

**Contact Information:**

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**Research Interests:**

- Differential Geometry and Discrete Mathematics.
  - Hamiltonian group actions. Combinatorial aspects of equivariant cohomology.
  - Enumerative and algebraic combinatorics.

**Education:**

- Massachusetts Institute of Technology, Cambridge, MA.  
 Ph.D., Mathematics June 2000
- University of Bucharest, Romania.  
 M.S., Mathematics June 1995  
 B.S., Mathematics June 1994

**Employment:**

- UMass Boston, Boston, MA, Department of Mathematics  
 Professor (tenured) 2017-  
 Associate Professor (tenured) 2011-2017  
 Assistant Professor (tenure-track) 2006-2011  
 Visiting Assistant Professor 2005-2006
- Penn State Altoona, Altoona, PA, Department of Mathematics  
 Assistant Professor (tenure-track), on leave 2005-2006 2003-2006
- Yale University, New Haven, CT, Department of Mathematics  
 J.W. Gibbs Instructor 2000-2003
- MIT, Cambridge, MA, Department of Mathematics  
 Teaching Assistant 1996-1999
- University of Bucharest, Romania, Department of Mathematics  
 Assistant 1995-1996

**Awards:**

- Goodwin Medal, MIT 2000  
 MIT's highest graduate student teaching award, given annually in recognition of  
*"conspicuously effective teaching over and above ordinary excellence."*
- Housman Graduate Student Teaching Award, MIT 2000  
 MIT Department of Mathematics award, given to graduate students in mathematics for  
*"skill and dedication in undergraduate teaching."*
- Charles W. and Jennifer C. Johnson Prize, MIT 1999  
 MIT Department of Mathematics award, given to a graduate student for  
*"an outstanding research paper accepted for publication in a major journal."*
- Alfred P. Sloan Foundation Doctoral Dissertation Fellowship 1999-2000
- American Mathematical Society Project NExT Fellowship 2003-2004

# Research

## Publications

(Authors listed in alphabetical order)

### Books:

- (1) Nicolescu, Liviu, Gabriel Pripoae, and Catalin Zara.  
*Teoreme si probleme de grupuri Lie* [*Theorems and Problems on Lie Groups*]. Editura Universitatii Bucuresti, Romania (1996). 188 pages.
- (2) Nicolescu, Liviu, Alexandru Bumbacea, Alin Catana, Paul Horja, Gheorghe G. Nicolescu, Nicolae Oprea, and Catalin Zara.  
*Metode de Rezolvare a Problemelor de Geometrie* [*Methods for Solving Geometry Problems*]. Editura Universitatii Bucuresti, Romania (1992). 2nd printing (1998). 374 pages.

### Articles in Refereed Journals and Proceedings:

- (1) Dan Simovici and Catalin Zara.  
“Tolerance Distances on Minimal Coverings.” Proceedings of the IEEE 46th International Symposium on Multiple-Valued Logic. ISMVL 2016, May 18-20, 2016, Sapporo, Japan, pp. 125 – 130.
- (2) Ethan Bolker, Carl Offner, Robert Richman, and Catalin Zara.  
“The Prouhet-Tarry-Escott Problem and Generalized Thue-Morse Sequences.” *J. of Combinatorics*. 7 (2016) no. 1, pp. 117 – 133.
- (3) Victor Guillemin, Silvia Sabatini, and Catalin Zara.  
“Polynomial Assignments.” *Indag. Math*, 25 (2014), no. 5, pp. 992–1018.
- (4) Victor Guillemin, Silvia Sabatini, and Catalin Zara.  
“Balanced Bundles and GKM Theory.” *International Mathematical Research Notices*, 17 (2013), pp. 3886–3910.
- (5) Victor Guillemin, Silvia Sabatini, and Catalin Zara.  
“Equivariant K-theory of GKM Bundles.” *Annals of Global Analysis and Geometry* 43 (2013), pp. 31–45.
- (6) Victor Guillemin, Silvia Sabatini, and Catalin Zara.  
“Cohomology of GKM Fiber Bundles.” *Journal of Algebraic Combinatorics* 35 (2012), pp. 19–59.
- (7) Saaid Baraty, Dan Simovici, and Catalin Zara.  
“The Impact of Triangular Inequality Violations on Medoid-Based Clustering.” Proceedings of ISMIS 2011, Warsaw, Poland. *Lecture Notes in Artificial Intelligence*, LNAI 6804, pp. 280–289.
- (8) Catalin Zara.  
“Positivity of Equivariant Schubert Classes through Moment Map Degeneration.” *Journal of Symplectic Geometry* 8 (2010), no. 4, pp. 1–21.
- (9) Catalin Zara.  
“Morse Interpolation for Hamiltonian GKM Spaces.” *Journal of Differential Geometry* 75 (2007), no. 3, 503–523.
- (10) Juan Gil, Mike Weiner, and Catalin Zara.  
“Complete Padovan Sequences in Finite Fields.” *Fibonacci Quarterly* 45 (2007), no. 1, 64–75.

- (11) Victor Guillemin, Tara Holm, and Catalin Zara.  
“A GKM description of the equivariant cohomology ring of a homogeneous space.”  
*Journal of Algebraic Combinatorics* 23 (2006), no. 1, 21–41.
- (12) Catalin Zara.  
“Chains, subwords, and fillings: strong equivalence of three definitions of the Bruhat order.”  
*Electronic Journal of Combinatorics* 13 (2006), no. 1, Note 5, 13 pp. (electronic)
- (13) Victor Guillemin and Catalin Zara.  
“The existence of generating families for the cohomology ring of a graph.”  
*Advances in Mathematics* 174 (2003), no. 1, 115–153.
- (14) Catalin Zara.  
“Parking functions, stack-sortable permutations, and spaces of paths in the Johnson graph.”  
*Electronic Journal of Combinatorics* 9 (2002/03), no. 2, Research paper 11, 11 pp. (electronic)
- (15) Victor Guillemin and Catalin Zara.  
“Combinatorial Formulas for Products of Thom Classes.”  
*Geometry, Mechanics, and Dynamics: Volume in Honor of the 60th Birthday of J. E. Marsden*, pages 363-405. Edited by Paul Newton, Phil Holmes, and Alan Weinstein. New York: Springer-Verlag, 2002.
- (16) Victor Guillemin and Catalin Zara.  
“ $G$ -actions on graphs.”  
*International Mathematics Research Notices* 2001, no. 10, 519–542.
- (17) Victor Guillemin and Catalin Zara.  
“1-skeleta, Betti numbers, and equivariant cohomology.”  
*Duke Mathematical Journal* 107 (2001), no. 2, 283–349.
- (18) Victor Guillemin and Catalin Zara.  
“Equivariant de Rham theory and graphs.”  
*Asian Journal of Mathematics* 3 (1999), no. 1, 49–76. Republished in *Surveys in Differential Geometry, VII*, 221–257, Int. Press, Somerville, MA, 2000.
- (19) Catalin Zara.  
“A characterization of bi-invariant Riemannian metrics on Lie groups.”  
*Studii si Cercetari Matematice* (Math Reports) 50 (1998), no. 1-2, 111–115.
- (20) Catalin Zara.  
“On a theorem of D. Müller.” (Romanian).  
*Studii si Cercetari Matematice* (Math Reports) 47 (1995), no. 3-4, 359–363.

### Other Articles

- Gouri Shankar Seal and Catalin Zara.  
“Polynomial Assignments for Bott-Samelson Manifolds.” arXiv:1603.00103. (2016)
- Ethan Bolker, Jeremy Hatch, and Catalin Zara.  
“Modeling bird passage through a windfarm.”  
Mathematical model and VBA macro implementing the model. arXiv:1408.1580. (2014)
- Liviu P. Dinu and Catalin Zara.  
“Cardinality of  $\ell_1$ -Spheres in Permutation Spaces.” arXiv:1303.0016. (2013)

- Catalin Zara.  
“Cardinality of  $\ell_1$ -Segments and Genocchi Numbers.” arXiv:1304.5798. (2013)

### Presentations at Conferences and Workshops

- Jul 2015 The Eight Congress of Romanian Mathematicians,  
Section: “Theoretical Computer Science” Iasi, Romania.  
*“Tolerance Distances on Minimal Coverings”*
- Jun 2012 Canadian Mathematical Society Summer Meeting,  
Special Session on “Geometry and Topology of Lie Transformation Groups,”  
Regina, SK.  
*“Balanced Bundles and GKM Theory”*
- Jul 2011 The Seventh Congress of Romanian Mathematicians,  
Section: “Theoretical Computer Science” Brasov, Romania.  
*“Spearman footrule and rank distance: combinatorial and computational aspects”*
- Apr 2009 American Mathematical Society Eastern Section Meeting,  
Special Session on “Symplectic and Contact Topology,” WPI, Worcester, MA.  
*“GKM Fiber Bundles”*
- Aug 2008 Workshop on “Moment Maps,” EPFL, Lausanne, Switzerland.  
*“Positivity of Equivariant Schubert Classes Through Moment Map Degeneration”*
- Mar 2008 American Mathematical Society Eastern Section Meeting,  
Special Session on “Algebraic Combinatorial Geometry,” New York University, New York, NY.  
*“Positivity in Equivariant Schubert Calculus: A Symplectic Approach”*
- Oct 2007 American Mathematical Society Eastern Section Meeting,  
Special Session on “Invariants of Lie Group Actions and Their Quotients,”  
Rutgers University, New Brunswick, NJ.  
*“A New Proof of a Positive Formula for Equivariant Schubert Classes”*
- Jun 2007 Pacific Institute for Mathematical Sciences  
Summer School on “Combinatorial Models in the Geometry and Topology of Flag Manifolds,” University of Regina, Canada. Four lectures on  
*“Equivariant cohomology of flag manifolds”*
- Oct 2006 American Mathematical Society Eastern Section Meeting,  
Special Session on “Combinatorial Methods in Equivariant Topology,”  
University of Connecticut, Storrs CT.  
*“Strong Equivalence of Three Definitions of the Bruhat Order and Consequences for the Equivariant Cohomology of Flag Manifolds”*
- May 2006 International Conference on “Toric Topology,” Osaka City University, Japan.  
*“Hamiltonian GKM spaces and their moment graphs”*
- Apr 2004 Mathematisches Forschungsinstitut Oberwolfach (Germany)  
Workshop on “Cohomological Aspects of Hamiltonian Torus Actions and Toric Varieties.”  
*“Morse Interpolation for Hamiltonian GKM Spaces”*
- Dec 2002 Canadian Mathematical Society Winter Meeting,  
Symposium on “Symplectic Geometry,” University of Ottawa, ON.  
*“Morse Interpolation and Divided Differences”*

- Oct 2002 American Mathematical Society Eastern Section Meeting,  
Special Session on “Modern Schubert Calculus,” Northeastern University, Boston MA.  
“*Divided Differences and Spaces of Subwords*”
- Apr 2002 Conference on “Symplectic and Contact Geometry,”  
MIT, Cambridge MA.  
“*Grothendieck Polynomials and Spaces of Paths*”
- Jun 2001 Fields Institute for Research in Mathematical Sciences  
Workshop on “Hamiltonian Group Actions and Quantization,” Toronto ON.  
“*Generators in Equivariant Cohomology and Equivariant K-Theory*”
- Jun 2000 Canadian Mathematical Society Summer Meeting,  
Symposium on “Symplectic Geometry,” Hamilton ON.  
“*Combinatorial Formulas for Products of Thom Classes*”

#### **Invited Speaker at Departmental Seminars and Colloquia**

- Oct 2012 University of Bucharest, Romania - Theoretical Computer Science Colloquium.
- Mar 2010 MIT, Cambridge, MA - Combinatorics Seminar.
- Mar 2009 Johns Hopkins University, Baltimore, MD - Topology Seminar.
- May 2008 UMass Boston - Mathematics Seminar.
- Nov 2007 MIT, Cambridge, MA - Group Actions in Geometry Seminar.
- Nov 2005 UMass Boston - Mathematics Seminar.
- Nov 2005 UMass Lowell - Mathematical Sciences Seminar.
- Jun 2005 University of Bucharest, Romania - Differential Geometry Seminar.
- Oct 2004 George Mason University, Fairfax, VA - Mathematics Colloquium.
- Apr 2004 Penn State University, State College, PA - Topology/Geometry Seminar.
- Apr 2004 Chapman University, Orange, CA - Mathematics Seminar.
- Apr 2004 California State University, Fullerton CA - Mathematics Colloquium.
- Oct 2003 Penn State University, State College, PA - Topology/Geometry Seminar.
- Mar 2002 University of Bucharest, Romania - Differential Geometry Seminar.
- Nov 2001 University of Toronto, Toronto, ON - Symplectic Geometry Seminar.
- Nov 2001 Yale University, New Haven, CT - Topology Seminar.
- Mar 2001 University of California at Berkeley, Berkeley CA - Combinatorics Seminar.
- Feb 2001 State University of New York, Albany NY - Mathematics Colloquium.
- Feb 2001 Yale University, New Haven CT - Lie Groups Seminar.
- Nov 2000 MIT, Cambridge MA - Schubert Calculus Seminar.

#### **Other Conferences Attended:**

- Mar 2010 “Localization Techniques in Equivariant Cohomology,” American Institute of Mathematics, Palo Alto CA.
- Jun 2008 “Moment Maps,” Centre de Recerca Matemàtica, Universitat Autònoma de Barcelona, Spain.
- Jan 2008 “Mathematical Physics and Geometric Analysis,” Fields Institute, Toronto ON, Canada.
- May 2007 “Interactions between Algebraic Combinatorics and Algebraic Geometry” Workshop, Centre de Recherches Mathématiques, Montreal QC, Canada.

- May 2005 “Moment Maps in Various Geometries” Workshop, Banff International Research Station, Banff AB, Canada.
- Aug 2004 “Moment Maps and Surjectivity in Various Geometries” Workshop, American Institute of Mathematics, Palo Alto CA.
- Jun 2004 “Retrospective in Combinatorics” Conference, MIT, Cambridge MA.
- Aug 2000 “Mathematical Challenges of the 21st Century,” UCLA, Los Angeles CA.

**Research Support:**

- Travel Grant, American Institute of Mathematics, March 2010
- Travel Grant, EPFL - Bernoulli Center, Lausanne, August 2008
- Travel Grant, Osaka City University, Osaka, May 2006
- Research Development Grants, Penn State University, 2003-2005
- Travel Grant, American Institute of Mathematics, August 2004
- US Junior Oberwolfach Fellow Grant, NSF, April 2004
- VIGRE Gibbs Instructorship, Yale University, 2000-2003
- Travel Grant, Fields Institute, Toronto, June 2001
- Clay Mathematics Institute Liftoff Program, June-August 2000.
- Travel Grant, American Mathematical Society, August 2000.
- Travel Grants, Canadian Mathematical Society, August 2000, December 2002.

**Ph.D. Thesis Committees:**

- Gourishankar Seal, 2017. Member, Thesis Committee, Department of Mathematics, Northeastern University, Boston.
- Rosanne Vetro, 2015. Member, Thesis Committee, Department of Computer Science, UMass Boston.
- Dan Pletea, 2013. Member, Thesis Committee, Department of Computer Science, UMass Boston.
- Silvia Sabatini, 2009. Member, Thesis Committee, Department of Mathematics, Massachusetts Institute of Technology (MIT), Cambridge, MA.
- Charles Cochet, 2003. Consultant, Thesis Committee, Department of Mathematics, University Paris 7.

**Other Research Activity:**

- Research Affiliate, Department of Mathematics, MIT, September 2008 - present.
- Refereed manuscripts for journals and conference proceedings
  - Advances in Mathematics • Algebra, Geometry, and Applications Seminar Proceedings • Algebraic and Geometric Topology • Bulletin of the London Mathematical Society • CAARMS13 Proceedings • Discrete Mathematics • Experimental Mathematics • Geometry and Topology • Information Processing Letters • International Journal of Mathematics and Mathematical Sciences • International Mathematics Research Notes • Journal of Differential Geometry • Osaka Journal of Mathematics • Revue Africaine de la Recherche (ARIMA) Journal • SIGMA (Symmetry, Integrability and Geometry: Methods and Applications)
- Reviewed 3 books and 42 articles for *Mathematical Reviews*.

# Teaching

## Teaching Experience:

Classes taught at UMass Boston (Fall 2005 - present)

- Math 140 - Calculus I
- Math 141 - Calculus II
- Math 240 - Multivariable Calculus
- Math 242 - Multivariable and Vector Calculus
- Math 260 - Linear Algebra
- Math 310 - Applied Ordinary Differential Equations
- Math 345 - Probability and Statistics
- Math 354 - Vector Calculus
- Math 356 - Differential Geometry
- Math 390 - Problem Solving Seminar
- Math 458 - Theory of Numbers
- Math 478 - Independent Study
  - Introduction to Topology • Topics in Geometry •
  - Mathematics for Finance • Applied Probability
- Math 480 - Special Topics
  - Topics in Combinatorics

Classes taught at Penn State Altoona (Fall 2003 - Spring 2005)

- Math 140 - Calculus with Analytic Geometry, I
- Math 141 - Calculus with Analytic Geometry, II

Classes taught at Yale University (Fall 2000 - Spring 2003)

- Math 115 - Calculus of Functions of One Variable
- Math 118 - Introduction to Functions of Several Variables
- Math 118S - Mathematics for Economists
- Math 225 - Linear Algebra and Matrix Theory
- Math 246 - Ordinary Differential Equations
- Math 435 - Differential Geometry

Classes taught at MIT (Winter 1997 - Summer 2000)

- Primary instructor for Calculus, Project Interphase (Summer 1998, 1999)
- Recitation instructor for
  - 18.022 Multivariable Calculus
  - 18.02A Multivariable Calculus - Intensive
  - 18.01 Calculus
  - 18.095 Mathematics Lecture Series
- Coordinator for the Mathematics Tutoring Center (Fall 1998).
- Mentor for
  - Research Science Institute (RSI)
  - Summer Program for Undergraduate Research

Classes taught at the University of Bucharest, Romania (1995-1996)

- Linear Algebra; Differential and Riemannian Geometry; Lie Groups.

**Other Teaching Activities:**

- Lecture notes for Math 242 - Multivariable and Vector Calculus.
- Lecture notes for Math 260 - Linear Algebra.
- Advisor for students with major or minor in Mathematics, UMass Boston, 2006 - present.
- Advisor for students with major in Engineering, Penn State Altoona, 2003 - 2005.
- Contributor to OpenCourseWare at UMass Boston: materials for Calculus I, II, and III.
- Course coordinator for Math 140 - Calculus I, 2008-2010.

**Teaching Related Conferences and Workshops**

- 14th Annual Legacy of R. L. Moore Conference, Washington, DC. Jun 2011
- UMass Boston Educational Technology Conference, Boston, MA. May 2011  
Presentation: *Using WeBWork in Mathematics Instruction*
- 12th Annual Legacy of R. L. Moore Conference, Austin TX. Jul 2009
- CONNECT Math Conference, Massasoit Community College, MA. May 2009  
“Essential Topics in Mathematics,”
- UMass Boston Educational Technology Conference, Boston, MA. May 2007  
Panel presentation: “*Sharing Your Course with the Public (OpenCourseWare)*”
- 10th Annual Legacy of R. L. Moore Conference, Austin TX. Apr 2007
- Instructional Technology Conference, Sturbridge, MA. Apr 2007  
“The Scholarship of Learning and Teaching: Technology and Reflective Practice.”
- COSMIC Seminar, Spring 2007 semester
- CIT’s Annual Conference, “Teaching for Transformation,” Boston, MA. Jan 2007  
Panel Presentation: “*Mini-Lessons with Technology*”
- CIT Seminar, UMass Boston, Fall 2006 semester.  
“Working with Technology in Our Courses: Pedagogical and Critical Perspectives,”
- Project NExT Workshops  
Providence RI (August 2004), Phoenix AZ (January 2004), Boulder CO (July 2003)
- Section NExT Meetings, Allegheny Mountain MAA Section  
Slippery Rock (March 2005), Pittsburgh (September 2004), Buckhannon (March 2004)
- PREP Workshop, Providence RI, June 2005  
“Internet-Based Interactive Multivariable Calculus”
- 8th Annual Legacy of R. L. Moore Conference, Austin TX, April 2005.
- MAA Minicourse, Atlanta GA, January 2005  
“ConcepTests and Peer Instruction: Active learning in the calculus classroom”
- 7th Annual Legacy of R. L. Moore Conference, Austin TX, March 2004.

**Support:**

- Program for Instruction Innovation Grant, UMass Boston, 2010
- Dean’s Development Fund Grant, Penn State Altoona, 2004-2005
- Travel Grant, Schreyer Institute for Teaching Excellence, Penn State University, 2005
- Travel Grants, Educational Advancement Foundation 2004, 2005, 2007, and 2009.
- AMS Project NExT Fellow Grant, AMS and Penn State Altoona, 2003-2004



## Service

### Department of Mathematics, UMass Boston

- Associate Chair, August 2010 - June 2012.  
Assisted the Chair in the administration of the Department.  
Focused on advising, transfer credit, graduation requirements.
- Curriculum Committee, Fall 2008 - Spring 2012. Chair, Fall 2009 - Spring 2011.  
Developed and implemented the “Honors in Mathematics” award.  
Developed and implemented an improved version of Math 242 - Multivariable Calculus.  
Developed two advanced undergraduate courses:  
Math 356 (Differential Geometry) and Math 454 (Analysis on Manifolds).
- Personnel Committee, Fall 2006 - Spring 2008, Fall 2011-Spring 2012  
Participated in the annual review process for full-time and part-time faculty.
- Recruitment Committee, Fall 2006 - Spring 2012  
Member, Search Committee for Department Chair (2009-2010), tenure-track Assistant Professor positions (2007-2012), part-time faculty, and administrative positions.
- Honors Committee, Spring 2010, Spring 2014.
- Course Coordinator for Math 140 - Calculus I, Fall 2008 - Spring 2010  
Attended lectures by part-time instructors and provided feed-back.  
Wrote common final exams.
- Web master for the departmental web site, Spring 2005 - present  
Redesigned and maintained the departmental web site ([www.math.umb.edu](http://www.math.umb.edu)).  
Developed and implemented online evaluation forms for Math 114Q.

### College of Science and Mathematics, UMass Boston

- Chair, College Personnel Committee, CSM, 2017 - 2018.  
*This committee reviews departmental recommendations concerning reappointment through the tenure decision year (fourth-year review), tenure, promotion to the rank of associate professor, and promotion to senior rank.*
- Chair, College Faculty Senate, Fall 2012 - Spring 2016; member: Fall 2010-Spring 2016.  
*The Senate is the governing body representing the faculty of the College of Science and Mathematics.*
- Member, Litton and Brann Scholarships Selection Committee, 2013 - present  
*The scholarship winners are based primarily upon the students scholastic achievement and character.*
- Member, Student Success Task Force, Spring 2009  
*The Student Success Task Force (SSTF) was charged with considering the question of what CSM can do to enhance the retention and graduation rate of entering freshmen.*

### University of Massachusetts Boston

- College Representative, UMass Boston Faculty Council, 2016 – 2019;  
*The UMass Boston Faculty Council ensures the representation of members of the faculty in the governance of the Boston campus and the University of Massachusetts.*
- Committee Chair, Review of Andrew Grosovsky, Dean of the CSM, Fall 2015.  
*The review committee has been charged with soliciting and analyzing information about Dean Grosovsky’s administrative knowledge, skills, and accomplishments, and with summarizing its findings in a written report to the Provost.*
- Committee Member, Review of Edward Lambert, Vice Chancellor for Government Relations and Public Affairs, Spring 2017.

*The review committee has been charged with soliciting and analyzing information about the vice chancellor's administrative knowledge, skills, and accomplishments, and with summarizing its findings in a written report to the chancellor.*

- College Representative, JFK Award Selection Committee, Spring 2016, 2017;  
*The John F. Kennedy Award for Academic Excellence is the highest honor given to UMass Boston graduates; the award is given to the graduating senior who best exemplifies academic excellence, commitment to service, and good citizenship.*
- Member, Organizing Committee of the Annual Conference on Teaching, Learning & Technology, Spring 2017
- Task Force Member, Teaching Soul Committee, Spring 2016 - Spring 2017  
*The committee has been appointed by the provost, with the charge of recommending practical strategies for effectively expressing and strengthening UMass Boston's identity as a "Research University with a Teaching Soul."*
- Coach and local organizer for the William Lowell Putnam Competition, 2006-present  
*Prepared students through weekly problem solving sessions each fall semester.  
The UMB team ranked **21st** (2011), **22nd** (2015), **24th** (2014) out of 400+ teams;  
Received and processed registration forms and exams, administered 6-hour exams.*
- Review Committee, Comprehensive Scholarships for Continuing Students, 2006-2015.  
Evaluated 300+ application packages: essay, recommendation letter, and transcript.
- Member, Academic Dishonesty Panel, Fall 2011 and Summer 2016.  
Panels convened by the Associate Provost to hear appeals of students.
- Member, Academic Technology Committee, Fall 2011 - Spring 2014.
- Member, Campus Fellowship Committee, Fall 2011  
Interview two students who were applying for Fulbright fellowships;  
Assessed the student's potential and offered constructive feed-back.
- Member, Academic Support Programs College Personnel Committee, Spring 2011  
Reviewed one candidate for promotion to Senior Lecturer
- Mathematics Faculty Work Group, Title III Grant, Spring 2009.  
Participated in meetings with representatives of five community colleges.  
Discussed methods to improve transfer student recruitment and retention.

### Community

- Member, panel at OCW workshop for Boston public high school teachers, July 2010.
- "Transformations in Geometry" Presentation, Haitian Scientific Society, March 2007.
- Judge for the Undergraduate Poster Session, AMS-MAA Joint Meetings, 2004, 2005.
- Judge for the Pennsylvania Junior Academy of Science Competition, 2004, 2005.

### Profession

- UMass Boston Disciplinary Expert, MassTransfer Pathways, 2015-2017.  
*The primary goal of this project is to create a unified system of transfer that will allow students to seamlessly move from two-year institutions to four-year institutions.*
- Organizer, Special Session on "Symmetries of Symplectic Manifolds and Related Topics" at the Mathematical Congress of the Americas, Montreal, July 24-28, 2017.
- Reviewer for Mathematical Reviews. Reviewed 3 books and 42 articles.
- Referee for research journals and conference proceedings.
- Member, Calculus Board of Advisors, Houghton Mifflin Company, 2003-2006.  
Reviewed two chapters for a new calculus textbook under development.  
Participated in Advisory Board meetings, Boston, October 2005.