

Curriculum Vitae

Mark Hovey (860) 685-2198 (office)
Department of Mathematics (860) 344-8251 (home)
Wesleyan University mhovey@wesleyan.edu
Middletown, CT 06459

<http://www.math.wesleyan.edu/~mhovey>

May 2008

Employment

- **Wesleyan University** Professor (2007-current).
- **Wesleyan University** Associate Professor (2002-2007).
- **Wesleyan University** Assistant Professor (1999-2002).
- **Wesleyan University** Visiting Assistant Professor (1997-1999).
- **Massachusetts Institute of Technology** NSF Postdoctoral Research Fellow (1994-1997).
- **University of Kentucky** Assistant Professor (1992-1994).
- **Yale University** Gibbs Instructor (1990-1992).
- **University of New Haven** Assistant Professor (1989-90).

Education

- *Massachusetts Institute of Technology* Ph.D. in Mathematics, May 1989. Advisor: David Anick. Thesis title: A New Definition of Cocategory. Elected member Sigma Xi.
- *Ohio State University* B.S. (magnā cum laude in Mathematics) June 1984. Elected member Phi Beta Kappa.

Books and monographs

1. *Morava K-theories and localization*, with Neil Strickland, Mem. Amer. Math. Soc. **139**, no. 666 (1999) (104 pages).
2. *Model categories*, Mathematical Surveys and Monographs **63**, American Mathematical Society, Providence, RI, 1999, (x + 209 pages).
3. *Axiomatic stable homotopy theory*, with John H. Palmieri and Neil P. Strickland, Mem. Amer. Math. Soc. **128**, no. 610 (1997) (114 pages).

Published refereed papers

4. *Morava E-theory of filtered colimits*, Trans. Amer. Math. Soc. **360** (2008), 369–382.
5. *Cotorsion pairs and model categories*, Interactions between homotopy theory and algebra, 277–296, Contemp. Math. **436**, Amer. Math. Soc., Providence, RI, 2007.
6. *Injective comodules and Landweber exact homology theories*, Fund. Math. **196** (2007), 237–251.
7. *On Freyd’s generating hypothesis*, Q. J. Math. **58** (2007), 31–45.
8. *The generating hypothesis in the derived category of a ring*, with Keir Lockridge and Gena Puninski, Math. Z. **256** (2007), 789–800.
9. *The generalized homology of products*, Glasg. Math. J. **49** (2007), 1–10.
10. *Chromatic phenomena in the algebra of BP_*BP -comodules*, Elliptic cohomology: geometry, applications, and higher chromatic analogues, 170–203, London Math. Soc. Lecture Notes **342**, Cambridge University Press, Cambridge, 2007.
11. *Comodules and Landweber exact homology theories*, with Neil Strickland, Adv. Math. **192** (2005), 427–456.
12. *Local cohomology of BP_*BP -comodules*, with Neil Strickland, Proc. London Math. Soc. (3) **90** (2005) 521–544.
13. *Operations and co-operations in Morava E-theory*, Homology Homotopy Appl. **6** (2004), 201–236.
14. *Homotopy theory of comodules over a Hopf algebroid*, Homotopy theory: relations with algebraic geometry, group cohomology and algebraic K-theory (Evanston, IL 2002), 261–304, Contemp. Math. **346**, Amer. Math. Soc., Providence, RI, 2004.
15. *Cotorsion pairs, model category structures, and representation theory*, Math. Z. **241** (2002), 553–592.
16. *Morita theory for Hopf algebroids and presheaves of groupoids*, Amer. J. Math. **124** (2002), 1289–1318.
17. *Quillen model structures for relative homological algebra*, with J. Daniel Christensen, Math. Proc. Camb. Phil. Soc. **133** (2002), 261–293.
18. *Spectra and symmetric spectra in general model categories*, J. Pure Appl. Alg. **165** (2001), 63–127.

19. *Classifying subcategories of modules*, Trans. Amer. Math. Soc., **353** (2001), 3181–3191. There is an erratum to this paper, which appears in Trans. Amer. Math. Soc. **360** (2008), 2890.
20. *Stably thick subcategories of modules over Hopf algebras*, with John Palmieri, Math. Proc. Camb. Phil. Soc. **130** (2001), 441–474.
21. *Model category structures on chain complexes of sheaves*, Trans. Amer. Math. Soc. **353** (2001), 2441–2457.
22. *Galois theory of thick subcategories in modular representation theory*, with John Palmieri, J. Algebra **230** (2000), 713–729.
23. *Phantom maps and chromatic phantom maps*, with J. Daniel Christensen, Amer. J. Math. **122** (2000), 275–293.
24. *Symmetric spectra*, with Brooke Shipley and Jeff Smith, J. Amer. Math. Soc. **13** (2000), no. 1, 149–208.
25. *Invertible spectra in the $E(n)$ -local stable homotopy category*, with Hal Sadofsky, J. London Math. Soc.(2) **60** (1999), 284–302.
26. *The structure of the Bousfield lattice*, with John Palmieri, Homotopy invariant algebraic structures (Baltimore, MD 1998), 175–196, Contemp. Math. **239**, Amer. Math. Soc., Providence, RI, 1999.
27. *v_n -elements in ring spectra and applications to bordism theory*, Duke Math. J. **88** (1997), 327–356.
28. *Tate cohomology lowers chromatic Bousfield classes*, with Hal Sadofsky, Proc. Amer. Math. Soc., **124** (1996), 3579–3585.
29. *Bousfield localization functors and Hopkins’ chromatic splitting conjecture*, The Cech centennial (Boston, MA 1993), 225–250, Contemp. Math. **181**, Amer. Math. Soc., Providence, RI, 1995.
30. *Spin bordism and elliptic homology*, Math. Z. **219** (1995), 163–170.
31. *Cohomological Bousfield classes*, J. Pure Appl. Algebra, **103** (1995), 45–59.
32. *The 7-connected cobordism ring at $p = 3$* , with Douglas C. Ravenel, Trans. Amer. Math. Soc., **347** (1995), 3473–3502.
33. *Lusternik-Schnirelmann cocategory*, Illinois J. Math. **37** (1993), 224–239.
34. *A proof of the existence of level 1 elliptic cohomology*, Proc. Amer. Math. Soc., **118** (1993), 1331–1334.
35. *Spin cobordism determines real K -theory*, with Michael J. Hopkins, Math. Z. **210** (1992), 181–196.

36. *A-cordial graphs*, Discrete Math. **93** (1991), 183–194.
37. *A bijective proof for the parity of Stirling numbers*, with Karen L. Collins, Ars Combin. **31** (1991), 31–32.
38. *Most graphs are edge-cordial*, with Karen L. Collins, Ars Combin. **30** (1990), 289–295.

Papers accepted for publication in refereed journals

39. *The ghost dimension of a ring*, with Keir Lockridge (7 pages), accepted in Proc. AMS.

Papers submitted for publication in refereed journals

40. *Semisimple ring spectra*, with Keir Lockridge (19 pages).
41. *Bounds on the distinguishing chromatic number*, with Karen L. Collins and Ann N. Trenk (12 pages)
42. *Gorenstein model structures and generalized derived categories*, with James Gillespie (24 pages).
43. *Intersection homological algebra* (14 pages).
44. *The homotopy of $MString$ and $MU\langle 6 \rangle$ at large primes* (11 pages).

Grants

- NSF Grant from the Topology/Foundations Program, “The chromatic splitting conjecture”, 1999-2002.
- NSF Postdoctoral Fellowship, 1994-1997.

Graduate Students

- Daniel Bravo-Vivallo, current.
- Mehdi Khorami, current.
- Weiwei Pan, current.
- James Gillespie, Ph. D. (2003).
- Manuel Lopez, Ph. D. (2003).
- Sally Lesik, MA (2000).

Professional service

- Regular speaker at international conferences in algebraic topology, most recently at the 2008 Banff International Research Station conference on “New Topological Contexts for Galois Theory and Algebraic Geometry”.
- Regular speaker in local seminars, particularly at Wesleyan and MIT.
- Editor, *Advances in Mathematics*, since 11/2000.
- Editor, *Homology, homotopy, and its applications*, 10/02-12/05.
- Reviewer for the NSF Topology program and NSERC. NSF Panelist in 2005 and 2008.
- Reviewer for *Math. Reviews*.
- Referee for multiple journals, including *Annals of Math*, *American Journal of Math*, *Math. Zeitschrift*, *Acta Mathematica*, *Bulletin of the London Math. Society*, *Topology*, *Transactions of the AMS*, and *Geometry and Topology*. Served as outside reviewer in tenure case at Hofstra University and Pomona College.
- Moderator for algebraic topology section of the arXive, the Los Alamos preprint server.
- Administrator, with Clarence Wilkerson, of the main electronic archive of papers in algebraic topology at `hopf.math.purdue.edu`.

University service

- Wesleyan Review and Appeals Board, 2007-current.
- President of Wesleyan Phi Beta Kappa chapter, 2006-current.
- Vice President/Secretary of Wesleyan Phi Beta Kappa chapter, 2003-2006.
- Service on numerous departmental committees, including hiring committee in 2005-2006 and standing committees such as the graduate education committee, departmental advisory committee, and computer committee.