publications represent and the new challenges that the future will bring.

Anatoly Libgober



Professor, University of Illinois at Chicago.

Born: March 24, 1949, Moscow, Russia.

Ph.D.: Tel-Aviv University, 1977.

Selected Addresses: Summer School on Algebraic Geometry, Seattle, Washington, 2005; Course in School on Singularities, ICTP, Trieste, Italy, 2005; ICM Satellite Conference on Algebraic Geometry, Segovia, Spain, 2006; Lecture

series, Hangzhou University, Hangzhou, China, 2007; Lecture, Workshop of Topology of Stratified Spaces, MSRI, 2008.

Additional Information: Editor, *Journal of Knot Theory and its Ramifications*; Co-editor, *Trends in Singularities* (with M. Tibar), Birkhäuser; Co-editor, *Algebraic Geometry* (with P. Wagreich), Springer-Verlag, 1981; Co-editor, *Braids* (with J. Birman), Contemporary Mathematics, vol. 78, Amer. Math. Soc., 1988; Co-editor, *Singularities and Complex Geometry* (with S. Yau and Q. K. Lu), AMSIP Studies in Advanced Mathematics, vol. 5, Amer. Math. Soc., 1997; Fulbright Scholar, 2001.

Selected Publications: 1. Invariants of plane algebraic curves via representations of the braid groups, *Invent. Math.*, **95** (1989), No. 1, 25–30. MR0969412 (90a:14038); 2. Homotopy groups of the complements to singular hypersurfaces. II, *Ann. of Math. (2)*, **139** (1994), No. 1, 117–144. MR1259366 (95d:14023); 3. with S. Yuzvinsky, Cohomology of the Orlik-Solomon algebras and local

systems, *Compositio Math.*, **121** (2000), No. 3, 337–361. MR1761630 (2001j:52032); 4. with L. Borisov, Elliptic genera of toric varieties and applications to mirror symmetry, *Invent. Math.*, **140** (2000), No. 2, 453–485. MR1757003 (2001j:58037); 5. with L. Borisov, McKay correspondence for elliptic genera, *Ann. of Math. (2)*, **161** (2005), No. 3, 1521–1569. MR2180406 (2008b:58030).

Statement: Communicating, documenting and disseminating mathematical knowledge is crucial for successful development of mathematics. AMS has a tradition of being very creative in finding new ways in finding, improving and using new capabilities in its publication processes. Identifying the best people to advance the quality and effectiveness of its publications is a challenge to which I hope to contribute if elected. I see excellence and diversity as the top criteria in recommending members to editorial boards.

Simon Tavener



Professor and Chair, Department of Mathematics, Colorado State University.

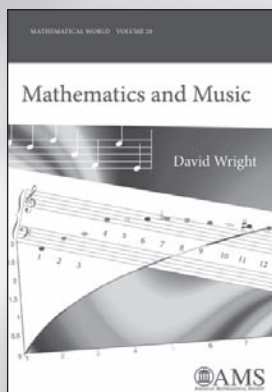
Born: August 31, 1960, Barnet, England.

Ph.D.: University of Oxford, 1986.

Selected Publications: 1. with J.-H. Chen and W. G. Pritchard, Bifurcation for flow past a cylinder between parallel planes, *J. Fluid Mech.*, **284** (1995), 23–41. MR1317889; 2. with K. A. Cliffe and A. Spence, The

numerical analysis of bifurcation problems with application to fluid mechanics, *Acta Numerica* (2000), 39–131. MR1883627 (2003b:37125); 3. with K. A. Cliffe, Two-fluid Marangoni-Bénard convection with a deformable interface, *J. Comput. Phys.*, **182** (2002), No. 1, 277–300. MR1936808 (2003i:76090); 4. with V. Carey and D. Estep, A posteriori analysis and adaptive error control for multiscale operator decomposition solution of elliptic systems I: Triangular systems, *SIAM J. Numer. Anal.*, **47** (2009), 740–761. 5. with E. Allgower and S.-G. Cruceanu, Application of numerical continuation to compute all solutions of semilinear elliptic equations (2009), to appear in *Adv. Geom.*

Statement: I like to think that a journal can instill a sense of expectation and excitement as the reader glances through the titles and abstracts of the latest issue. Achieving such a standard consistently is possible only through the perspective, ingenuity and diligence of the editorial board. As a member of the EBC I would strive to identify mathematicians who can help to continue this tradition throughout the AMS journals and book series.



TEXTBOOK

Mathematics and Music

David Wright, *Washington University, St. Louis, MO*

This introduction to the interrelationships between mathematical reasoning and musical creativity shows how both subjects appeal to the same set of skills and instincts. The text explores the common foundations of the two subjects, which are developed side by side. The use of musical topics allows for the introduction of important mathematical concepts such as modular arithmetic and equivalence relations to early undergraduates.

Mathematical World, Volume 28; 2009; 161 pages; Softcover; ISBN: 978-0-8218-4873-9; List US\$35; AMS members US\$28; Order code MAWORLD/28

Table of Contents

- * Basic mathematical and musical concepts
- * Horizontal structure
- * Harmony and related numerology
- * Ratios and musical intervals
- * Logarithms and musical intervals
- * Chromatic scales
- * Octave identification and modular arithmetic
- * Algebraic properties of the integers
- * The integers as intervals
- * Timbre and periodic functions
- * The rational numbers as musical intervals
- * Tuning the scale to obtain rational intervals
- * Bibliography
- * Index

1-800-321-4AMS (4267), in the U. S. and Canada, or 1-401-455-4000 (worldwide); fax: 1-401-455-4046; email: cust-serv@ams.org.

www.ams.org/bookstore



From the AMS Secretary—Election Special Section

Pham Huu Tiep



Professor, Department of Mathematics, University of Arizona.

Born: 1963, Hanoi, Vietnam.

Ph.D.: Moscow State University, Moscow, Russia, 1989.

Selected Addresses: Twelve conferences on Representations of Finite Groups, Groups and Geometries, Lattices and Applications, and Permutation Groups, at Mathematisches Forschungsinstitut Oberwolfach, 1991–2009; Harvard

Number Theory Seminar, 1999; Conference on Algebraic Groups and Finite Reductive Groups, Bernoulli Center, EPFL, Lausanne, Switzerland, 2005; Department Colloquium, University of Wisconsin, Madison, 2006; Caltech Geometry and Topology Seminar, 2008; Group Theory, Geometry and Representation Theory: Abel Prize 2008; London Algebra Colloquium, Imperial College, London, 2009; Newton Institute, Cambridge, UK, 2009.

Additional Information: International Mathematical Olympiad, Silver Medal, London, 1979; Alexander von Humboldt Fellow, Germany, 1993–1995; Teacher of the Year Award, College of Liberal Arts and Sciences, University of Florida, 2001–2002; Visiting Professor, Bernoulli Center, EPFL, Lausanne, Switzerland, 2005; Member, Mathematical Sciences Research Institute (MSRI), Berkeley, 2008; Editorial Boards: *Communications in Algebra*, *Acta Math. Vietnamica*; Conference organizer, “Group Representations and Combinatorics”, Gainesville, FL, 2007; Co-organizer: Special Year in Algebra 2002–2003, University of Florida; “Finite Groups 2003”, Gainesville, FL, 2003; “Quadratic Forms, Sums of Squares, Theta Functions and Integral Lattices” and “Higher Degree Forms”, Gainesville, FL, 2009.

Selected Publications: 1. with A. I. Kostrikin, *Orthogonal Decompositions and Integral Lattices*, Walter de Gruyter & Co., Berlin, 1994. MR1308713 (96f:17001); 2. with A. E. Zalesskii, Mod p reducibility of unramified representations of finite groups of Lie type, *Proc. London Math. Soc.*, **84** (2002), 439–472. MR1881398 (2002m:20027); 3. with G. Navarro, Rational irreducible characters and rational conjugacy classes in finite groups, *Trans. Amer. Math. Soc.*, **360** (2008), No. 5, 2443–2465. MR2373321 (2008k:20014); 4. with R. M. Guralnick, Symmetric powers and a problem of Kollár and Larsen, *Invent. Math.*, **174** (2008), 505–554. MR2453600; 5. with A. S. Kleshchev, Representations of finite special linear groups in non-defining characteristic, *Adv. Math.*, **220** (2009), 478–504.

Statement: If elected, I will work with other members of the committee to identify and nominate the best qualified mathematicians for the editorial boards of the AMS publications, to help maintain their high standards and to further promote the role of mathematics in science, engineering, education, and in the society as a whole.