# Peter Howard

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Texas A&M University
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## EDUCATION

PhD, Applied Mathematics, Indiana University, Bloomington, 1998.

MS, Mathematics, Indiana University, Bloomington, 1997.

MS, Management Science, University of Tennessee, Knoxville, 1993.

BS, Physics, Tennessee Technological University, Cookeville, 1991.

## POSITIONS HELD

2023–current: Department Head, Mathematics Department, Texas A&M University.

2012–current: Professor of Mathematics, Texas A&M University.

2012–2019: Associate Head for Graduate Studies, Mathematics Department, Texas A&M University.

2007–2012: Associate Professor of Mathematics, Texas A&M University.

2001–2007: Assistant Professor of Mathematics, Texas A&M University.

1999–2001: Visiting Research Scientist, Courant Institute of Mathematical Sciences.

1998–1999: Visiting Research Scientist, Department of Mathematics, Brown University.

## GRANTS

2009–2013: NSF Individual Investigator Grant DMS–0906370.

2005–2008: NSF Individual Investigator Grant DMS–0500988.

2001–2004: NSF Individual Investigator Grant DMS–0230003.

1998–2001: NSF Mathematical Sciences Postdoctoral Research Fellowship, DMS–9804390.

## AWARDS

2014 Association of Former Students Distinguished Achievement Award in Teaching (College of Science)

2010 Texas A&M Partners in Learning Award

2006 Texas A&M mathematics department Outstanding Teacher Award

## SUBMITTED PREPRINTS

1. *Comparison of coarsening dynamics for the Cahn–Hilliard and Burgers–Cahn–Hilliard equations*, arXiv 2405.11709.

2. *Oscillation theory and instability of nonlinear waves* arXiv 2301.07146.

## REFEREED PUBLICATIONS

1. *Renormalized oscillation theory for linear Hamiltonian systems on $[0,1]$ via the Maslov index*, (with Alim Sukhtayev), J. Dynamics and Differential Equations **36** (2024) 535–575.

2. *The Maslov index and spectral counts for linear Hamiltonian systems on $\mathbb{R}$*, J. Dynamics and Differential Equations **35** (2023) 1947–1991.

3. *Renormalized oscillation theory for regular linear non-Hamiltonian systems*, Comm. Pure Appl. Anal. **21** (2022) 4311–4345.

4. *Renormalized oscillation theory for singular linear Hamiltonian systems* (with Alim Sukhtayev), J. Functional Analysis **283** (2022).

5. *Hörmander's index and oscillation theory*, J. of Mathematical Analysis and Applications **500** (2021), no. 1, 1–38.

6. *The Maslov and Morse indices for Sturm-Liouville Systems on the Half-Line*, (with Alim Sukhtayev), Discrete and Continuous Dynamical Systems A **40(2)** (2020) 983–1012.

7. *The Maslov and Morse indices for system Schrödinger operators on $\mathbb{R}$* (with Yuri Latushkin and Alim Sukhtayev), Indiana U. Math. J. **67** (2018) 1765-1815.

8. *The Maslov index and spectral counts for Hamiltonian systems on $[0,1]$*, (with Soyeun Jung and Bongsuk Kwon), J. Dynamics and Differential Equations **30** (2018) 1703–1729.

9. *Spectral analysis of θ-periodic Schrödinger operators and applications to periodic waves*, (with Soyeun Jung), J. Differential Equations **264** (2018) 2205-2241.

10. *The Maslov index for Lagrangian pairs on $\mathbb{R}^{2n}$* (with Yuri Latushkin and Alim Sukhtayev), J. of Mathematical Analysis and Applications **451** (2017), no. 2, 794–821.

11. *Linear stability for transition front solutions in multidimensional Cahn-Hilliard systems*, Journal of Dynamics and Differential Equations **29** (2017) 895–955.

12. *The Maslov and Morse indices for Schrödinger operators on $[0,1]$* (with Alim Sukhtayev), J. Differential Equations **260** (2016) 4499–4559.

13. *Stability for transition front solutions in multidimensional Cahn-Hilliard systems*, Journal of Nonlinear Science **26** (2016) 619–661.

14. *Short-time existence theory toward stability for nonlinear parabolic systems*, Journal of Evolution Equations **15** (2015) 403–456.

15. *Spectral analysis for transition front solutions in multidimensional Cahn-Hilliard systems*, J. of Differential Equations **257** (2014) 3448–3465.

16. *Asymptotic stability analysis for transition front solutions in Cahn-Hilliard systems* (with Bongsuk Kwon), Phys. D **241** (2012), no. 14, 1193–1222.

17. *Asymptotic $L^p$ stability for transition fronts in Cahn-Hilliard systems* (with Bongsuk Kwon), J. Differential Equations **252** (2012) 5814–5831.

18. *Spectral analysis for transition front solutions to Cahn-Hilliard systems* (with Bongsuk Kwon), Discrete and Continuous Dynamical Systems A **32** (2012) 126-166.

19. *Spectral analysis for periodic solutions of the Cahn-Hilliard equation on $\mathbb{R}$*, NoDEA Nonlinear Differential Equations and Applications **18** (2011) 1-26.

20. *Spectral analysis for stationary solutions of the Cahn–Hilliard equation in $\mathbb{R}^d$*, Communications in Partial Differential Equations **35** (2010) 590-612.

21. *Spectral analysis of stationary solutions of the Cahn–Hilliard equation*, Advances in Differential Equations **14** (2009) 87–120.

22. *Spectral analysis of planar transition fronts for the Cahn–Hilliard equation*, J. Differential Equations **245** (2008) 594–615.

23. *Asymptotic behavior near planar transition fronts for the Cahn–Hilliard equation*, Physica D **229** (2007) 123–165.

24. *Nonlinear stability of degenerate shock profiles*, Differential and Integral Equations **20** (2007) 515–560.

25. *Asymptotic behavior near transition fronts for equations of generalized Cahn–Hilliard form*, Communications in Mathematical Physics **269** (2007) 765–808.

26. *Stability of undercompressive shocks* (with Kevin Zumbrun, Indiana University), Hyperbolic problems: theory, numerics and applications. I, 155-162, Yokohama Publ., Yokohama, 2006.

27. *Pointwise asymptotic behavior of perturbed viscous shock profiles* (with Mohammadreza Raoofi, Max Planck Institute for Mathematics), Advances in Differential Equations **9** (2006) 1031–1080.

28. *Sharp pointwise bounds for perturbed viscous shock waves* (with Mohammadreza Raoofi, Max Planck Institute for Mathematics and Kevin Zumbrun, Indiana University), Journal of Hyperbolic Differential Equations **3** (2006) 297–373.

29. *Pointwise Green's function estimates toward stability for degenerate viscous shock waves*, Communications on Partial Differential Equations **31** (2006) 73–121.

30. *Nonlinear stability for multidimensional fourth order shock fronts*, (with Changbing Hu, University of Louisville) Arch. Rational Mech. Anal. **181** (2006) 201–260.

31. *Stability of undercompressive shock profiles* (with Kevin Zumbrun, Indiana University), J. Differential Eqns. **225** (2006) 308–360.

32. *Pointwise Green's function estimates toward stability for multidimensional fourth order viscous shock fronts*, (with Changbing Hu, University of Louisville) J. Differential Equations **218** (2005) 325–389.

33. *The Evans function and stability criteria for degenerate viscous shock waves*, (with Kevin Zumbrun) Discrete and Continuous Dynamical Systems **10** (2004) 837–855.

34. *Local tracking and stability for degenerate viscous shock waves*, J. Differential Eqns. **186** (2002) 440–469.

35. *Pointwise estimates and stability for degenerate viscous shock waves*, J. Reine Angew. Math. **545** (2002) 19–65.

36. *Pointwise estimates and stability for dispersive–diffusive shock waves*, (with Kevin Zumbrun) Arch. Rational Mech. Anal. **155** (2000) 85–169.

37. *Pointwise Green's function approach to stability for scalar conservation laws*, Comm. Pure Appl. Math. **52** (1999) 1295–1313.

38. *Pointwise estimates on the Green's function for a scalar linear convection–diffusion equation*, J. Differential Equations **155** (1999) 327–367.

39. *Shift invariance of the occupation time of the Brownian bridge process* (with Kevin Zumbrun) Stat. Prob. Lett. **45** (1999) 379–382.

40. *Pointwise semigroup methods and stability of viscous shock waves*, (with Kevin Zumbrun) Indiana U. Math. J. **47** (1998) 741–871.

## PROCEEDINGS

1. *Stability of transition front solutions in Cahn-Hilliard systems* (with Bongsuk Kwon, Ulsan National Institute of Science and Technology), Refereed Proceedings of the Research Institute of Mathematical Sciences, at Kyoto University.

2. *Stability of undercompressive shock profiles* (with Kevin Zumbrun, Indiana University), Refereed Proceedings in HYP2004: Proceedings of the Tenth International Conference on Hyperbolic Problems (2005).

## THESIS

*Pointwise estimates for the stability of a scalar conservation law*, Doctoral dissertation, Indiana University 1998 (Advisor: Kevin Zumbrun).

## CONFERENCE TALKS PRESENTED

- Equadiff 2024, Karlstad University, Sweden, June 10 – 14, 2024.

- 13th AIMS International Conference on Dynamical Systems, Differential Equations, and Applications, Wilmington, NC, May 31 – June 4, 2023.

- Joint Alabama–Florida Conference on Differential Equations, Dynamical Systems and Applications, Auburn University, Auburn, AL, May 13–14, 2023.

- IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, University of Georgia, Athens, GA, March 29 – April 1, 2022.

- IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, University of Georgia, Athens, GA, April 17 – 19, 2019.

- SIAM Conference on Nonlinear Waves and Coherent Structures, Anaheim, CA, June 11 – 14, 2018.

- KUMUNU PDE, Dynamical Systems and Applications Conference, U. Kansas, Lawrence, KS, Apr. 20 – 22, 2018.

- IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, University of Georgia, Athens, GA, March 29 – April 1, 2017.

• SIAM Conference on Nonlinear Waves and Coherent Structures, Philadelphia, PA, August 8 – 11, 2016.

• IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, University of Georgia, Athens, GA, April 1–4, 2015.

• SIAM Conference on Nonlinear Waves and Coherent Structures, Churchill College, University of Cambridge, Cambridge, UK, August 11 – 14, 2014.

• AMS Central Section Meeting, University of Kansas, March 30 – April 1, 2012.

• SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 22-26, 2011.

• SIAM Conference on Nonlinear Waves and Coherent Structures, Philadelphia, PA, Aug 16–19, 2010.

• SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 17–21, 2009.

• 7th AIMS International Conference on Dynamical Systems, Differential Equations, and Applications, Arlington, TX, May 18–21, 2008.

• SIAM Conference on Analysis of Partial Differential Equations, Mesa, Arizona, Dec. 10–12, 2007.

• SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 28–June 1, 2007.

• Texas PDE 2007, Mar. 24–25, University of Texas at San Antonio.

• SIAM Conference on Nonlinear Waves and Coherent Structures, Seattle, WA, Sept. 9–12, 2006.

• SIAM PDE Conference, Boston, MA, July 10–12, 2006.

• Joint mathematics meeting, San Antonio, TX, Jan. 12–15, 2006.

• The 26th Midwest–Pacific Differential Equations Conference, Edmonton, Alberta, Canada, October 15–17, 2005

• AIM Workshop on stability criteria for multi-dimensional waves and patterns, Palo Alto, CA, May 16–20, 2005.

• SIAM conference on Analysis of Partial Differential Equations, Houston, December 6–8, 2004.

• AIMS Fifth International Conference on Dynamical Systems and Differential Equations, California State Polytechnic University, June 16–June 19, 2004

- BIRS Workshop: Nonlinear Dynamics of Thin Films and Fluid Interfaces, Banff, Alberta, Canada, Nov. 29–Dec. 4, 2003.

- Joint Mathematics Meetings, Minisymposium on hyperbolic conservation laws and related topics, Baltimore, MD, Jan. 2003.

- AIMS Fourth International Conference on Dynamical Systems and Differential Equations, UNC Wilmington (2002)

- Pacific Rim Dynamical Systems Conference, SIAM (2000)

- Mathematical Aspects of Materials Science, SIAM (2000)

- Nonlinear Analysis 2000, Courant Institute (2000)

- Hyperbolic Aspects of Fluid Dynamics, Oberwolfach (1999)

- Workshop on Conservation Laws, Stanford (1999)

- Seventh International Conference on Hyperbolic Equations, ETH Zürich (1998)

## COLLOQUIUM AND SEMINAR TALKS PRESENTED

- University of Houston, Houston, TX, March 2020.

- University of Texas at Dallas, Dallas, TX, November 2019.

- Brigham Young University, Provo, UT, October 2018.

- Miami University, Oxford, OH, March 2018.

- National Autonomous University of Mexico (UNAM), Mexico City, Mexico, August 2017.

- Texas A&M University, September 2016.

- Ulsan National Institute of Science and Technology, Ulsan, Korea, July 2016.

- University of Wyoming, September 2013.

- Max Planck Institute for the Mathematical Sciences, Leipzig, Germany, July 2012.

- Texas A&M University, December 2011.

- University of Helsinki, September 2011.

- Texas A&M University, September 2011.

- University of Kentucky, February 2010.

- Michigan State University, January 2008.

- University of Louisville, October 2007.

- Penn State University, October 2007.

- Texas A&M University, September 2007.

- Texas A&M University, September 2006.

- Texas A&M University, February 2006.

- Georgia Tech, September 2004.

- Indiana University, May 2004.

- Texas A&M University, September 2003.

- University of Houston, September 2002.

- Indiana University, September 2002.

- Texas A&M University, September 2001.

- North Carolina State University, February 2001.

- Texas A&M University, February 2001.

- University of Tennessee, Knoxville, January 2001.

- Illinois University, January 2001.

- Indiana University, September 1999.

- University of Massachusetts, Amherst, October 1998.

- Brown University, September 1998.

## CURRICULUM DEVELOPMENT

- Developed an on-line version of M615, Introduction to Classical Analysis, Fall 2015.

- Introduced a new two-semester sequence on calculus for students in the biological sciences (M289), Texas A&M University, Fall 2006, Spring 2007.

- Entirely re-designed M670 (Applied Math I) as a course in asymptotic analysis, perturbation methods, and variational methods, Texas A&M University, Fall 2004.

## COURSES TAUGHT AT TEXAS A&M UNIVERSITY

- M147, Calculus I for students in life sciences, Fall 2010, Fall 2009.

- M151B, Calculus I for students in life sciences, Fall 2008, Fall 2007.

- M152B, Calculus II for students in life sciences, Spring 2008.

- M200, Horizons of mathematics, Fall 2024, Fall 2022, Spring 2021.

- M289, Two semester sequence on calculus for students in the biological sciences, Fall 2006–Spring 2007.

- M308, Differential Equations, Fall 2023 (College majors version), Spring 2023 (College majors version), Spring 2021 (Honors), Fall 2020, Fall 2005, Fall 2002, Fall 2001.

- M401, Advanced Engineering Mathematics, Spring 2010, Fall 2003.

- M412, Theory of Partial Differential Equations, Fall 2005.

- M442 Mathematical Modeling, Spring 2022, Fall 2017, Fall 2016, Fall 2013, Fall 2009, Fall 2007, Fall 2006, Spring 2006, Spring 2005, Fall 2004, Spring 2003, Fall 2003, Spring 2002.

- M469, Introduction to Mathematical Biology, Spring 2020, Fall 2010.

- M491, Research on Zugunruhe for the bird *sylvia borin*, Summer 2010.

- M611, Introduction to Ordinary and Partial Differential Equations, Fall 2019, Fall 2014, Fall 2008.

- M612, Partial Differential Equations, Spring 2020, Spring 2015, Spring 2009.

- M615-online, Introduction to Classical Analysis, TAMU, Spring 2019, Fall 2017, Fall 2015.

- M641, Analysis for Applications I, Fall 2012.

- M642, Analysis for Applications II, Spring 2013.

- M647 Mathematical Modeling, Spring 2023, Spring 2022, Fall 2018, Spring 2017, Spring 2016, Spring 2014, Spring 2012, Spring 2011, Spring 2004.

- M670, Applied Math I: Asymptotic Methods, Perturbation Theory, and Variational Techniques, Fall 2004.

- M685, Spring 2023, Directed Studies on geometric singular perturbation theory, and existence of pulse solutions to the FitzHugh-Nagumo equations.

- M685, Fall 2022, Directed Studies on stability of shock-rarefaction patterns.

- M685, Spring 2022, Directed Studies on applied analysis.

- M685, Summer 2017, Directed Studies on Queueing Theory.

- M685, Spring 2013, Directed Studies on the mathematics of phase separation

processes.

- M685, Summer 2011, Directed Studies on game theory and stochastic processes,

- M685, Summer 2010, Directed Studies on numerical evaluation of the Evans function for transition front solutions in Cahn-Hilliard systems.

- M685, Summer 2006, Directed Studies in phase separation and the Cahn–Hilliard equation.

## COURSES TAUGHT AT INDIANA UNIVERSITY

- T104, Mathematics for Education Majors, Fall 1997, Spring 1997, Fall 1996, Spring 1996.

- M125, Pre-calculus, Fall 1995.

## COURSES TAUGHT AT THE UNIVERSITY OF TENNESSEE

- MS 310, Introduction to Management Science, Spring 1992, Fall 1992.

## JOURNALS REFEREED

- Applications and Applied Mathematics

- Communications in Partial Differential Equations

- Communications in Pure and Applied Mathematics

- Discrete and Continuous Dynamical Systems

- Dynamics of Continuous, Discrete and Impulsive Systems

- European Journal of Applied Mathematics

- FILOMAT

- Indiana U. Mathematics Journal

- Interface and Free Boundaries

- International Journal of Mathematics and Mathematical Sciences

- Journal of Computational and Applied Mathematics

- Journal of Differential Equations

- Journal of Dynamics and Differential Equations

- Journal of Evolution Equations

- Journal of Hyperbolic Differential Equations

- Journal of Mathematical Analysis and Applications

- Journal of Mathematical Physics

- Journal of Nonlinear Science

- Kinetic and Related Models

- Mathematische Annelen

- Mathematische Nachrichten

- Physica A

- Physica D

- Proceedings of the Edinburgh Mathematical Society

- Quarterly of Applied Mathematics

- SIAM Journal on Mathematical Analysis

- Zeitschrift fuer Angewandke Mathematik und Physik (ZAMP)

## MATHEMATICAL REVIEWS

1. Y. Wu, X. Xing, and Q. Ye, *Stability of travelling waves with algebraic decay for n-degree Fisher-type equations*, Discrete and Continuous Dynamical Systems **16** (2006) 47–66.

## DEPARTMENTAL SERVICE

- Executive Committee 2023–current (chair); 2019–2021; 2014–2016; 2008–2010.

- Endowed Positions Committee, 2022–2023.

- Strategic Planning Steering Committee, 2022–2023.

- Undergraduate Programs Committee 2021–2023.

- Chair, ad-hoc Committee revising documents for APT appointment and promotion, 2019 – 2020.

- Chair, Department Head Search Committee, Spring 2019.

- Associate Head for Graduate Studies 2012–2019.

- Graduate Programs Committee 2012–2019.

- Web Design Committee 2012-2016.

- AMUSE seminar speaker, Fall 2017, Fall 2015.

- Represented the mathematics department at the IMA PI Council Meeting and Industrial Advisory Board at the University of Minnesota, April 19, 2015.

- Represented the mathematics department at the IMA PI Council Meeting at the University of Minnesota, May 20, 2014.

- Co-organizer (with Bojan Popov) of the Math Mini Fair, Spring 2011.

- Member, M308 textbook selection committee, Spring 2011.

- Outreach Activities Committee 2008–2011

- Engineering Math Committee 2008–2012.

- Undergraduate Programs Committee 2007–2008.

- Graduate Programs Committee 2007

- Power Team Exam Grader, High School Mathematics Contest, Oct. 28 2006.

- Member, M308 Committee 2003.

- Mock interviewer for Mathematics Communications, Fall 2016, Spring 2015, Fall 2014, Spring 2014, Fall 2013, Fall 2012, Spring 2012, Fall 2011, Spring 2011, Fall 2010.

## POST-DOCTORAL MENTORING

- Post-doctoral mentor for Alim Sukhtayev, 2012–2015.

- Post-doctoral mentor for Bongsuk Kwon, 2009–2012.

- Post-doctoral mentor for Changbing Hu, 2002–2005.

## PhD COMMITTEES

- Chair, PhD committee for Cesar Cobos-May, 2017–2019.

- co-Chair, PhD committee for Sandra Truong (Genetics), 2012–2017.

- Member, PhD committee for Krishna Kamdi (student in Mechanical Engineering, Kumbakonan Rajagopal, chair), 2022–current.

- Member, PhD committee for Mohsen Alshahrani (Yalchin Efendiev, chair), 2022–current.

- Member, PhD committee for Tanuj Gupta (Emil Straube, chair), 2021–current.

- Member, PhD committee for Zhiying Hai (Prabir Daripa, chair), 2019–2022.

- Member, PhD committee for Johnathan McKenzie (student in Industrial Systems Engineering), 2018–2022.

- Member, PhD committee for Sangin Mah (Jay Walton, chair), 2015–2021.

- Member, PhD committee for Yanbo Li, 2016–2019.

- Member, PhD committee for Sourav Dutta, 2016–2017.

- Member, PhD committee for Zhidong Zhang, 2014–2017.

- Member, PhD committee for Bowen Li, 2014–2017.

- Member, PhD committee for Wing Tat Leung, 2016–2017.

- Member, PhD committee for Jing Tian, 2014–2016.

- Member, PhD committee for Manal Alotibi, 2013–2016.

- Member, PhD committee for Bheemaiah Veena Shankva Narayan Rao, 2011-2016.

- Member, PhD committee for Craig Gin, 2014–2015.

- Member, PhD committee for Maya Johnson, 2010–2015.

- Member, PhD committee for Yi-Ching Wang 2009–2015.

- Member, PhD committee for Mustafa Ayyuru, 2012–2014.

## MASTER'S COMMITTEES

- Chair, (thesis) Master's committee for Devon Maywald, 2023–2024.

- Chair, (non-thesis) Master's committee for Micah Gautney, 2022–current.

- Chair, (non-thesis) Master's committee for Zach Kossow, 2018–current.

- Chair, (non-thesis) on-line Master's committee for David Amos, 2017–current.

- Member, (non-thesis) Master's committee for Kathryn Quandt (Anne Shiu, chair), 2022–2023.

- Member, (non-thesis) Master's committee for Daniel Vorobiev (student in electrical and computer engineering, Linda Katehi, chair), 2022–2023.

- Member, (non-thesis) Master's committee for Nathan Taylor (student in electrical and computer engineering), 2022–current.

- Member, (non-thesis) Master's committee for Matthew Lee (student in physics, Nader Mirabolfathi, chair), 2022–2022.

- Chair, (non-thesis) on-line Master's committee for Lucas Johnson, 2019–2021.

- Chair, (non-thesis) on-line Master's committee for Donna Jaznow, 2019–2021.

- Chair, (non-thesis) Master's committee for Daniel Uyarra, 2019–2020.

- Chair, (non-thesis) Master's committee for Aggie Hennessey, 2019–2020.

- Chair, (non-thesis) Master's committee for Shifan Zhao, 2019–2020.

- Chair, (non-thesis) Master's committee for Madelaine Werran, 2018–2019.

- Chair, (non-thesis) Master's committee for Xingchi Li, 2018–2019.

- Member, (non-thesis) Master's committee for Natalie Hemmer, 2018–2019.

- Member, (non-thesis) on-line Master's committee for Nick Valletta, 2017–2019.

- Chair, (non-thesis) Master's committee for Chunyang Liao, 2017–2018.

- Chair, (non-thesis) Master's committee for Ting Lu, 2017–2018.

- Chair, (non-thesis) Master's committee for Guanxun Li, 2017–2018.

- Member, (non-thesis) Master's committee for Hatice Pekmez, 2017–2018.

- Member, (non-thesis) on-line Master's committee for Jessica Crook, 2017–2018.

- Member, (non-thesis) on-line Master's committee for Joseph Smith, 2017–2018.

- Chair, (non-thesis) on-line Master's committee for Badri Johnson, 2017–2018.

- Chair, (non-thesis) on-line Master's committee for Leon Johnson, 2016–2018.

- Member, (thesis) Master's committee for Sabyasachi Chakraborty, 2014–2018.

- Member, (non-thesis) Master's committee for Christian Williams, 2017.

- Member, (non-thesis) Master's committee for Xinjie Fan, 2016–2017.

- Member, (non-thesis) Master's committee for Fernando Chavarria, 2016–2017.

- Chair, (non-thesis) Master's committee for Yu Han, 2016–2017.

- Chair, (non-thesis) Master's committee for Linhao Song, 2016–2017.

- Member, (non-thesis) on-line Master's committee for Matt Stanford, 2016–2017.

- Chair, (non-thesis) Master's committee for Bibhu Mishra, 2015–2016.

- Chair, (non-thesis) Master's committee for Song Zhai, 2015–2016.

- Member, (non-thesis) Master's committee for Shuo Yang, 2015–2016.
- Member, (non-thesis) Master's committee for Quyuan Lin, 2015–2016.
- Chair, (non-thesis) Master's committee for Todd Schrader, 2015–2016.
- Member, (non-thesis) Distance Master's committee for Tim Swast, 2015–2018.
- Member, (non-thesis) Master's committee for Zheming Gao, 2015–2016.
- Member, (distance) Master's committee for Cynthia Galvan, 2014–2016.
- Chair, (non-thesis) Master's committee for Mona Karimi, 2014–2015.
- Member, (non-thesis) Master's committee for Katie Switzer, 2014–2015.
- Member, (non-thesis) Master's committee for Jennifer Bouse, 2014–2015.
- Member, (non-thesis) Distance Master's committee for Lisa O'Brien, 2014–2015.
- Member, (non-thesis) Master's committee for Alex Lapanowski, 2014–2015.
- Chair, (non-thesis) Master's committee for Mahmood Ettehad, 2013–2014.
- Member, (thesis) Master's committee for Homayoon Shobeiri, 2012–2014.
- Member, (non-thesis) Master's committee for Yun Shi, 2013–2014.
- Chair, (non-thesis) Master's committee for Gaurav Sharma, 2013.
- Co-Chair, (non-thesis) Master's committee for Shuang Yin, 2012–2013.
- Member, (non-thesis) Master's committee for Shriram Srinivasan, 2012–2013.
- Chair, (non-thesis) Master's committee for Grant Clayton, 2012–2013.
- Chair, (non-thesis) Master's committee for Jun Yao, 2012.
- Chair, (non-thesis) Master's committee for Tingyi Zhu, 2011–2012.
- Chair, (non-thesis) Master's committee for Jing Voon Chen, 2011-2012.
- Member, (non-thesis) Master's committee for Tanner Wilson, 2011-2012.
- Member, (non-thesis) Master's committee for Ruifang Li 2010–2012.
- Chair, (non-thesis) Master's Committee for Mayumi Nabb 2006.
- Chair, (non-thesis) Master's Committee for Mark Pape 2004–2005.
- Member, (non-thesis) Master's Committee for Xuechao Du 2004–2005.
- Member, (non-thesis) Master's Committee for Mohammad Sattar 2004–2005.

## TEACHING MENTOR

Ayo Adeniran, Weston Baines, Ryan Causey, Jimmy Corbin, Ngoc Do, Mahmood Ettehad, Alperen Ergur, Oguz Gesmiz, Arezou Ghesmati, Aditi Ghosh, Yonghui Guan, Paul Gustafson, Timo Heister (post-doc), Sheagan John, Minh Kha, Sanghyun Lee, Quyuan Lin, Wen Liu, Tina Mai, Dustin McPhate, Van Nguyen, Nida Obatake, Sofia Ortega-Castillo, Arpan Pal, Andrew Penland, Curtis Porter, Yang Qi, Todd Schrader, Vladimir Tomov, Joe Torres, Tracy Weyand, John Williams (post-doc), Konrad Wrobel, Yanfang Yang, Li Ying

## UNIVERSITY SERVICE

• Member, College of Arts and Sciences Faculty Affairs Council, Fall 2022 – Fall 2023.

• Member, Association of Former Students Distinguished Graduate Student Awards Selection Committee, Spring 2021, Spring 2014.

• Member, College of Science Graduate Instruction Committee, 2012–2019.

• Mentor, 3M Thesis Contest, Fall 2016, Fall 2015.

• Judge, 3M Thesis Contest, Fall 2016, Spring 2016, Fall 2014, Fall 2013.

• Member, Faculty Advisory Council, College of Science, 2012 - 2016.

• Texas A&M representative at the investiture of Dr. Philip Oldham as President of Tennessee Technological University, Nov. 2, 2012.

• Reviewer, Merit/Diversity Fellowship Nominations 2015, 2012.

• 9th Annual Pathways Texas A&M System Student Research Symposium Judge, Fall 2011.

• Member, Math and Engineering Student Success Task Force, 2010-

• Member, (thesis) Master's Committee, Wei Guo, Civil Engineering, 2008–2009.

• Member, ECON PhD Committee, Megha Weerakoon Watugala, 2007–2008.

• Member, (thesis) Master's Committee for Brandon Shirley, Electrical Engineering 2005–.

• Member, (non-thesis) Master's Committee for Marilee Myers, Aerospace Engineering 2004–2005.

• Member, (thesis) Master's Committee for Nishant Kumar, Computer Science 2003–2004.

## PROFESSIONAL SERVICE

- Co-organizer for conference *Stability of nonlinear waves: analysis and computation*, Institut Henri Poincare, July 1–5, 2019.

- Developed a SEMIODE modeling project, jointly with Jean Marie Linhart. J. M. Linhard and P. Howard, "Ballistics modeling with a sponge dart," available: https://www.simiode.org/resources/5568

- Presentation at St. Edward's University in Austin, Texas about graduate school in mathematics, Feb. 23, 2018.

- Panel Member, *Choosing the right math graduate school*, Joint Mathematics Meetings, San Antonio, Texas, Jan. 10–13, 2015.

- Co-organizer for conference *Shock Waves and Beyond*, Institut Henri Poincare, June 23–26, 2015.