Biographies of Candidates 2014

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.

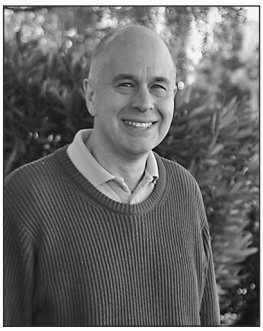
Candidates have had the opportunity to supply a photograph to accompany their biographical information.

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).

Vice President

Robert Calderbank



Professor of Mathematics, Director of the Information Initiative, Duke University (iiD).

Born: December 28, 1954, Bridgwater, Somerset, UK.

Ph.D.: California Institute of Technology, 1980.

AMS Committees: AMS Centennial Fellowship Committee, 1995–1998 (Chair, 1996–1998); Committee to Select Speakers at NE Regional Meetings, 2003–2006; Chair, Organizing Committee, von Neumann Symposium, 2006; Committee to Select Speakers at National Meetings, 2006–2009; Committee to Select the Gibbs Lecturer, 2009–2012; AAAS Section A Representative, 2010–present.

Selected Addresses: Principal Lecturer and Organizer, Different Aspects of Coding Theory, AMS Symposium in Applied Mathematics, 1995; AMS Invited Address, Hoboken, 2001; Plenary Lecture, International Symposium on Information Theory, Toronto, 2009; Special Session on New Directions in Applied Mathematics, AAAS Meeting, Vancouver, 2012; R. T. Chien Distinguished Lecture, Coordinated Science Lab, University of Illinois, 2013.

Additional Information: *Positions*: Bell Labs and AT&T, from Member of Technical Staff in 1980 to VP for Research in 2003; Director, Program in Applied and Computational Mathematics, Princeton, 2004–2010; Dean of Natural Sciences, Duke, 2010–2012; Director, Information Initiative, Duke, 2012–present. *Boards*: Institute for Mathematics and Applications, Board of Governors, 1996–1999; NSF Committee of Visitors, Division of Mathematical Sciences, 2001; American Institute of Mathematics, Scientific Advisory Board, 2006–present; Institute for Pure and Applied Mathematics, Scientific Advisory Board, 2013–present. *Selected Editorships*: *IEEE Transactions on Information Theory*, 1995–1998; Editor in Chief, *Information and Inference*, 2011–present. *Selected Honors*: IEEE Fellow, 1995; AT&T Fellow, 2000; National Academy of Engineering, elected 2005; Honorary Doctorate, Warwick University, 2013; IEEE Hamming Medal, 2013; AAAS Fellow, 2013; AMS Fellow, 2013.

Selected Publications: 1. A personal perspective on mathematics research in industry, *Notices Amer. Math. Soc.*, 569–571, May 1996; 2. with P. W. Shor, Good quantum error correcting codes exist, *Phys. Rev.* A, **54** (1996), no. 2, 1098–1105; 3. with P. J. Cameron, W. M. Kantor and J. J. Seidel, Z_4–Kerdock codes, orthogonal spreads and extremal Euclidean line–sets, *Proc. London Math. Soc.* (3), **75** (1997), 436–480. **MR1455862 (98i:94039)**; 4. with I. Daubechies, W. Sweldens, and B. L. Yeo, Wavelet transforms that map integers to integers, *Appl. Comput. Harmon. Anal.*, **5** (1998), 332–369. **MR1632537 (99h:94012)**; 5. with S. Jafarpour, Finding needles in compressed haystacks, *Compressed Sensing: Theory and Applications*, Y. Eldar and G. Kutyniok, eds., Cambridge University Press, Cambridge, UK, 2012, 439–485. **MR2963575**.

Statement by Candidate: It is an honor to be asked to stand as a candidate for Vice President. The role of the AMS in creating a vibrant mathematics community through meetings, publications and outreach activities is vital. AMS initiatives make a huge difference to both the development of individual research mathematicians and to national perceptions of the return on investing in mathematics.

These are interesting times. The rise of the information economy has reduced the distance between mathematics and the value it creates, and there has never been a greater diversity of opportunity for mathematicians. Ours is a global activity and as access to the Internet grows so too does the opportunity to make a difference to mathematicians across the world. However we also face serious challenges, from the future of scholarly publication to the implications of online learning for university instruction.

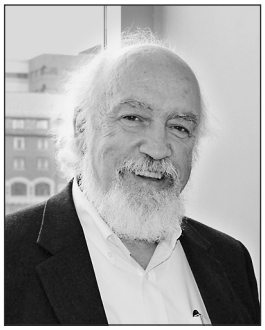
As a mathematician with experience leading an industrial research laboratory, an interdisciplinary mathematics program, and a college of sciences, I have thought deeply about these issues. If elected it would be my privilege to help AMS sustain federal funding for mathematics research and teaching, also to work for AMS programs that expand access to mathematical publications.

Carlos E. Kenig

Professor, Department of Mathematics, University of Chicago.
Born: November 25, 1953, Buenos Aires, Argentina.
Ph.D.: University of Chicago, 1978.
AMS Offices: Council, 1985–1988; Managing Editor, *JAMS*, 2000–2002.
AMS Committees: Editorial Boards Committee, 1989–1992; Committee on Mathematicians with Disabilities (AMS–MAA–SIAM), 1994–2000 (chair, 1997–2000); Committee on Committees, 1999–2000; Editorial Boards: *Bulletin of the AMS*, 1994–1997; *JAMS*, 1998–2002; *Electronic Research Announcements of the AMS*, 2004–2009; Bergman Prize Committee, 2010–2012.
Selected Addresses: Invited address, AMS meeting, Columbia, MO, 1985; Invited speaker, ICM, 1986; Invited address, AMS meeting, Detroit, MI, 1997; Invited speaker, ICM, 2002; Plenary speaker, ICM, 2010.
Additional Information: Sloan Fellow, 1981–1983; Salem Prize, 1984; Guggenheim Fellow, 1986; Fellow, American Academy of Arts and Sciences, 2002; Member, Committee of Visitors for DMS at NSF, 2004; Scientific Advisory Committee, Banff Research Station, 2006–2009; Scientific Advisory Committee, MSRI, 2006–2010 (co-chair, 2008–2010); Editor, *Tracts in Mathematics*, European Mathematical Society, 2006–present; Bôcher Prize, AMS, 2008; Decadal Review Committee, IAS, 2008; Editor, *Inventiones Mathematicae*, 2009–present; US delegate to the General Assembly of the International Mathematical Union, 2010; Fellow of the AMS, 2013; Editor, *Forum of Mathematics Pi/Sigma*, 2013–present; Chair, Program Committee, International Congress of Mathematicians 2014, 2011–2014; Member, National Academy of Sciences, 2014.
Selected Publications: 1. with G. Ponce and L. Vega, Well-posedness and scattering results for generalized Korteweg-de Vries equations via the contraction mapping principle, *Comm. Pure Appl. Math.*, **46** (1993), no. 3, 527–620. **MR1211741 (94h:35229)**; 2. with J. Sjostrand and G. Uhlmann, The Calderón problem with partial data, *Ann. of Math.*, **165** (2007), 567–591. **MR2299741 (2008k:35498)**; 3. with F. Merle, Global well-posedness, scattering and blow-up for the energy critical focusing non-linear wave equation, *Acta Math.*, **201** (2008), no. 2, 147–212. **MR2461508 (2011a:35344)**; 4. with F. Lin and Z. Shen, Homogenization of elliptic systems with Neumann boundary conditions, *J. Amer. Math. Soc.*, **26** (2013), 901–937. **MR3073881**; 5. with T. Duyckaerts and F. Merle, Classification of radial solutions of the focusing, energy-critical wave equation, *Cambridge Journal of Mathematics*, **1** (2013), 75–144.
Statement by Candidate: It is a great honor to be nominated for the vice-presidency of the AMS. It would be a privilege to have the opportunity to serve the AMS and the mathematical community in this position. The AMS is the premier organization in the USA that champions research and education in mathematics, which is its core mission. It has played a major role in my professional life, going back to my graduate student days. I have a strong commitment to the core mission of the AMS and to making sure that underrepresented groups are full participants in the enterprise of the AMS. We are living in a rapidly changing world and I would like to have the opportunity to contribute, should I be elected, to the task of ensuring that the AMS continues to evolve, adapting to these changes.

Board of Trustees

Daniel M. Burns Jr.



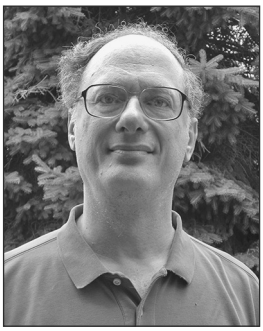
Professor of Mathematics, University of Michigan.
Born: August 25, 1946, Brooklyn, NY.
Ph.D.: MIT, 1972.
AMS Offices: AMS Council, 1987–1989.
AMS Committees: Nominating Committee, 1992–1994; Transactions Editorial Committee, 1995–2000.
Selected Addresses: Invited address, Central Section Meeting, Notre Dame, 1982; many special sessions.
Additional Information: Sloan Fellow, 1978–1982; AMS Fellow, 2013.
Selected Publications: 1. with M. Rapoport, On the Torelli problem for kählerian K–3 surfaces, *Ann. Sci. École Norm. Sup.*, **8** (1975), no. 2, 235–274. **MR0447635 (56 #5945)**; 2. Curvatures of Monge–Ampère foliations and parabolic manifolds, *Ann. Math.*, **115** (1982), no. 2, 349–373. **MR0647810 (84a:32031)**; 3. with C. L. Epstein, A global invariant for three-dimensional CR-manifolds, *Invent. Math.*, **92** (1988), no. 2, 333–348. **MR0936085 (89b:53060)**;

4. with J.-S. Ryu, Rationality of renormalized Chern classes, *Pure App. Math. Q.*, **1** (2005), no. 3, Special Issue: In memory of Armand Borel. Part 2, 449–478. **MR2201325 (2006i:32032)**; 5. with N. Sibony, Limit currents and value distribution of holomorphic maps, *Ann. Inst. Fourier (Grenoble)*, **62** (2012), no. 1, 145–176. **MR2986269**.

Statement by Candidate: The AMS appears to be in a healthy financial situation and it is the primary responsibility of the Board of Trustees to keep things that way. I have been active in recent years in mathematics developments in Africa, and I would like to see the AMS play a more outgoing role in this part of the world. The AMS already has initiatives around the world, most notably jointly held meetings abroad. I would like to see the AMS foster the formation of sister societies in some of those areas of Africa and other parts of the developing world, sharing practical expertise on organization, offering infrastructure support, etc. I think it would be great if we were to do that in collaboration with some of our sister societies which have already blossomed more recently than our own, e.g., those of Mexico and Brazil. This is just one way the AMS and its funding potential could help to shepherd mathematics globally, another dimension of the diversity we wish to see in the profession.

Joseph H. Silverman

Professor of Mathematics, Brown University.



Born: March 27, 1955, New York, New York.

Ph.D.: Harvard University, 1982.

AMS Elected Offices: AMS Council, 2008–2013; AMS Executive Committee, 2009–2013.

AMS Committees: Conant Prize Selection Committee, 2000–2003; University Lecture Series Editorial Committee, 2006–2008; Committee on Publications, 2008–2011 (chair 2011); AMSTexts Editorial Board, 2009–present; Fellows Selection Committee, 2013.

Selected Addresses: Five Lectures on Moduli for Dynamical Systems, Barbados, 2010; Four Special Sessions, Joint Mathematics Meetings, Boston, 2012; ICERM Semester Program on Complex and Arithmetic Dynamics, lead scientific organizer, Providence, 2012; AMS Special Session, Boston College, 2013; Eight Lectures on Elliptic Curves and Lattices, Seoul National University, 2014.

Additional Information: *Fellowships*: NSF Post-Doctoral Fellow, 1983–1986; Sloan Foundation Fellow, 1987–1991; Guggenheim Foundation Fellowship, 1998–1999. *Editorial Boards*: *Compositio Mathematica*, 1993–2005; AMSTexts 2009–present; *Algebra and Number Theory*, 2011–present. *Awards*: MAA Lester Ford Award, 1994; AMS Steele Prize for Mathematical Exposition, 1998; NES MAA Award for Distinguished Teaching, 2011; ECC Visionary Award, 2011; Fellow of the AMS, 2012. *Governing Boards*: IPAM Board of Trustees, 2003–2005; Shannon Institute Advisory Board, 2006–2012. *Programs Co-Organized*: AMS special sessions, Providence, 1999, New Jersey, 2004, JMM San Francisco 2010, workshops on cryptography, IPAM 2002, 2006, Montreal, 2010, workshops on arithmetic dynamics, AIM, 2008, Toronto, 2008, CUNY, 2010, ICERM, 2012, Berkeley, 2012, ICERM Semester Program, 2012, ICERM IdeaLab, 2013.

Selected Publications: 1. T*he Arithmetic of Elliptic Curves*, Graduate Texts in Mathematics, vol. 106, Springer–Verlag, N.Y., 1986, 2nd edition 2009. **MR0817210 (87g:11070)**; 2. with M. Hindry, The canonical height and integral points on elliptic curves, *Invent. Math.*, **93** (1988), 419–450. **MR0948108 (89k:11044)**; 3. with M. Rosen, On the rank of an elliptic surface, *Invent. Math.*, **133** (1998), 43–67. **MR1626465 (99f:11081)**; 4. *The Arithmetic of Dynamical Systems*, Graduate Texts in Mathematics, vol. 214, Springer–Verlag, N.Y., 2007. **MR2316407 (2008c:11002)**; 5. An algebraic approach to certain cases of Thurston rigidity, *Proc. Amer. Math. Soc.*, **140** (2012), no. 10, 3421–3434. **MR2929011**.

Statement of Candidate: I have been actively involved for more than 30 years in mathematics research and mathematics education at the undergraduate and graduate levels, including supervision of 27 students who have received their Ph.D.'s. Having recently completed terms on the AMS Council and Executive Committee, I look forward to further service as a member of the Board of Trustees. This board has the responsibility of ensuring the AMS's financial stability, while also funding programs that promote the vitality of the mathematics community. As a member, I will encourage the AMS to find innovative ways to positively influence graduate students and young mathematicians, while at the same time serving the full spectrum of our membership. As an example of the former, I recently chaired the subcommittee that created the new AMS Graduate Student Chapter program, which in its second year already has 24 chapters. Another important aspect of AMS finances concerns its publishing enterprise, including its many journals, book series, and MathSciNet. Having published eight textbooks and having served on the AMS Council's publishing subcommittee and the AMSTexts editorial board, I feel qualified to help make the financial decisions necessary for the AMS to succeed in today's challenging publishing environment.

Nominating Committee

Douglas N. Arnold

McKnight Presidential Professor of Mathematics, University of Minnesota.

Born: April 30, 1954, New York, NY.

Ph.D.: University of Chicago, 1979.

AMS Committees: Liaison committee to the AAAS, 2000–2002, 2007–2009; Birkhoff Prize selection committee, 2002; Fellows selection committee, 2012; Gibbs Lecturer selection committee, 2013–2014.

Selected Addresses: Plenary Address, International Congress of Mathematicians, Beijing, 2002;

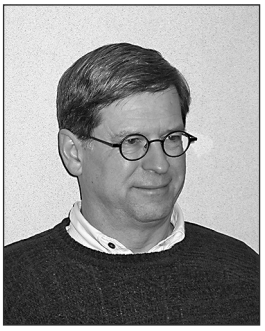
Plenary Talk, Central Sectional Meeting, Notre Dame, 2006; AMS–MAA Invited Address, Joint Mathematics Meetings, Washington, DC, 2009; NSF–CBMS lecture series, Providence, RI, 2012.

Additional Information: Director, Institute for Mathematics and its Applications, 2001–2008; Guggenheim Fellow, 2008–2009; Foreign member, Norwegian Academy of Science and Letters, elected 2009; SIAM Fellow, appointed 2009; President of SIAM, 2009–2010; AAAS Fellow, elected 2011; AMS Fellow, appointed 2012; SIAM Prize for Distinguished Service to the Profession, 2013.

Selected Publications: 1. with R. Falk and R. Winther, Finite element exterior calculus, homological techniques, and applications, *Acta Numer.*, **15** (2006), 1–155. **MR2269741 (2007j:58002)**; 2. with R. Falk and R. Winther, Finite element exterior calculus: From Hodge theory to numerical stability, *Bull. Amer. Math. Soc. (N.S.)*, **47** (2010), 281–354. **MR2594630 (2011f:58005)**; 3. with K. Fowler, Nefarious numbers, *Notices Amer. Math. Soc.*, **58** (2011), 434–437. **MR2789123**; 4. with G. Awanou, Finite element differential forms on cubical meshes, *Math. Comp.*, **83** (2014), 1551–1570. **MR3194121**; 5. with R. Falk, J. Guzman, and G. Tsogtgerel, On the consistency of the combinatorial codifferential, *Trans. Amer. Math. Soc.*, 2014.

Statement by Candidate: Much of the strength of the AMS derives from the involvement of talented, committed, and thoughtful volunteers. Consequently, the nominating committee plays a crucial role. In various capacities I have had the pleasure of working with many mathematicians to advance our profession. If chosen to serve on the nominating committee, I will put this experience to work to help involve a broad and diverse group of effective people in AMS service.

James W. Cogdell



Professor, Ohio State University.

Born: September 22, 1953, Little Rock, Arkansas.

Ph.D.: Yale University, 1981.

AMS Committees: AMS Central Section Program Committee, 2007–2009.

Selected Addresses: Plenary address, XXII Journées Arithmétiques, Lille, France, July 2001; Invited 45-minute address, Number Theory Section, ICM, Beijing, China, 2002; Whittemore Lectures, Yale University, November 2002; Erwin Schrödinger Lecture, Erwin Schrödinger Institute, January 2009.

Additional Information: NSF Postdoctoral Fellowship, 1982–1983; Inaugural Fellow of the AMS, 2012.

Selected Publications:
1. with I. I. Piatetski-Shapiro, Converse theorems for GL_n, *Inst. Hautes Études Sci. Publ. Math.*, **79** (1994), 157–214. **MR1307299 (95m:22009)**; 2. with I. I. Piatetski-Shapiro, Converse theorems, functoriality, and applications to number theory, *Proceedings of the International Congress of Mathematicians, Vol. II* (Beijing, 2002), 119–128. **MR1957026 (2004c:11071)**; 3. On sums of three squares, *J. Théor. Nombres Bordeaux*, **15** (2003), 33–44. **MR2018999 (2005d:11072)**; 4. with H. Kim, I. I. Piatetski-Shapiro and F. Shahidi, Functoriality for the classical groups, *Publ. Math. Inst. Hautes Études Sci.*, **99** (2004), 163–233. **MR2075885 (2006a:22010)**.

Candidate Statement: I am pleased to have been nominated by the Society to serve on the Nominating Committee. This committee has a great responsibility as it serves as the gateway to service on the other committees. It must assure the other committees have a balanced slate of members of the Society that are able and willing to get their work done. I will fulfill this responsibility to the best of my ability.

Christine Guenther

Professor of Mathematics, Pacific University.

Born: August 5, 1966, Denver, Colorado.

Ph.D.: University of Oregon, 1998.

AMS Committees: Joint Committee on Women in the Mathematical Sciences, 2012–2015 (co-chair, 2014–2015).

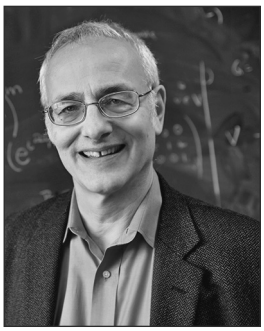
Selected Addresses: I have given numerous colloquia and frequent talks. Recent examples: AMS Special Sessions, 2009–2012; Max-Planck-Institut für Gravitationsphysik, 2012; University of Arizona, Colloquium, 2013; Stanford University, joint PNGS/BADGS, 2014.

Additional Information: Thomas and Joyce Holce Chair in Science, Pacific University, 2005–2008; Department Chair, Pacific University, 2004–2006, 2009–2010; Simons Foundation Collaboration Grant, 2013–2018; Editorial Board, *Geometric Flows*, deGruyter, 2014–present.

Selected Publications: 1. with D. Knopf and J. Isenberg, Stability of the Ricci flow at Ricci flat metrics, *Comm. Anal. Geom.*, **10** (2002), no. 4, 741–777. **MR1925501 (2003g:53118)**; 2. with B. Chow, et al., *The Ricci Flow: Techniques and Applications Pts I – III*, Mathematical Surveys and Monographs, American Mathematical Society, Providence, RI (2007, 2008, 2010). **MR2302600 (2008f:53088)**, **MR2365237 (2008j:53114)**, **MR2604955 (2011g:53142)**; 3. with T. Oliynyk, Stability of the (two-loop) renormalization group flow for nonlinear sigma models, *Lett. Math. Phys.*, **84** (2008), no. 2–3, 149–157. **MR2415546 (2009c:81060)**; 4. with K. Gimre and R. Whiteley, The analytical determination of kinetic parameters for a bimolecular EC mechanism from chronoamperometric data, *J. Math. Chem.*, **50** (2012), no. 4, 805–818. **MR2903697**; 5. with K. Gimre and J. Isenberg, Short-time existence for the second-order renormalization group flow in general dimensions, *Proc. Amer. Math. Soc.*, to appear (2014).

Statement by Candidate: It would be a privilege to serve on the nominating committee of the AMS. I would work to nominate highly qualified candidates to represent the broad constituency of the AMS in pure and applied mathematics, at research universities and liberal arts institutions, in industry and government.

Phil Kutzko



Professor of Mathematics and Collegiate Fellow, University of Iowa.
Born: November 24, 1946, Brooklyn, New York.
Ph.D.: University of Wisconsin, 1972.
AMS Committees: Centennial Fellowship Committee, 2005-2007; Committee to Select the Winner of the Prize for Exemplary Program or Achievement by a Mathematics Department, 2011-2013.
Selected Addresses: Brandeis-Harvard-MIT Joint Mathematics Colloquium, 1979; International Congress of Mathematicians, Berkeley, 1986; University of Iowa Presidential Address, 2004; Mathematical Association of America James R. C. Leitzel Lecture, 2011.
Additional Information: Director, National Alliance for Doctoral Studies in the Mathematical Sciences; Iowa State Regents Award for Faculty Excellence, 2002; Brody Award for Service, 2003; Hubbard Award for Teaching, 2003; National AGEP Mentor of the Year, 2006; Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring, 2008 (Awarded by President Barack Obama, January, 2010); Fellow of the AAAS, 2010; American Mathematical Society Award for Distinguished Public Service, 2014.
Selected Publications: 1. The Langlands conjecture for Gl_2 of a local field, *Ann. of Math. (2)*, **112** (1980), 381-412. **MR0592296 (82e:12019)**; 2. with C. J. Bushnell, *The Admissible Dual of GL_N via Compact Open Subgroups*, Annals of Mathematics Studies, vol. 129, Princeton University Press, Princeton, NJ, 1993. **MR1204652 (94h:22007)**; 3. with C. J. Bushnell, Smooth representations of reductive *p*-adic groups: Structure theory via types, *Proc. London Math. Soc. (3)*, **77** (1998), 582-634. **MR1643417 (2000c:22014)**; 4. with C. J. Bushnell and G. Henniart, Local Rankin-Selberg convolutions for GL_n: Explicit conductor formula, *J. Amer. Math. Soc.*, **11** (1998), 703-730. **MR1606410 (99h:22022)**; 5. with L. Morris, Explicit Plancherel theorems for $H(q_1,q_2)$ and $SL_2(F)$, *Pure Appl. Math. Q. (Serre 80th Birthday volume)*, **5** (2009), 435-467. **MR2531913 (2010m:20009)**.
Statement by the Candidate: I am honored to have been nominated to serve on the Nominating Committee of the American Mathematical Society. We are going through a period of great change in our nation, becoming less and less European, more and more American. Our challenge is to embrace these changes, to transform our profession to reflect the new realities of our society, so as to maintain the central role that mathematics plays in all aspects of our intellectual life. If elected to the Nominating Committee, I will work to ensure that the candidates for our elected positions in the AMS will provide strong vision and leadership during this critical period of transition.

Douglas Lind

Professor Emeritus of Mathematics, Department of Mathematics, University of Washington.
Born: August 11, 1946, Arlington, Virginia.
Ph.D.: Stanford University, 1973
AMS Committees: Centennial Fellowship Committee, 1991-1993; AMS Task Force on Excellence, 1995-2000; Editorial Board, *Electronic Research Announcements*, 1997-1999; Associate Editor, Research-Expository Articles, *Bulletin*, 1999-2002; AMS Working Group on Graduate Education, 2011-2013.
Selected Addresses: Invited lecturer, AMS Short Course on Dynamical Systems, San Diego, January, 2002; Invited speaker, Conference on Algebraic Dynamics, University of New South Wales, Sydney, February, 2005; Invited lecturer, Summer School in Dynamical Systems and Number Theory, Technical University of Graz, Austria, July, 2007; Invited Speaker, Warwick Conference on Dynamics and Number Theory, University of Warwick, April, 2011; Invited Speaker, Conference on Periodic Orbits in Dynamical Systems, Schrodinger Institute, Vienna, May, 2012; Invited Lecture Series, Workshop on Operator Algebras and Dynamical Systems, University of Wollongong, Australia, July, 2014.
Additional Information: Vice Chair, Board of Trustees, MSRI, Berkeley, 1989-1995; Professeur Invité, Université Aix-Marseilles, 1993; Mathematics Department Chair, University of Washington, 1993-1998; Chair, Organizing Committee, AMS Conference on Leadership in Doctoral Mathematics Departments, Bloomington, 1999; Chair, MSRI Building Addition Design Committee, 2003-2006; Research Member, MSRI Program on Ergodic Theory and Additive Combinatorics, Autumn Semester, 2008; Organizing Committee, First Pacific Rim Congress of Mathematicians, Sydney, July, 2009; Principal Organizer, NSF Advisory Workshop on Research Networks, April, 2009; Organizing Committee, Second Pacific Rim Congress of Mathematicians, Shanghai, June, 2013; Inaugural Fellow, American Mathematical Society, 2013.
Selected Publications: 1. The entropies of topological Markov shifts and a related class of algebraic integers, *Ergodic Theory Dynam. Systems*, **4** (1984), 283-300. **MR0766106 (86c:58092)**; 2. with K. Schmidt and T. Ward, Mahler measure and entropy for commuting automorphisms of compact groups, *Invent. Math.*, **101** (1990), 593-629. **MR1062797 (92j:22013)**; 3. with B. Marcus, *An Introduction to Symbolic Dynamics and Coding*, Cambridge University Press, Cambridge, 1995. **MR1369092 (97a:58050)**; 4. with M. Einsiedler and M. Kapranov, Non-archimedean amoebas and tropical varieties, *J. Reine Angew. Math.*, **601** (2006), 139-157. **MR2289207 (2007k:14038)**; 5. with K. Schmidt and E. Verbitskiy, Homoclinic points, atoral polynomials, and periodic points of algebraic Z^d-actions, *Ergodic Theory Dynam. Systems*, **33** (2013), no. 4, 1060-1081. **MR3082539**.

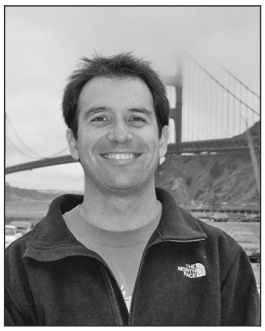
Statement by Candidate: The Nominating Committee plays a crucial role in finding strong candidates for the most important leadership positions of the AMS. If elected, I would try hard to represent the broad interests of our community thoughtfully and fairly.

Kavita Ramanan

Professor of Applied Mathematics, Brown University.
Born: Chennai, Tamil Nadu, India.
Ph.D.: Brown University, 1998.
AMS Committees: Eastern Section Program Committee Member, 2012-2014 (chair, 2013-2014)
Selected Addresses: Invited talks at Special Sessions at AMS meetings in 1996, 1999, 2001, 2002, 2014; Plenary Lecture, Conference on "Skorokhod Space: 50 Years On", Kiev, Ukraine, June 2007; Plenary Lecture, Conference on "Stochastic Processes and their Applications", Boulder, Colorado, July 2013; Plenary Lecture, "Frontier Probability Days" Conference, Arizona, May 2014; Plenary Lecture, "ICM Satellite Conference on Stochastic Analysis", Seoul, Korea, August 2014.
Additional Information: *Awards and Honors*: Simon Ostrach Fellowship, 1996; Stella Dafermos Award, 1996; Recipient of the Erlang Prize, INFORMS Applied Probability Society, 2006; Fellow, Institute of Mathematical Statistics, 2013; IMS (Institute of Mathematical Statistics) Medallion lecturer, 2015. *Editorial boards*: *Annals of Probability*, 2006-2012, *Annals of Applied Probability*, 2009-present, *Mathematics of Operations Research*, 2007-present, *Stochastic Analysis and Applications*, 2002-2010. *Member of Scientific Council*: French Applied Maths Society (SMAI), 2014-present. *Member of Nominations Committee*: IMS, 2011-2013, Bernoulli Society, 2013-present. *Member of Prize Committees*: Nicholson Prize, member, 2013, chair, 2014; Erlang Prize, 2014-present. *Faculty Sponsor*: AWM Chapter at the Division of Applied Mathematics, Brown University, 2013-present. *Conference Organizer*: Stochastic Networks meeting, Newton Institute, Cambridge, UK, 2010; Applied Probability conference, Stockholm, Sweden, 2011; semester program on Computational Challenges in Probability, ICERM, Providence, 2012; IMI Meeting, Limit Theorems in Probability, Bangalore, India. *Member*: AWM, SIAM, INFORMS.
Selected Publications: 1. with P. Dupuis, Convex duality and the Skorokhod problem - Parts I and II, *Probab. Theory Related Fields*, **115** (1999), no. 2, 153-195, 197-236. **MR1720348 (2001f:49041)**; 2. Reflected diffusions defined via the extended Skorokhod map, *Electron. J. Probab.*, **11** (2006), 934-992. **MR2261058 (2008c:60054)**; 3. with L. Kruk, J. Lehoczky and S. Shreve, An explicit formula for the Skorokhod map on [0, *a*], *Ann. Probab.*, **35** (2007), no. 5, 1740-1768. **MR2349573 (2008k:60087)**; 4. with L. Kontorovich, Concentration inequalities for dependent random variables via the martingale method, *Ann. Probab.*, **36** (2008), no. 6, 2126-2158. **MR2478678 (2010f:60057)**; 5. with W. Kang, Fluid limits of many-server queues with reneging, *Ann. Appl. Probab.*, **20** (2010), no. 6, 2204-2260. **MR2759733 (2012a:60090)**.
Statement by Candidate: I am honored to have been chosen as a candidate for the AMS Nominating Committee, which is charged with the important task of identifying candidates for election to AMS offices and committees. If elected, I will help identify dedicated candidates who are willing to devote some of their energy and creativity to implement the broad mission of the AMS, which includes promoting mathematics research and scholarship internationally and in an inclusive fashion, maintaining high standards of publication, improving public understanding of the importance of mathematics, and fostering the interaction of mathematics with other disciplines.

Member at Large

Matthew Baker



Professor of Mathematics, Georgia Institute of Technology.
Born: January 1973, Silver Spring, Maryland.
Ph.D.: University of California, Berkeley, 1999.
Selected Addresses: Invited speaker, Arizona Winter School, Tucson, AZ, Spring 2007; Plenary Talk, Journées Arithmétiques, Saint-Étienne, France, Summer 2009; Featured speaker, Michigan Lectures in Number Theory, University of Michigan, Spring 2010; Invited address, AMS Southeastern Section Meeting, University of Richmond, Fall 2010; Principal speaker, Bellairs Workshop in Number Theory, Barbados, Summer 2011.
Additional Information: University System of Georgia Board of Regents Teaching Excellence Award, 2010; Fellow of the American Mathematical Society.
Selected Publications: 1. Torsion points on modular curves, *Invent. Math.*, **140** (2000), 487-509. **MR1760749 (2001g:11092)**; 2. with S. Norine, Riemann-Roch and Abel-Jacobi theory on a finite graph, *Adv. Math.*, **215** (2007), 766-788. **MR2355607 (2008m:05167)**; 3. with R. Rumely, *Potential Theory and Dynamics on the Berkovich Projective Line*, Mathematical Surveys and Monographs, vol. 159, Amer. Math. Soc., 2010. **MR2599526 (2012d:37213)**; 4. with O. Amini and X. Faber (eds.), *Tropical and Non-Archimedean Geometry*, Contemp. Math., vol. 605, Amer. Math. Soc. (2013). 5. with L. De Marco, Special curves and postcritically-finite polynomials, *Forum Math. Pi*, **1** (2013), e3, 35 pages. **MR3141413**.
Statement by Candidate: Academia, education, and the publishing industry are all changing rapidly as a result of technology, budget cuts, and globalization. The AMS needs to be on top of these changes in order to remain a forceful advocate for mathematics. What is the future of open access journals? How will online instruction change the way mathematics is taught? How can we spot and nurture mathematical talent in the face of ever-increasing gaps between the rich and poor? How can we better harness the

internet and social media for the benefit of mathematics? I don't have answers to all of these questions, but I'm very interested in helping discover and implement innovative solutions. Although I've never held an AMS office before, I do have experiences which are relevant to the tasks of the AMS Council. For example, I write a popular blog at `http://mattbakerblog.wordpress.com` and am currently developing an online Number Theory and Cryptography course for talented high school seniors. Last year I co-organized an AMS Math Research Communities workshop and I've been heavily involved with undergraduate research for more than a decade. If elected, I will try my best to promote mathematics research and education at all levels.

Yuliy Baryshnikov

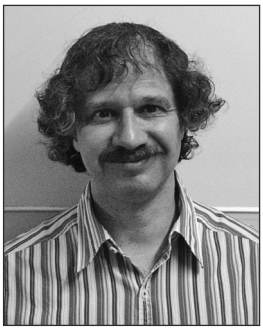
Professor of Mathematics and Electrical and Computer Engineering, University of Illinois, Urbana-Champaign.
Born: March 30, 1961, Moscow, Russia.
Ph.D.: Institute for Control Sciences, Moscow, 1987.
AMS Committees: Short Course Committee, 2010-2012.
Selected Addresses: Plenary, Conference on Analysis of Algorithms, Vienna, 2010; Plenary, SIAM Conference on Applied Algebraic Geometry, Fort Collins, 2013.
Additional Information: Alexander von Humboldt Fellow, 1992-1995; Lady Davis Professorship at Technion, 2005.
Selected Publications: 1. Complexity of trajectories in rectangular billiards, *Comm. Math. Phys.*, **174** (1995), no. 1, 43-56. **MR1372799 (96m:58065)**; 2. On small Carnot-Carathéodory spheres, *Geom. Funct. Anal.*, **10** (2000), no. 2, 259-265. **MR1771429 (2002h:53046)**; 3. GUEs and queues, *Probab. Theory Related Fields*, **119** (2001), no. 2, 256-274. **MR1818248 (2002a:60165)**; 4. with R. Ghrist, Euler integration over definable functions, *Proc. Natl. Acad. Sci. USA*, **107** (2010), no. 21, 9525-9530. **MR2653583 (2011j:90038)**; 5. with R. Pemantle, Asymptotics of multivariate sequences, part III: Quadratic points, *Adv. Math.*, **228** (2011), no. 6, 3127-3206. **MR2844940 (2012k:05035)**.
Statement by Candidate: The role mathematics is playing in science and engineering is becoming increasingly more visible. This process presents a remarkable opportunity for our community to assert the position of mathematics as the key element in advancement of science and technology, and to expand further the variety of ways mathematics contributes to the society.

Reinforcing ties of the mathematical profession to the broader science and technology community, I plan, if elected, to use my experience of two decades in industrial research to further the connections of the Society with the broader scientific and engineering communities. Reinforcing the ties of mathematical profession with the broader science and technology can be extremely beneficial for the profession itself: in particular, the career options for the young mathematicians can be vastly improved by closer interactions with scientific and engineering labs in academia, national laboratories, and industrial research.

Edward Frenkel

Professor of Mathematics, University of California, Berkeley.
Born: May 2, 1968, Kolomna, Russia.
Ph.D.: Harvard University, 1991.
AMS Committees: Editorial Board of the *Bulletin of AMS*, 2007-present.
Selected Addresses: International Congress of Mathematical Physics, Paris, 1994; International Congress of Mathematicians, Zürich, 1994; Séminaire Bourbaki, 2000, 2008; Plenary Address, Centennial Meeting of the Royal Spanish Mathematical Society, Avila, Spain, 2011; AMS Colloquium Lectures, Joint Mathematics Meetings, Boston, 2012.
Additional Information: Hermann Weyl Prize in mathematical physics, 2002; Chaire d'Excellence from Fondation Sciences Mathématiques de Paris, 2008; Eilenberg Chair, Columbia University, 2012; Fellow of the American Mathematical Society, 2013; "Love and Math" selected as one of the Best Books of 2013 by both Amazon and iBooks; Member of the American Academy of Arts and Sciences, 2014.
Selected Publications: 1. with D. Ben-Zvi, *Vertex Algebras and Algebraic Curves*, Mathematical Surveys and Monographs, vol. 88, American Mathematical Society, Providence, RI, Second Edition, 2004 (First Edition, 2001). **MR2082709 (2005d:17035)**; 2. *Langlands Correspondence for Loop Groups*, Cambridge Studies in Advanced Mathematics, vol. 103, Cambridge University Press, Cambridge, 2007. **MR2332156 (2008h:22017)**; 3. with E. Witten, Geometric endoscopy and mirror symmetry, *Commun. Number Theory Phys.*, **2** (2008), 113-283. **MR2417848 (2009e:14017)**; 4. with D. Gaitsgory, Localization of g-modules on the affine Grassmannian, *Ann. of Math.*, **170** (2009), no. 3, 1339-1381. **MR2600875 (2011h:17034)**; 5. with R. Langlands and B. C. Ngô, Formule des traces et fonctorialité: Le debut d'un programme, *Ann. Sci. Math. Québec*, **34** (2010), no. 2, 199-243. **MR2779866 (2012c:11240)**.
Statement by Candidate: While fostering top-level mathematical research remains our priority, it is equally important, in my view, for the AMS to become more visible and more active in the public domain. We have to find more creative ways to convey to the public what mathematics is really about; show that math is a much bigger and more fascinating subject than most people are led to believe. We have to actively promote better math education (including the K–12 system), disseminate mathematical knowledge to the widest audience, and redouble our efforts on increasing diversity and attracting more women and underrepresented groups to the subject. If elected to the Council, I will work toward these goals.

Solomon Friedberg



James P. McIntyre Professor of Mathematics, Boston College.
Born: September 26, 1958, New York, NY.
Ph.D.: University of Chicago, 1982.
AMS Committees: Working Group on Preparation for Technical Careers, 2007-2008; Joint Mathematics Meetings Travel Grants Selection Committee, Chair, 2009-2010.
Selected Addresses: Plenary Speaker (4 lectures), Number Theory Xi'an, Northwest University, Xi'an, China, 2011; Plenary Speaker, Texas-Oklahoma Representations and Automorphic Forms I, Denton, TX, 2011; Plenary Speaker, Palmetto Number Theory Seminar XVIII, Wake Forest University, Winston-Salem, NC, 2012; Invited Address, Matemáticos en la Educación Matemática Escolar: En la búsqueda de impacto en nuestra realidad educacional, Santiago, Chile, 2012; Invited Address, Conference on Stark's Conjectures and Related Topics, University of California, San Diego, 2013.
Additional Information: Sloan Fellow, 1989-1992; Distinguished Visiting Professor of Mathematics, Brown University, 2002; MAA Northeastern Section Award for Distinguished College or University Teaching, 2009; Board of Directors, Math for America Boston, 2012-present; Distinguished Ordway Visitor, University of Minnesota, 2014; Fellow of the AMS, 2014.
Selected Publications: 1. with D. Bump and J. Hoffstein, On some applications of automorphic forms to number theory, *Bull. Amer. Math. Soc.*, **33** (1996), no. 2, 157–175. **MR1359575 (97a:11072)**; 2. with B. Brubaker and J. Hoffstein, Cubic twists of GL(2) automorphic *L*-functions, *Invent. Math.*, **160** (2005), no. 1, 31–58. **MR2129707 (2005m:11091)**; 3. with G. Chinta and P. E. Gunnells, On the *p*-parts of quadratic Weyl group multiple Dirichlet series, *J. Reine Angew. Math.*, **623** (2008), 1-23. **MR2458038 (2009j:11144)**; 4. with B. Brubaker and D. Bump, Schur polynomials and the Yang-Baxter equation, *Comm. Math. Phys.*, **308** (2011), no. 2, 281-301. **MR2851143**; 5. with B. Brubaker and D. Bump, Weyl group multiple Dirichlet series, Eisenstein series and crystal bases, *Ann. of Math.*, **173** (2011), no. 2, 1081-1120. **MR2776371 (2012c:11113)**.
Statement by Candidate: The AMS is the primary advocate for mathematics scholarship in the US. In these challenging times—cuts in research funding, a difficult job market for young scholars, an increasing reliance on temporary and part-time faculty, and vastly uneven access to quality math instruction at the K–12 level—the AMS must do its utmost to ensure that mathematics scholarship remains vibrant. It must work to communicate to the public and elected officials the value of mathematics, to support young researchers, to develop increased ties to mathematicians in industry as well as throughout academia, to encourage interactions with scholars in neighboring disciplines, to promote diversity with energy and conviction, to support mathematics teachers at all levels, and to share with the next generation the excitement and beauty of mathematics. If elected to the Council I will encourage high-impact activities by the AMS in these areas.

Pamela Gorkin

Professor of Mathematics, Bucknell University.
Born: November 5, 1954, New York, New York.
Ph.D.: Michigan State University, 1982.
AMS Committees: Editor, *Proceedings of the American Mathematical Society*.
Selected Addresses: Banach algebras conferences, Stefan Banach International Mathematical Center, Bedlewo, Poland, 2009; Keynote speaker, Canadian Undergraduate Mathematical Conference, Laval University, Quebec City, 2011; Fields Institute, Conference on Blaschke Products, 2011; Plenary Speaker, Banach algebras and their applications, Gothenburg, Sweden, 2013; Special session invited speaker, Joint international meeting of the AMS-Romanian Mathematical Society, Operator theory and Function theory, 2013.
Additional Information: National Science Foundation Grants, 1984-1986, 1987-1990; Lindback Award for Distinguished Teaching, Bucknell University, 1987; Presidential Professor, Bucknell University, 2000-2003; Research in Pairs, Oberwolfach, July 2000, July 2001, November 2002, July 2003, July 2006; Visiting Research Positions: University of Karlsruhe, Germany, 1992, University of Metz, France, 1996, 1997, 2002, University of Bern, Switzerland, 2002, Lehrauftrag, University of Zaragoza, Spain, Fall 2009, Lund University, Sweden, Summer 2012, 2014; Association for Women in Mathematics, Alice T. Schafer Prize Selection Committee, 2013-2016; Book reviewer for the *Mathematical Intelligencer*, 8 reviews; Mathematical Reviews, 120 reviews; Bucknell University, Faculty Fellow, providing advice on funding and applying for grants in the natural sciences, mathematics, and engineering, 2010-2011; Simons Collaboration Grant, 2012-2017.
Selected Publications: 1. with U. Daepp, *Reading, Writing, and Proving: A Closer Look at Mathematics*, Undergraduate Texts in Mathematics, Springer-Verlag, New York, Second Edition (2011). **MR2809225**; 2. with E. Skubak, Polynomials, ellipses, and matrices: Two questions, one answer, *Amer. Math. Monthly*, **118** (2011), no. 6, 522-533. **MR2812283 (2012h:30012)**; 3. with E. Gallardo-Gutiérrez, Interpolating Blaschke products and angular derivative, *Trans. Amer. Math. Soc.*, **364** (2012), no. 5, 2319-2337. **MR2888208**; 4. with I. Chalendar and J. R. Partington, Prime and semiprime inner functions, *J. London Math Soc.*, **88** (2013), no. 3, 779-800. **MR3145131**; 5. with S. Pott and B. Wick, Thin sequences and their role in H^p theory, model space and uniform algebras, *Rev. Mat. Iberoam.*, to appear.
Statement by Candidate: It is an honor to be nominated for the position of Member at Large of the Council. I am fortunate to have spent my career at a liberal arts college that values and supports both research in and the teaching of mathematics, as well as outreach. My experiences have

provided me with opportunities to advance mathematics in the public sphere, to support young mathematicians, and to understand the importance of the scholarship, research and teaching of mathematics. Through my travels and visiting positions at institutions in other countries, I have gained an understanding of other mathematical communities that I hope will be beneficial to the AMS. If elected, I will use these experiences to encourage a diverse group of talented undergraduate and graduate students, advise those looking for employment in the field, and foster engagement from mathematicians at a variety of institutions.

Michael Anthony Hill

Associate Professor of Mathematics, University of Virginia.
Born: February 12, 1980, Alexandria, LA.
Ph.D.: Massachusetts Institute of Technology, 2006.
Selected Addresses: Guterman Lecture, Tufts University, April 2013; Master class, Vietnam Institute for Advanced Study in Mathematics, July 2013; Master class, University of Copenhagen, August 2013; AMS Invited Address, Fall Southeastern Sectional Meeting, University of Louisville, Louisville, KY, October 2013; International Congress, Topology session, Seoul, Korea, August 2014.
Additional Information: Alfred P. Sloan Research Fellowship, 2011; Member: AWM.
Selected Publications: 1. with M. Behrens, M. J. Hopkins and M. Mahowald, On the existence of a v_2^{32}-self map on $M(1,4)$ at the prime 2, *Homology, Homotopy Appl.*, **10** (2008), no. 3, 45–84. **MR2475617 (2009j:55015)**; 2. with T. Lawson, Automorphic forms and cohomology theories on Shimura curves of small discriminant, *Adv. Math.*, **225** (2010), no. 2, 1013–1045. **MR2671186 (2011f:55016)**; 3. with V. Angeltveit and T. Lawson, Topological Hochschild homology of l and *ko*, *Amer. J. Math.*, **132** (2010), no. 2, 297–330. **MR2654776 (2011i:19008)**; 4. Ext and the motivic Steenrod algebra over R, *J. Pure Appl. Algebra*, **215** (2011), no. 5, 715–727. **MR2747214 (2012i:55020)**; 5. with M. Hopkins and D. Ravenel, On the non-existence of elements of Kervaire invariant one, to appear.
Statement by Candidate: It is an honor to be nominated to serve the AMS. We have a wonderful community built around our common love of mathematics and being able to help the AMS with its missions is a wonderful opportunity. The AMS plays a vital role in our community, from helping mathematicians navigate jobs in academia and industry to fostering interest in mathematics in the broader community.
If elected, my goals are threefold:
1. Work to increase diversity in the field, emphasizing the inclusion of underrepresented groups. Organizations like AWM, NAM, and Math Alliance do incredible work with underrepresented groups, and the AMS can do more to support their efforts and the participation of mathematicians from these groups.
2. Help mathematics students determine their best career options with more transparent avenues to industry. Students at research institutions may not know what sorts of skills and approaches best help them secure industry jobs. The AMS can help connect students with this kind of information.
3. Help mathematicians navigate an increasingly web-centric world. The AMS can help provide information and resources for mathematicians interested in exploring MOOCs, online collaborative tools, MathOverflow, and other tools.

Wen-Ching Winnie Li

Distinguished Professor of Mathematics, Pennsylvania State University.
Born: December 25, 1948, Taiwan.
Ph.D.: University of California, Berkeley, 1974.
AMS Committees: Committee on Human Rights of Mathematicians, 1992-1995, 2007-2010; Editorial Committees: *Transactions* and *Memoirs of the AMS*, 1992-1996, *Proceedings of the AMS*, 2002-2010.
Selected Addresses: Invited Plenary Address, AMS Summer Meeting, Albany, 1983; Invited Plenary Address, Taiwanese Mathematical Society, Annual Meeting, Taipei, 2006; Invited Plenary Address, Joint Mathematics Meetings, San Diego, 2008; Invited Plenary Address, Fifth International Congress of Chinese Mathematicians, Beijing, 2010; Oliver Atkin Memorial Lecture, University of Illinois at Chicago, 2011.
Additional Information: Alfred P. Sloan Fellow, 1981-1983; AMS Visiting Professorship for Women Award, 1991-1992; Chern Prize, International Congress of Chinese Mathematicians, 2010; Inaugural Fellow, American Mathematical Society, 2012; Director, National Center for Theoretical Sciences, Taiwan, 2009-present; Editorial Boards: *Taiwanese Journal of Mathematics*, 1998-present; *International Journal of Number Theory*, 2005-present; *Journal of Combinatorics and Number Theory*, 2008-present; Monographs in Number Theory book series, World Scientific, Singapore, 2008-present; *Tamkang Journal of Mathematics*, 2013-present.
Selected Publications: 1. with A. O. L. Atkin, Twists of newforms and pseudo-eigenvalues of *W*-operators, *Invent, Math.*, **48** (1978), 221-243. **MR0508986 (80a:10040)**; 2. *Number Theory with Applications*, Series on University Mathematics, **7**, World Scientific, Singapore, 1996. **MR1390759 (98b:11001)**; 3. Ramanujan hypergraphs, *Geom. Funct. Anal.*, **14** (2004), no. 2, 380-399. **MR2060199 (2005i:11172)**; 4. with A. O. L. Atkin and L. Long, On Atkin and Swinnerton-Dyer congruence relations II, *Math. Ann.*, **340** (2008), no. 2, 335-358. **MR2368983 (2009a:11102)**; 5. with M.-H. Kang, Zeta functions of complexes arising from PGL(3), *Adv. Math.*, **256** (2014), 46-103. **MR3177290**.
Statement by Candidate: I strongly support the central role of the AMS in promoting mathematical research and the interests of mathematicians, enhancing mathematics

education at all levels, and publicizing the developments in pure and applied mathematics. If elected, it would be my honor to serve on the Council to help the society accomplish these goals.

Ezra Miller

Professor of Mathematics, Duke University; Associate Director, Statistical and Applied Mathematical Sciences Institute (SAMSI).
Born: Maryland, 1974.
Ph.D.: University of California, Berkeley, 2000.
AMS Committees: AMS Southeastern Section Program Committee, 2012-2014; AMS Short Course Subcommittee, 2012-2015; AMS Fellows Selection Committee, 2013-2016.
Selected Addresses: Invited Address, AMS Sectional Meeting, Cincinnati, OH, 2006; Plenary Address, Formal Power Series and Algebraic Combinatorics, Tianjin, China, 2007; Lecture Series, CIMPA-TÜBITAK Summer School, Istanbul, Turkey, 2009; Invited Address, Geometry and Statistics in Bioimaging, Sandbjerg, Denmark, 2012; Invited Address, German Probability and Statistics Days, Ulm, Germany, 2014.
Additional Information: Alfred P. Sloan Doctoral Dissertation Fellow, 1999-2000; University of Minnesota "Thank a Teacher" award, 2004; NSF CAREER award, 2005-2010; University of Minnesota McKnight Presidential Fellow, 2007-2009; Fellow, American Mathematical Society, 2012; Editorial board member: *Advances in Math.*, *Discrete Math.*, *Beiträge zur Algebra und Geometrie, SIAM J. Discrete Math.*
Selected Publications: 1. with B. Sturmfels, *Combinatorial Commutative Algebra*, Graduate Texts in Mathematics, vol. 227, Springer-Verlag, New York, 2004. **MR2110098 (2006d:13001)**; 2. with A. Knutson, Gröbner geometry of Schubert polynomials, *Ann. of Math.*, **161** (2005), 1245-1318. **MR2180402 (2006i:05177)**; 3. with L. Matusevich and U. Walther, Homological methods for hypergeometric families, *J. Amer. Math. Soc.*, **18** (2005), no. 4, 919-941. **MR2163866 (2007d:13027)**. 4. with T. Hotz, S. Huckemann, H. Le, J. S. Marron, J. C. Mattingly, J. Nolen, M. Owen, V. Patrangenaru and S. Skwerer, Sticky central limit theorems on open books, *Ann. of Appl. Probab.*, **23** (2013), no. 6, 2238-2258. **MR3127934**; 5. with M. Gopalkrishnan and A. Shiu, A projection argument for differential inclusions, with applications to persistence of mass-action kinetics, *SIGMA Symmetry Integrability Geom. Methods Appl.*, **9** (2013), Paper 025, 25 pages. **MR3056169**.
Statement by Candidate: In today's evolving interdisciplinary world, it is vital that the mathematical community increase the real and perceived importance of our field and raise scientifically multilingual young practitioners. I would be honored to represent these interests on the Council, bringing to bear experiences running annual programs at MSRI and SAMSI as well as smaller-scale events at other institutes. These organizational activities have bolstered my research and mentoring in pure mathematics while additionally leading me to interactions between mathematics, statistics, and basic or applied sciences such as biology, chemistry, medical imaging, and neuroscience.

Mary Pugh

Associate Professor, University of Toronto.
Born: Washington, DC, 1966.
Ph.D.: University of Chicago, 1993.
AMS Committees: Editorial board of AMS *Proceedings of Symposia in Applied Mathematics*, 2003-2014 (chair, 2012-2014); AMS Centennial Fellowship Committee, 2004-2006; AMS Committee on Committees, 2005-2007; AMS-ASA-AWM-IMS-MAA-NCTM-SIAM Committee on Women in the Mathematical Sciences, 2005-2008; SIAM representative to the selection committee for the 2014 AMS-MAA-SIAM Porter Lecture.
Additional Information: National Science Foundation Post-Doctoral Fellowship, 1993-1994, 1995-1997; Alfred P. Sloan Fellowship, 1999-2003; extensive activity in SIAM, including election to two terms on SIAM Council, 2005-2010.
Selected Publications: 1. with M. Chugunova and R. M. Taranets, Nonnegative solutions for a long-wave unstable thin film equation with convection, *SIAM Journal on Mathematical Analysis*, **42** (2010), no. 4, 1826-1853. **MR2679597 (2011f:35177)**; 2. with D. Slepcev, Selfsimilar blowup of unstable thin-film equations, *Indiana Univ. Math. J.*, **54** (2005), no. 6, 1697-1738. **MR2189683 (2007a:35130)**; 3. with R. S. Laugesen, Linear stability of steady states for thin film and Cahn–Hilliard type equations, *Arch. Ration. Mech. Anal.*, **154** (2000), 3-51. **MR1778120 (2002k:35056)**; 4. with A. L. Bertozzi, The lubrication approximation for thin viscous films: Regularity and long time behavior of weak solutions, *Commun. Pure Appl. Math.*, **49** (1996), no. 2, 85-123. **MR1371925 (97b:35114)**; 5. with P. Constantin, Global solutions for small data to the Hele–Shaw problem, *Nonlinearity*, **6** (1993), no. 3, 393-416. **MR1223740 (94j:35142)**.
Statement by Candidate: I'm honored and excited to stand for election to the AMS council! The AMS does an excellent job serving and promoting the mathematics community. It provides an extensive and exciting collection of journals and books, runs many conferences a year, and is tireless in advocating the importance of mathematics. It is an effective, open, democratic, and welcoming society with many proud members.

I have been extensively involved with SIAM, including being elected to and serving two terms on SIAM council as well as serving on various other SIAM committees. Also, since 2001 I have been based in Canada. As a result, I would view things from a slightly different angle from many other council members—a valuable contribution, I hope.

One thing that I am especially concerned about are the options for students and postdocs who leave academia —we have provided them with wonderful mathematical training in many ways but there could be further support for those who choose to transition out of academia. And

there are many things that we can learn from those using their mathematical training and skills outside of academia; it would be good to have more communication between these worlds.

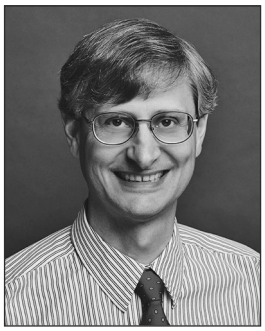
For example, the AMS offers corporate memberships. It would be interesting to have an AMS industrial internship program for students and postdocs. The AMS's reputation and stability would make it attractive for companies to commit to such partnerships. Among the benefits, interns would return to their home institutions with interesting and vital research problems, the boundaries between academia and non-academia would become more porous, and a successful internship program would recruit new corporate members and as well as benefit the existing corporate members.

Jared Wunsch

Professor of Mathematics and Department Chair, Northwestern University.
Born: 1971, Boston, MA.
Ph.D.: Harvard University, 1998.
AMS Committees: Central Section Speakers Committee, 2011-2013.
Additional information: Maître de Conférence Invité, Université de Paris XI, Orsay, May 2004; Professeur Invité, Université de Paris Nord, May-June, 2007; Research Professor, MSRI, 2008–2009; Distinguished Teaching Award in the Weinberg College of Arts and Sciences, Northwestern University, 2011; Professeur Invité, Université de Nantes, July 2013; Fellow of the AMS, 2013; Department Chair, Northwestern University Department of Mathematics, 2013-present.
Selected Addresses: Clay Mathematics Institute Summer School on Evolution Equations, ten-lecture course, ETH Zürich, June 2-July 4, 2008; MSRI Evans Lecture, Berkeley, September 2008; Invited address, Fall Central Section Meeting, Notre Dame, November 2010.
Selected Publications: 1. Propagation of singularities and growth for Schrödinger operators, *Duke Math. J.*, **98** (1999), 137-186. **MR1687567 (2000h:58054)**; 2. with R. Melrose, Propagation of singularities for the wave equation on conic manifolds, *Invent. Math.*, **156** (2004), no. 2, 235-299. **MR2052609 (2005e:58048)**; 3. with A. Hassell, The Schrödinger propagator for scattering metrics, *Ann. Math.*, **162** (2005), 487–523. **MR2178967 (2006k:58048)**; 4. with M. Zworski, Resolvent estimates for normally hyperbolic trapped sets, *Ann. Henri Poincaré*, **12** (2011), 1349–1385. **MR2846671**; 5. with R. Melrose and A. Vasy, Diffraction of singularities for the wave equation on manifolds with corners, *Astérisque*, **351** (2013). **MR3100155**.
Statement by candidate: Mathematics enjoys an unusually democratic social structure. The widespread recognition that great mathematical ideas can come from anywhere and anyone has mostly served to keep our community supportive of all its members. At the same time, considerable pressure from funding agencies and deans' offices is pushing us toward ever more focused celebration of the few biggest success stories, and the effects of the "star system" are ever more visible in academic recruitment and grant funding. We need to find ways of promoting our achievements to the wider world without betraying the interests of the larger math community. These are issues that I have faced on a small scale as a department chair and that the AMS is in a position to tackle much more broadly. Math is the apotheosis of a small science, and we need our achievements to be celebrated and our research funded without compromising our core values or our mission. Another central issue facing the AMS is the future of academic publishing. Careful consideration needs to be given to the headlong rush toward open access as well as to the need to accommodate e-books in the AMS's excellent book publishing operation.

Editorial Boards Committee

Todd Arbogast

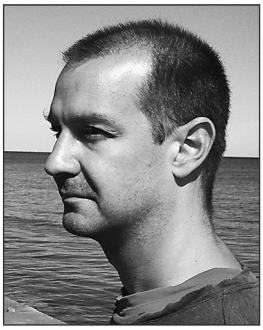


Professor of Mathematics, The University of Texas at Austin.
Born: December 9, 1957, Minneapolis, MN.
Ph.D.: University of Chicago, 1987.
Selected Addresses: Mathfest, Joint AMS and MAA invited address, "Mathematical simulation of flow in porous media," Minneapolis, MN, 1994; 13th International Conference on Domain Decomposition Methods plenary lecture, "A two-scale framework for approximating the solution of an elliptic equation," Lyon, France, 2000; Numerical Analysis of Multiscale Problems, LMS-EPSRC Durham Symposium plenary lectures, "Mixed multiscale methods for heterogeneous elliptic problems," Durham, England, 2010; Eighth International Conference on Scientific Computing and Applications semi-plenary lecture, "Multiscale mixed methods for heterogeneous elliptic problems," University of Nevada, Las Vegas, 2012; SIAM Conference on Mathematical and Computational Issues in the Geosciences plenary lecture, "Approximation of transport processes using Eulerian-Lagrangian techniques," Padova, Italy, 2013.
Additional Information: Associate Editor: *SIAM Journal on Numerical Analysis*, 1999-2013; Editorial Board Member: *Advances in Water Resources*, 2000-present; Program Director and Chair, SIAM Activity Group on Geosciences, 2007-2008, 2013-2014; Institute for Computational Engineering & Sciences Distinguished Research Award, University of Texas at Austin, 2011; Fellow of the AMS, appointed 2012.
Selected Publications: 1. with J. Douglas Jr. and U. Hornung, Derivation of the double porosity model of single phase flow via homogenization theory, *SIAM J. Math. Anal.*, **21** (1990), 823-836. **MR1052874 (91d:76074)**; 2. with Z. Chen, On the implementation of mixed methods as nonconforming methods for second-order elliptic problems, *Math. Comp.*, **64** (1995), 943–972. **MR1303084 (95k:65102)**; 3. with M. F. Wheeler, A characteristics-mixed finite element method for advection-dominated transport problems, *SIAM J. Numer. Anal.*,

32 (1995), 404-424. **MR1324295 (95m:65151)**; 4. with L. C. Cowsar, M. F. Wheeler and I. Yotov, Mixed finite element methods on nonmatching multiblock grids, *SIAM J. Numer. Anal.*, **37** (2000), 1295-1315. **MR1756426 (2001h:65140)**; 5. with G. Pencheva, M. F. Wheeler and I. Yotov, A multiscale mortar mixed finite element method, *Multiscale Model. Simul.*, **6** (2007), 319-346. MR2306414 (2008k:65234).

Statement by Candidate: One of the most important functions of the AMS is to publish first rate mathematics journals and books. The publishing industry is undergoing significant change; nevertheless, high standards are maintained by rigorous peer review and copyedited archival documents. If elected to the Editorial Boards Committee, I would strive to maintain the high standards and stature of AMS publications.

Danny Calegari



Professor of Mathematics, University of Chicago.

Born: May 24, 1972, Melbourne, Australia.

Ph.D.: University of California, Berkeley, 2000.

AMS Committees: Associate Editor, *Notices of the American Mathematical Society*, 2013-present.

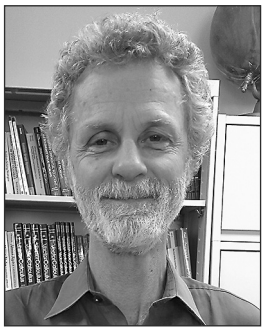
Selected Addresses: Clay Lecture Series, Melbourne-Sydney-Canberra-Adelaide, July-October 2009; Namboodiri Lectures, Chicago, April 2012; Blumenthal Lectures, Tel Aviv, January 2013.

Additional Information: Clay Research Award, 2009; Royal Society Wolfson Research Merit Award, 2011; AMS Fellow, 2012.

Selected Publications: 1. with D. Gabai, Shrinkwrapping and the taming of hyperbolic 3-manifolds, *J. Amer. Math. Soc.*, **19** (2006), no. 2, 385–446. **MR2188131 (2006g:57030)**; 2. *Foliations and the Geometry of 3-Manifolds*, Oxford Mathematical Monographs, Oxford University Press, Oxford (2007). **MR2327361 (2008k:57048)**; 3. Stable commutator length is rational in free groups, *J. Amer. Math. Soc.*, **22** (2009), no. 4, 941–961; 4. with M. Freedman and K. Walker, Positivity of the universal pairing in 3 dimensions, *J. Amer. Math. Soc.*, **23** (2010), no. 1, 107–188; 5. with A. Walker, Random groups contain surface subgroups, *J. Amer. Math. Soc.* (to appear).

Statement by Candidate: The AMS journals are a model for the near future of mathematical publishing, with their commitment to low cost, high quality, electronic accessibility, and open-minded copyright policy. It is important that much of the best that our discipline produces should be curated by a professional organization answerable to mathematicians, and not to commercial interests. Mathematics is deep, broad, and diverse; and the members of the AMS editorial boards should be receptive to depth, breadth, and diversity.

Richard Hain



Professor of Mathematics, Duke University.

Born: August 15, 1953, Sydney, Australia.

Ph.D.: University of Illinois, 1980.

AMS Offices: Member at Large of the Council, 2010-2013.

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; Committee on Publications, 2010-2013.

Selected Addresses: 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; Course at IHES, May 2014.

Additional Information: Member, Institute for Advanced Study, 1985-1986, fall 1994, 2014-2015 and MSRI, spring, 2009; AMS Research Fellowship, 1987; Japan Society for the Promotion of Science Fellow, May, 1998; 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 2009-2014.

Selected Publications: 1. with S. Zucker, Unipotent variations of mixed Hodge structure, *Invent. Math.*, **88** (1987), 83-124. **MR0877008 (88i:32035)**; 2. Infinitesimal presentations of Torelli groups, *J. Amer. Math. Soc.*, **10** (1997), 597–651. **MR1431828 (97k:14024)**; 3. with E. Looijenga, Mapping class groups and moduli spaces of curves, *Algebraic Geometry-Santa Cruz 1995*, Proc. Symp. Pure Math., vol. 62 (1997), part II, 97–142. **MR1492535 (99a:14032)**; 4. Rational points of universal curves, *J. Amer. Math. Soc.*, vol. 24 (2011), no. 3, 709-769. **MR2784328 (2012f:14044)**; 4. Normal functions and the geometry of moduli spaces of curves, *Handbook of Moduli, vol. I*, edited by Gavril Farkas and Ian Morrison, Adv. Lect. Math., International Press, (2013), 527–578. **MR3184171**.

Statement by Candidate: One of the most important functions of the Society is to produce high quality, reasonably priced books and journals. This is particularly important in these days of constrained budgets. If elected, I will seek to identify individuals to serve on the editorial boards of AMS publications who will maintain the quality and integrity of the Society's publications.

Hee Oh

Professor of Mathematics, Yale University.
Born: October 27, 1969, Gwang-Ju, Korea.
Ph.D.: Yale University, 1997.
AMS Committees: Eastern sectional committee, 2014-2016.
Selected Addresses: Invited address, ICM, 2010; Joint AMS-MAA invited address, JMM, 2012; Heilbronn Distinguished lecture series, Bristol University, UK, 2013; Takagi lecture series, Kyoto, 2013; Plenary lecture, ICWM, 2014.
Additional Information: Scientific advisory board at American Institute of Mathematics, 2010-present; US delegate to the 17th IMU General Assembly, Gyeongju, Korea, 2014.
Selected Publications: 1. with L. Clozel and E. Ullmo, Hecke operators and equidistribution of Hecke points, *Invent. Math.*, **144** (2001), no. 2, 327-351. **MR1827734 (2002m:11044)**; 2. Uniform pointwise bounds for matrix coefficients of unitary representations and applications to Kazhdan constants, *Duke Math. J.*, **113** (2002), 133-192. **MR1905394 (2003d:22015)**; 3. with A. Eskin and S. Mozes, On uniform exponential growth for linear groups, *Invent. Math.*, **160** (2005), 1-30. **MR2129706 (2006a:20081)**. 4. with A. Kontorovich, Apollonian circle packings and closed horospheres on hyperbolic 3-manifolds, *J. Amer. Math. Soc.*, **24** (2011), 603-648. **MR2784325**. 5. with N. Shah, The asymptotic distribution of circles in the orbits of Kleinian groups, *Invent. Math.*, **187** (2012), 1-35. **MR2874933 (2012k:37011)**.
Statement by Candidate: I am honored to have been asked to run for election to the Editorial committee. The AMS journals play a very important role in publishing high quality research papers. If elected, I will do my best to select candidates with strong research credentials as well as a high level of responsibility in dealing with submissions in a timely manner.