Curriculum Vitae

Name Haynes Robert Miller

Birth January 29, 1948, Princeton, NJ; U.S. Citizen

Education
BA, Harvard University, 1970
PhD, Princeton University, 1974

Positions
Instructor, Princeton University, 1974–1975
Benjamin Pierce Assistant Professor, Harvard University, 1975–1979
Visiting Assistant Professor, Northwestern University, 1976–1977
Assistant Professor, University of Washington, 1979–1981
Associate Professor, University of Washington, 1981–1984
Visiting Associate Professor, Northwestern University, 1981–1982
Member, Institute for Advanced Study, Princeton, 1982–1983
Professor, University of Washington, 1984
Professor, University of Notre Dame, 1985
Professor, Massachusetts Institute of Technology, 1986–2021
Professor, post-tenure, Massachusetts Institute of Technology, 2021–2022
Professor, emeritus, Massachusetts Institute of Technology, 2022–

Visiting Positions
Aarhus University, summer 1979
University of Cambridge, summer 1982
Professeur Associé, Université de Paris VII, February–June 1986
Ordway Professor, University of Minnesota, January 1991
Göttingen University, August 1991
Université de Paris XIII, June 1993
Institut Mittag-Leffler, Djursholm, Sweden, September 1993
Kyoto University, January 1997
Max-Planck-Institut für Mathematik, Bonn, July 1997
Australian National University, Canberra, January 2001
Maître de recherche, Ecole Polytechnique, June 2005
Institut Mittag-Leffler, Djursholm, Sweden, May–June 2006
Center for Symmetry and Deformation, University of Copenhagen, May 2011
Mathematical Sciences Research Institute, Berkeley, January–February 2014
Hausdorff Research Institute for Mathematics, June–July 2015

Editorships
Proceedings of the AMS, 1984–1988
Bulletin of the AMS: editor 1993–1999, managing editor 1995–1996, associate editor 1996–2004
Geometry and Topology, 1996–
Topology and its Applications, 1998–2001
International Mathematical Research Notices, 2000–2004
Mathematische Zeitschrift, 2000–2006
Journal of the American Mathematical Society (Associate Editor), 2006–2012
Journal of the Institute of Mathematics of Jussieu, 2008–2015
International Journal of Research in Undergraduate Mathematics Education, 2014–2025
Journal of Homotopy and Related Structures, 2015–2025
Tunisian Mathematics Journal, 2017–

Grants

NSF Graduate Fellow, 1970–1973
Dodds Fellow, Princeton University, 1973–1974
Harvard Graduate Society Fellow, 1978–1979
Sloan Fellow, 1980–1983
NSF research grants, 1975–2015
MIT d'Arbeloff grant "Computer-aided Teaching of Mathematics," 2001–2006
Cambridge-MIT Institute grant, 2002–2005
MIT Alumni Class Funds grant "Mathematics for Aerospace Engineers," 2002–2003
ACF grant "Explicit Linking of Mathematics," 2004–2005
d'Arbeloff grant "Coordinating the MIT Mathematics GIR Curriculum," 2009–2011
ACF grant "Flash-forward/Flash-back in OpenCourseWare," 2010–2011
NSF grant, "Mathematical Communication Space," 2011–2012
Davis Educational Foundation Grant, "Quantifying Uncertainty," 2012–15
ACF grant "A Module on Laplace Transform," 2014–2015
ACF grant "Crosslinks," 2015–2016
MIT Office of Digital Learning grant to develop 18.03x, 2016–2017
MIT Office of the Vice-provost for International Activities and Office of Digital Learning, "Building a library of Kreyòl based resources for further outreach," 2017–
NSF grant, "2017–2019 Talbot Workshops," 2017–2022
MITx grant to build a Kreyòl version of 18.01, 2017–
MIT J-WEL/pK-12, "An MIT-Haiti Center for Educational Innovation," 2019–2025
NSF grants, "2019–2021 Talbot Workshops on Mathematics Centered on Algebraic Topology," 2019–2025
NSF grant "Classical Methods in Motivic Homotopy Theory," 2019–2022
MIT Office of the Vice-Provost for International Engagements, "Third Gathering for Science in Palestine," January, 2020
MIT J-WEL/Higher Education, "MIT-Palestine UROPs," 2021–2024

Awards

Cambridge-MIT Institute Fellowship, 2002–2003
Margaret MacVicar Faculty Fellow, 2005–2014
Graduate Student Council Teaching Award, 2006
Fellow of the American Mathematical Society, 2012
Alan J. Lazarus Award for Excellence in Advising, 2021

MIT Committees

Committee to Study TA Training at MIT, 2002
Presidential Task Force on the Undergraduate Educational Commons, 2004–2006
Dean for Undergraduate Education Faculty Advisory Committee, 2006–2012
Impact Study Group for the Communication Requirement, 2007
OpenCourseWare Faculty Advisory Committee, 2008–2022
Committee on the Undergraduate Program, 2009–2011
Faculty Advisory Committee to MIT Information Systems and Technology on Learning Management Systems, 2010
Provost's Working Group on Educational Initiatives, 2010
MITx Task Force on Concepts and Learning Pathways, 2013
MIT-Haiti Initiative, 2013–
Faculty Policy Committee, 2016–2019
Presidential ad hoc committee on the role of OCW, 2016–2017
Higher Education Advisory Group for the Jameel World Education Lab, 2017–2023
Faculty Advisory Committee for J-WEL, 2023–2025
Advisory Committee for the Global MIT At-risk Fellows Program/Palestine, 2024–

Departmental Service

MIT Pure Mathematics Committee, 1987–1995, 2000–2013; Chairman, 1993–1995
Chairman, Education Committee, and Undergraduate Officer, 2004–2013
Associate Head, Department of Mathematics, 2011–2013
Cambridge-MIT Exchange liaison, 2001–2013, 2016–2017.

External Committees

AMS Committee on Summer Institutes and Special Symposia, 1988–1990
AMS Editorial Boards Committee, 1989–1992; Chairman, 1991–1992
AMS ad hoc Committee to Review Membership Publications, 1992–1993
AMS Progress in Mathematics Committee 1992–1993; Chairman, 1993
AMS Committee on Publications, 1993–1995
External Review Committee, Purdue University, March 1996
Executive Committee, Geometry and Topology Publications, 2001–2005
Graduate Program Review Committee, University of California at San Diego, chairman, January 2007
Committee to Visit the Department of Mathematics, Harvard University, chairman, February 2008, March 2011, and November 2013
Northeast Region Judge, Siemens STEM Competition, 2009, '10, '12, '13, '15, '16
Committee to Visit the Department of Computer Science and Mathematical Sciences, University of Toronto, Scarborough, November 2011
MAA MathDL Advsory Board, 2011–2013
Committee to Visit the Department of Mathematics, the Johns Hopkins University, February 2012
Committee to Visit the Department of Mathematics, University of Oregon, February 2012
Technical Advisory Committee for the AAU Undergraduate STEM Education Initiative, August 2012–2021
AMS Committee on Education, 2012–2015
Committee to Visit the Department of Mathematics, Swarthmore College, April 2013
Board of Directors, Math for America/Boston, 2014–2021
TPSE Mathematics Advisory Group, 2014–2024
Bisan Lecture Series steering committee, 2021–
AMS Lecture on Education Selection Committee, 2022–2024; chair, 2022
Review Committee for the Mathematics Department of the Lebanese-American University, November 2024

Conferences co-organized

Northwestern University Homotopy Theory Conference, 1982 (with S. Priddy)

Seattle Algebraic Topology Emphasis Year, 1984–1985 (with D. Ravenel)

Arcata conference on Algebraic Topology, 1986 (with G. Carlsson, R. Cohen, and D. Ravenel)

Luminy Homotopy Theory Conference, July 1988 (with J.-M. Lemaire, L. Schwartz, and M. Zisman)

Oberwolfach session, March 1992 (with H.-W. Henn and D. Puppe)

Cech centennial Homotopy Theory Conference, Northeastern University, June 1993 (with B. Cenkl and M. Hopkins)

MPI-Bonn Workshop on Algebraic Topology and Stable Homotopy Theory, 1997 (with H.-J. Baues, H.-W. Henn, and M. Mahowald)

Newton Institute program on New Contexts for Stable Homotopy Theory, 2002 (with J. Greenlees, F. Morel, and V. Snaith)

Barcelona Conference on Algebraic Topology, June 2002 (with J. Aguadé, C. Broto, M. Castellet, and C. Casacuberta)

Hanoi Conference and Summer School on Algebraic Topology, August 2004 (with N. Hung, J. Hubbuck, G. Nishida, S. Priddy, L. Schwartz)

Fields Institute Workshop on Loop Spaces and Elliptic Cohomology, September 2004 (with M. Ando, M. Hopkins, and J. Morava)

Clay Mathematics Institute Workshop on Homotopy Theoretic Applications of the Goodwillie Calculus, March 2005 (with J. Morava)

Complex cobordism in homotopy theory: Its impact and prospects, the Johns Hopkins University, March 2007 (with M. Boardman, D. Davis, J. Morava, and D. Pengelley)

Algebraic Topology, Old and New: the M. M. Postnikov Memorial Conference, Bedlewo, Poland, June 2007 (with A. Pajitnov et al.)

International Conference on Algebraic Topology, in celebration of the 60th birthday of Jean Lannes, Djerba, Tunisia, October 2007 (with H.-W. Henn, L. Schwartz, and S. Zarati)

The Legacy of Daniel Quillen: K-Theory and Homotopical Algebra, MIT, October 2012 (with C. Barwick and M. Behrens)

Conference in Algebra and Topology celebrating Lionel Schwartz's sixtieth birthday, Nantes, France, May 2013 (with B. Oliver and J.-C. Thomas)

Homotopy Theory, Manifolds, and Field Theories, Hausdorff Institute, Bonn, Germany, May–August 2015 (with S. Galatius, S. Schwede, and P. Teichner)

Scientific Committee for IHES Summer School "Motivic, Equivariant, and Non-commutative Homotopy Theory," 2020 (with E. Friedlander, A. Suslin, and B. Toën)

International Workshop on Algebraic Topology, SUSTech, Shenzhen, China, June 2018 (with A. Beadry, M. Behrens, Z. Huan, N. Stapleton, G. Wang, Z. Xu, and Y. Zhu)

Third International Gathering for Science in Palestine, MIT, January 2020 (with F.-J. Ulm and Scientists for Palestine)

Linguistic Barriers, Exploitation and Resistance in Haiti, MIT, January 2024 (with M. DeGraff)

Graduate Students	John Palmieri (PhD, 1991) Matthew Ando (PhD, 1992) Kevin Kelly (MS, 1993) James Turner (PhD, 1994) Brooke Shipley (PhD, 1995) Gerd Laures (PhD, 1996) Daniel Christensen (PhD, 1997) Nitya Kitchloo (PhD, 1998) Andrei Radulescu-Banu (PhD, 1998) Ioanid Rosu (PhD, 1999) Jesper Grodal (PhD, 2000) Donald Yau (PhD, 2002) Kári Ragnarsson (PhD, 2004) Hugh Robinson (PhD, 2005) Michael Ching (PhD, 2005) Vigleik Angeltveit (PhD, 2006) Francesca Deserti (MS, 2006) Peter Lee (PhD, 2008) Ricardo Andrade (PhD, 2010) Martin Frankland (PhD, 2010) Matthew Gelvin (PhD, 2010) Olga Stroilova (PhD, 2012) Rune Haugseng (PhD, 2013) Geoffroy Horel (PhD, 2013) Maximilien Holmberg-Péroux (MS, EPFL, 2014) Michael Andrews (PhD, 2015) Michael Donovan (PhD, 2015) Eva Belmont (PhD, 2018) Lyuboslav Panchev (PhD, 2019) Robert Hood Chatham (PhD, 2020) Zhulin Li (PhD, 2021) Andrew Senger (PhD, 2021) Adela YiYu Zhang (PhD, 2023)
Postdoctoral Fellows Mentored since 2010	Chris Schommer-Pries, 2010–2012 Vesna Stojanoska, 2011–2014 Marc Hoyois, 2014–2017 Håkon Bergsacker 2014 Sune Reeh, 2014–2017 Zhouli Xu, 2017–2020 Tom Bachmann, 2017–2019 Jeremy Hahn, 2018–2021 Arpon Raksit, 2021–2025

Selected disciplinary talks

1974 Homotopy Theory Conference, Northwestern University
1975 Topology Seminar, Princeton University
1975 Topology Seminar, University of Pennsylvania
1975 Topology Seminar, MIT
1976 Homotopy Theory Special Session, Winter AMS meeting, San Antonio
1976 Topology Seminar, MIT
1976 Midwest Topology Seminar
1977 Topology Seminar, University of Washington
1978 Colloquium, University of Washington
1978 Topology Seminar, University of British Colombia
1978 Colloquium, University of Rochester
1978 Topology Seminar, Princeton University
1978 Topology Seminar, Northwestern University
1979 Topology Seminar, University of California, San Diego
1979 Ontario Topology Seminar, University of Toronto
1979 Colloquium, University of Western Ontario
1979 Topology Seminar, Princeton University
1979 Topology Seminar, MIT
1979 Algebraic Topology Colloquium, Aarhus University
1980 Topology Seminar, University of British Colombia
1980 Southern California Topology Seminar
1981 Homotopy Theory Special Session, Winter AMS meeting, San Francisco
1981 Topology Seminar, Berkeley
1981 Plenary talk, Oxford Conference, Edinburgh
1981 Current Trends in Algebraic Topology, University of Western Ontario
1981 Colloquium, University of North Carolina
1981 Midwest Topology Seminar, University of Chicago
1982 Colloquium, Duke University
1982 Colloquium, University of Virginia
1982 Topology Seminar, Purdue University
1982 Topology Seminar, University of Chicago
1982 Plenary lecture at Aarhus Topology Conference
1982 Upstate Topology Conference, Syracuse University
1982 Homotopy Theory Seminar, Princeton University
1982 Colloquium, Johns Hopkins University
1983 Topology Seminar, Northwestern University
1983 Topology Seminar, Ohio State University
1983 Topology Seminar, Princeton University
1983 Midwest Topology Seminar
1983 Dan Christie Memorial Lecture, Bowdoin College
1983 Topology Seminar, Rutgers University
1983 Cornell Topology Festival
1983 Topology Seminar, MIT
1983 Colloquium, University of Minnesota
1983 Plenary lecture, Centro del I.P.N. Topology Conference, Tlaxcala

1983 Oberwolfach Session on Homotopy Theory
1983 Plenary lecture at Conference on Topology and Algebraic K-theory, Princeton
1983 Topology Seminar, University of British Colombia
1984 Colloquium, University of Notre Dame
1984 Lecture series, Aarhus University
1984 Colloquium, Reed College
1985 Homotopy Theory Special Session, AMS meeting, Mobile
1985 Lecture Series at L.M.S Conference in Algebric Topology, Durham
1985 Topology Workshop Seminar, University of Warwick
1985 Conference on Homotopy Theory and its Geometric Applications, in honor of W.S. Massey, Yale University
1985 Colloquium, University of Virginia
1985 Midwest Topology Seminar
1985 Colloquium, Wayne State University
1985 Colloquium, Northwestern University
1986 Hour address, Winter AMS meeting, New Orleans
1986 Algebraic K-theory seminar, Université Paris VII
1986 Colloquium, Ecole Polytechnique
1986 Plenary lecture, Conference on Rational Homotopy Theory, Louvain-la-Neuve
1986 45 minute talk at ICM86, Berkeley
1986 Colloquium, University of Toronto
1986 Topology Seminar, University of Toronto
1986 Colloquium, Princeton University
1987 Colloquium, University of Connecticut
1987 Lecture Series, University of New Hampshire
March 1988 Plenary address at Homotopy Theory Conference, Northwestern University
April 1988 Number Theory Seminar, Brown University
May 1988 Plenary address at the JDG Conference, Lehigh
June 1988 Conference in honor of Ioan James, Cortona
August 1988 Conference in honor of Hirosi Toda, Kinosake
September 1988 Colloquium in honor of Albrecht Dold, Heidelberg
October 1993 Colloquium, Univ. of Kentucky
November 1993 Midwest Topology Seminar, Purdue University
November 1993 Colloquium, Purdue University
June 1994 Lecture series at the Summer School on the Steenrod Algebra and Compact Lie Groups in Homotopy Theory, Warsaw, Poland
July 1995 Lecture series at the EEC-sponsored Workshop on Elliptic Cohomology, Barcelona
March 1996 Lecture series at Wayne State University, Detroit
May 1996 Conference at the retirement of Albrect Dold and Dieter Puppe, Heidelberg, Germany
July 1996 Plenary speaker at AMS Summer Institute, Seattle
October 1996 Distinguished Visiting Scholar, Western Michigan University
October 1996 Midwest Topology Seminar, Western Michigan University
January 1997 Lecture series at Kyoto University
March 1997 Notre Dame Lectures in Geometry and Topology,
April 1997 Princeton University Colloquium
June 1997 Arbeitstagung, Bonn, Germany

October 1999	Special session at AMS regional meeting at Austin, Texas
December 1999	Homotopy Theory Seminar, Institute for Advanced Study
February 2000	Colloquium, Brown University
February 2000	Midwest Topology Seminar, University of Chicago
March 2000	Homotopy Theory Conference, Johns Hopkins University
January 2001	Workshop in Topology, Melbourne University
January 2001	Colloquium, Australian National University
March 2001	Distinguished Lecture Series, University of Western Ontario
April 2001	Tercentennial Colloquium, Yale University
July 2002	Keynote Speaker, BCAT2002, Barcelona
August 2003	Homotopy Theory Conference in honor of Goro Nishida, Kinosaki, Japan
January 2003	Special session on Homotopy Theory, AMS Winter Meeting, Baltimore, MD
October 2003	Workshop on TMF, Münster, Germany
December 2003	Homotopy Theory Conference in honor of Sam Gitler, San Miguel de Allende, Mexico
August 2004	Short course on p compact groups, Hanoi, Vietnam
October 2004	Midwest Topology Seminar, Purdue University
November 2005	Homotopy Theory Conference in Honor of Joe Neisendorfer's 60th Birthday, Montreal
June 2006	45 minute address at the annual meeting of the Swedish Mathematical Society, Stockholm
September 2006	Colloquium, University of Oslo
March 2007	Complex bordism in homotopy theory: its impacts and prospects: Conference in honor of Doug Ravenel and Steve Wilson, Johns Hopkins University
April 2007	Graduate Student Topology Conference, University of Chicago
August 2007	Joint meeting of the AMS and the Polish Mathematical Society
June 2008	Miller Institute Interdisciplinary Symposium, Tomales Bay, CA
October 2010	MSRI Hot Topics Workshop on the Kervaire Invariant, Berkeley, CA
November 2010	Séminaire Bourbaki report on Kervaire Invariant One
May 2011	SYM Lecture, Center for Symmetry and Deformation, University of Copenhagen
July 2013	Samuel Eilenberg Centenary Conference, Warsaw
November 2013	Connecticut Valley Colloquium, Amherst College
July 2014	Conference in Honor of Jean Lannes and Bob Oliver, Paris
March 2015	Geometry and Topology: A Conference Honoring Martin Bendersky and Sam Gitler, Princeton, NJ
April 2015	Colloquium, Georgia Tech, Atlanta, GA
June 2015	Oberseminar, Max Planck Institute for Mathematics, Bonn
July 2015	Kepler Lecture, Johannes-Kepler-Research Center for Mathematics, Regensburg
November 2016	Colloquium, Vanderbilt University
July 2017	Plenary Lecture, Homotopy Theory: Tools and Applications, UIUC
August 2017	Plenary Lecture, Homotopy Theory in the Ecliptic, Reed College
November 2024	Zoom lecture, Plectics Laboratories
July 2025	Workshop on Homotopy Theory, Fields Institute
June 2026	Between Logic and Computer Science, Boston University

Selected educational talks and panel participation

August 2000	"Mathematical Visions," Clay Mathematics Institute/PROMYS, BU
April 2001	"Teaching and learning about differential equations," at the Bok Center, Harvard University
June 2003	"Knots and Numbers," MIT Science and Engineering Program for Teachers
September 2006	"Some examples of linkage of mathematics and engineering," Workshop on Curriculum Integration, MIT
June 2007	"Knots and Numbers," MIT SEPT
March 2009	Panelist on "Leading a campus to embrace innovation and assessment," The Spencer Foundation Forum on Excellence and Innovation, Harvard University
March 2009	"New Directions in General Education at MIT," MIT MacVicar Fellows Program
March 2010	"The Mathematics Communication-Intensive Webspace," a Crosstalk presentation sponsored by the MIT Office of Educational Technology and Innovation
April 2010	"Promoting the Use of Instructional Mathlets across the Curriculum," a Crosstalk presentation sponsored by the MIT OEIT
April 2010	MIT Office of Educational Innovation and Technology Crosstalk presentation on the Mathematics CI Space (with Susan Ruff)
April 2011	"Innovations in Communication Instruction," sponsored by the Subcommittee on the Communication Requirement, MIT
January 2012	"Interactive Applets for Calculus and Differential Equations," an MAA Minicourse at the AMS Joint Mathematics Meetings
January 2013	NSF Workshops on Active Learning, Port-au-Prince, Haiti – also August 2013 and January 2015, and in Limonade, August 2015 and June 2016
February 2013	Colloquium, Colby College
June 2013	Panelist and presenter at "New Directions for Mathematics Research Experiences for Undergraduates," Mt. Holyoke College
June 2013	"Mathlets: A case study of the use of technology in and out of the classroom," MIT SEPT
December 2013	Presenter and Panelist at "Pakistan Teachers Education Project," MIT OEIT
April 2014	Marvin I. Freedman Memorial Colloquium, Boston University
April 2016	Colloquium, Reed College
June 2016	"Ne ak Nomb," UEH Campus Henri Christophe, Limonade, Haiti
June 2016	"Knots and Numbers," MIT SEPT
October 2017	"Mathematical manipulatives: the MIT Mathlets," with Jennifer French, Electronic Seminar on Mathematics Education
June 2019	"Mathlets: A case study of the use of technology in and out of the classroom," MIT J-WEL Course and Curriculum Design Workshop
September 2019	Course-based Undergraduate Research Experiences: Two Examples," with Sunil Chebolu, Electronic Seminar on Mathematics Education.
December 2019	"The Electronic Seminar on Mathematics Education: Creating an online community of educators," Canadian Math Society Annual Meeting, Toronto.
April 2023	"Knots and Numbers," Bethlehem University, Bethlehem, Palestine
April 2023	"Knots and Numbers," An-Najah National University, Nablus, Palestine
January 2026	AWM Panel: Defending and Supporting our Communities: Next Steps, Washington, DC