CURRICULUM VITAE
Victor J. Donnay
July 2025

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Education:

B.S.	Dartmouth College, 1981
M.S.	Courant Institute, New York University, 1983
Ph.D.	Courant Institute, New York University, 1986. Peter Sarnak, Adviser

Positions:

1981-85	Research/Teaching Assistantship, Courant Institute, New York University
1982-83	(Summers)Instructor, Junior Faculty Member, Pre-Medical Research and Education Program, New York City
1985-86	Visiting Scholar, Stanford University
1986 (Winter, Spring)	Instructor, Adjunct Position in School of Engineering, Santa Clara University, CA
1986-87	Visiting Member, ETH, Zurich Switzerland
1987-90	Instructor, Princeton University
1990 (Winter, Spring)	Participant, Program in Dynamical Systems and Their Applications, Institute for Mathematics and Its Applications, Minneapolis
1990-1996	Assistant Professor, Bryn Mawr College
1991 July	Guest of "Sonderforschungsbereich 170", "Geometry and Analysis", University of Gottingen, Germany
1992-93	Visitor, Institute for Advanced Study, Princeton, NJ
1994 October	Short term visitor, The Geometry Center, Minneapolis
1996-2002	Associate Professor, Bryn Mawr College
1996-2002, 2021-2024	Chair, Department of Mathematics, Bryn Mawr College
1998-99	Visiting Scholar, University of California, Berkeley
2002 -	Professor, Bryn Mawr College 2007- Board Member, 21st Century Partnership for STEM Education
2011-	Director, Philadelphia Regional Institute for STEM Educators at Saint Joseph's University (formerly the Philadelphia Regional Noyce Partnership)
2012 - 2014	Chair, Bryn Mawr College Sustainability Leadership Group
2013 -	William R. Kenan, Jr. Chair in Mathematics

2013 - 2016	Director, Environmental Studies Program, Bryn Mawr College
2016 - 2018	Co-Director, Environmental Studies Program, Bryn Mawr College
2017 -	Judge of Elections, Haverford Township 5-2
2020-2023	Chair, Haverford Township Ad-Hoc Solar Advisory Committee

Grants:

NSF Grants 1988-1990, $21,496
Bryn Mawr College Faculty Research Grant, 1991-1992, $1000
Pew Science Program, 1991-1992, $6779
Bryn Mawr College Faculty Research Grant, 1992-1993, $1163
NSF Travel Grant 1992-93, $3000
Bryn Mawr College Faculty Research Grant, 1993-1994, $1535
Bryn Mawr College Provost's Grant, summer 1994, $2705, to fund the Bryn Mawr - Swarthmore Geometry and Computer Visualization Project
U.S. Civilian Research and Development Foundation (CRDF) Grant, $33,900, 1996-1998, Co-PI with Vladimir Lazutkin.
Bryn Mawr College Faculty Research Grant, 1998-1999, $2000.
Bryn Mawr College Praxis Course Development Grant 2001, $3000.
Sigma Xi National Computer Science Institute workshop for Tri-college faculty, Co-PI, Dec. 2003.
Mellon Tri-College Forum Grant, 2003-2004, $5000
NSF Math-Science Partnership Grant, 2003-2008, $12.5 million, Co-PI, Joe Merlino, PI. PI of the Bryn Mawr-Haverford MSPGP subaward ($700,000).
Project Kaleidoscope Leadership Planning Grant, 2004-2005, $5000.
National Fish and Wildlife Foundation, Delaware Estuary Watershed Grants Program Environmental Assessment and Action Plan for the Haverford State Hospital site, 2007-2008, $45, 320. Project Director Jan Marie Rushforth. Member of project leadership team.
NSF Math Science Partnership START grant, Environment, Energy, and Sustainability Science: An Institute for 21st Century Teacher Leaders, 2008-2010, $299,498. Co-PI, Steve Madigosky, Widener University, PI.
NSF Noyce Teacher Scholarship Program at Bryn Mawr and Haverford Colleges, PI, 5 year grant for $897,421, 7/1/09 – 6/30/2014.
NSF Noyce Capacity Building grant #1136323, Philadelphia Regional Noyce Partnership, PI, 2 year grant for $300,000, 9/1/11 – 8/31/13.
Mellon Tri-Co Seed grant, Tri-College Biomathematics Initiative, $3000, 2011-12.
Course Development Grant for Math and Sustainability course, $3000, Bryn Mawr College, summer 2011.
Consortium for Excellence in Teacher Education (CETE), $3000 seed grant to sponsor conference on STEM Teacher Preparation at Liberal Arts Institutions. October 2011.
NSF Workshop grant, # 123662, $50,000 to fund conference on STEM Teacher Preparation at Liberal Arts Institutions. 4/1/12-3/31/14.
NSF Noyce Capacity Building grant #1439790, Philadelphia Regional Noyce Partnership New Teacher Support Program, PI, $300,000, 2014-17.

NSF ISUE grant #1525691, The Summer STEM Teaching Experiences for Undergraduates from Liberal Arts Institutions (TEU) program, 5 year grant for $2.13 million, C. Steinhorn PI, V. J. Donnay, Co-PI, 9/1/15 – 8/31/20.

NSF Noyce Capacity Building grant #1660796, Education for Sustainability – Philly, PI, $120,000, 2017-18.

NSF Noyce Teacher Scholarship grant #1758353, Philadelphia Regional Noyce Partnership Scholarship Program, Co-PI, $1.45 million, 6/1/18-5/31/23.

NSF Noyce Conference grant #1852807, Philadelphia Regional Pre-and In-Service Teacher Conference Series on Integrating STEM in Everyday Life, PI, $49,996, 4/15/19-5/21/20.

Carnegie Corporation, STEM Teaching Experiences for Undergraduates Program (TEU), 4-year grant for $520,000, C. Steinhorn PI, V. J. Donnay, Co-PI, 2/1/20 – 8/31/24.

PASmart Advance grant, STEM Education for Sustainability – Linking Schools and Communities, 16 month grant for $500,000, P. Morgan, PI, V. J. Donnay Co-PI, 2/1/20-6/30/21.

NSF Discovery Research K-12 grant #2101395, Understanding STEM Teaching through Integrated Contexts in Everyday Life, 4 year grant for $2,031,108, A. Macalalag, PI. Donnay PI of the Saint Joseph's University $331,000 subaward.

NSF S-STEM-C grant #2130370 , Building STEM Identity and Persistence Through STEM Pathway Mentorship (STEMLA), $1,493,741, 4/22 – 3/28, J. Skirkanich, PI, V. Donnay Co-PI.

PA Aspire to Educate STEM -CS, Philadelphia Regional STEM - CS Teaching Experience for Undergraduates (PR-TEU), 2 year grant for $243,000. S. Varnum, Temple University, Director, V.J. Donnay, Co-Director, 1/2023 – 12/ 2024.

PA Aspire to Educate STEM -CS, The Philadelphia Regional STEM Teacher Talent Development Coalition, 1 year grant for $98,000. G. Richardson, Director, V.J. Donnay, S. Olinksy, Co-Directors, 1/2023 – 12/ 2023.

PAsmart Advancing Computer Science & STEM Education Grants, The Career Connected Pathways for STEM Teacher Education (C2 STEP) initiative for $75,000. G. Richardson, Director, V.J. Donnay, S. Olinksy, Co-Directors, 12/2024 – 6/ 2026.

Honors and Awards:

June 1981	Graduated Phi Beta Kappa, Summa Cum Laude with Distinction in Mathematics from Dartmouth College. Recipient of the Reynolds Scholarship (Honorary).
March 1987	Friedrichs Prize for an outstanding Ph.D. thesis from the Courant Institute.
1998	Recipient of Enhanced Sabbatical Leave from Bryn Mawr College.
2008	Curriculum for my Differential Equations course chosen as a Model Course by SENCER (Science Engagement for New Civic Engagements and Responsibilities).
2009, 2016	Nominated by Bryn Mawr's Civic Engagement Office for the national Campus Compact Thomas Ehrlich award given to a faculty member for

	exemplary engaged scholarship including leadership in advancing civic engagement.
2012-13	On the Rosabeth Moss Kanter Change Master Fund.
2013 -	William R. Kenan, Jr. Chair in Mathematics.
August 2015	Keynote speaker, National SENCER Summer Institute, WPI, Worcester, MA.
June 2016	School District of Philadelphia GreenFutures Capacity Builder Certificate of Acknowledgment.
October 2016	Distinguished Visiting Scholar, University of Hawaii West Oahu.

Conferences:

Invited Lectures:

March 1987	Conference on Smooth Dynamical Systems, University of Maryland
May 1987	Dynamical Systems Conference, Oberwolfach, Germany
July 1988	London Mathematical Society Symposium on Dynamical Systems, Durham, England
August 1989	International Conference and Workshop on Dynamical Systems, IMPA, Rio De Janeiro
March 1990	Twist Map Conference, IMA, Minneapolis
March 1991	Dynamical Systems Conference, University of Maryland
July 1991	Dynamical Systems Conference, Oberwolfach, Germany
April 1993	Workshop on Spectral Theory and Dynamical Systems, The Johns Hopkins University
October 1993	Dynamical Systems Conference, Penn State University
July 1994	Symposium on Classical and Quantum Billiards, Ascona, Switzerland
August 1994	Minneapolis Mathfeast, AMS Special Session, "Computer Graphics as a Research Tool in Geometry and Topology"
April 1995	Dynamical Systems Conference, Rutgers Camden
July 1995	International Workshop on Hamiltonian Mechanics, Warsaw, Poland
October 1996	Panelist, Exemplary Mathematics Programs for Women, 11th Annual Department Chairs Colloquium, Washington, DC
December 1996	Hyperbolic Systems with Singularities, Schroedinger Institute, Vienna, Austria
March 1997	AMS Meeting, Southeastern Section, Memphis, Special Session on Chaotic Dynamics.
June 1998	Conference in Honor of M.C. Escher's 100th Birthday, Rome, Italy
November 1999	Workshop session leader, "Selling your department to the Administration",14th Annual Department Chairs Colloquium, Washington, DC
March 2000	Dynamical Systems Conference, University of Maryland
July 2000	International Conference on Dynamical Systems, IMPA, Rio De Janeiro
November 2000	AMS Meeting, Southeastern Section, University of Alabama, Birmingham, Special Session on Billiards.
October 2001	Dynamical Systems Conference, Penn State University.

July 2003	International Conference on Dynamical Systems, Porto Portugal.
October 2003	Dynamical Systems Conference, Penn State University.
March 2004	Dynamical Systems Congress, Montevideo, Uruguay
November 2005	Differential Geometry Day, Eastern Illinois University
January 2014	QR Sigma, Annual meeting, Keynote Address, Joint Mathematics Meetings, Baltimore.
March 2015	Chicago Symposium, Northeastern Illinois University.
March 2015	Midwest SENCER meeting, Northeastern Illinois University.
January 2018	Joint Mathematics Meetings, San Diego, MAA Invited Session: Research in Improving Undergraduate STEM Education, The Teaching Experience for Undergraduates (TEU) Summer Program.

Contributed Talks:

June 1989	Workshop on the Geometry of Hamiltonian Systems, MSRI
January 1990	Joint Mathematics Meetings, MAA Special Session, "Computers in the Classroom, the time is Right", Louisville
January 1992	Joint Mathematics Meetings, MAA Special Session, "Toolkit for the Liberal Arts", Baltimore
March 1992	International Conference on Hamiltonian Dynamical Systems, University of Cincinnati
May 1993	Joint Northeastern University-Bryn Mawr Ergodic Theory Conference, Bryn Mawr College
August 1999	Art and Mathematics Conference, UC Berkeley
January 2009	Joint Mathematics Meetings, MAA Session on College Algebra: Focusing on Conceptual Understanding, Real-World Data, and Mathematical Modeling. Talk titled Building Civic Engagement into Mathematics Courses as a Way to Motivate and Inspire Students,
January 2014	Joint Mathematics Meetings, Baltimore, MAA Session Undergraduate Sustainability Experiences in the Introductory Mathematics Classroom: (i) Is it "Worth It" to Change Your Light Bulb? with E. Biernet and H. Weinstein; (ii) Artic Sea Ice Activities in Class with B. Bauldry and L. Reed; (iii) Using Solar Panels to Teach Integration.
April 2018	AREA Structured Poster Session, NYC, Teaching Experiences for Undergraduates: Recruiting, Preparing and Retaining STEM Teachers for Public Schools. (i) Changing Pedagogies in Math and Science Education: A Liberal Arts College STEM Majors Course(Presenting Author) (ii) The Summer STEM Teaching Experiences for Undergraduates Program (Non-presenting author).
July 2018	SIAM Conference, Session on Innovative Pedagogical Practices, Math Modeling and Sustainability, talk on the Education for Sustainability

– Philly project and talk on Math Modeling and Sustainability: Using Service Learning Projects to Deepen Student Engagement with Modeling.

March 2022 AMS Eastern Spring Virtual Sectional Meeting, Special session on Geometric Dynamics and Billiards, Embedded surfaces of finite genus with Anosov geodesic flow: Part I.

January 2025 Joint Mathematics Meetings, Seattle, AMS Special Session on Modeling Natural Resources, Cost Benefit Analysis of Solar Panels: Empowering students to make a difference, joint with K. Pasia and P. Peterson.
Sigma Special Session on Mathematics and the Arts, Creating the World's Largest Sierpinski Triangle out of K'NEX pieces.

Attended:

August 1988	Symposium in Mathematics, ETH Zurich, on the occasion of Professor J. Moser's 60th birthday
May 1989	Geometric Rigidity Conference, University of Colorado
March 1990	Geometric Rigidly Conference, Northwestern University
April 1990	Dynamical Systems Conference, University of Maryland
July 1990	International Convention on Cooperative Learning, Baltimore, Maryland
October 1990	Dynamical Systems Conference, Penn State University
March 1991	Geometric Rigidity and Hyperbolic Dynamics Conference, Penn State University
October 1991	Dynamical Systems Conference, Penn State University
October 1992	Dynamical Systems Conference, Penn State University
March 1993	Dynamical Systems Conference, University of Maryland
March 1993	Geometry Festival, University of Pennsylvania
January 1994	Joint Mathematical Meetings, Cincinnati
March 1994	Dynamical Systems Conference, University of Maryland
October 1995	Dynamical Systems Conference, Penn State University
March 1996	Visualizing Geometry Conference, Rutgers Camden
January 1998	Joint Mathematical Meetings, Baltimore, MD
October 1999	Dynamical Systems Conference, Penn State University
January 2000	Joint Mathematical Meetings, Washington D.C.
January 2004	National MSP Conference, Washington, DC
February 2004	National Research Council Workshop on Assessment, Washington, DC
May 2004	DIMACS Workshop on Mathematical Epidemiology and Vaccine Strategies, Rutgers University.
June 2004	National Research Council Workshop on How People Learn, Washington, DC
January 2005	National MSP Conference, Washington, DC
January 2006	National MSP Conference, Washington, DC

November 2006	Dynamical Systems Conference, Penn State University
November 2007	Lilly Conference on College Teaching and Learning, Miami of Ohio University.
January 2008	2008 MSP Learning Network Conference
November 2010	Oxtoby Centennial Conference, Bryn Mawr College.
October 2011	Consortium for Excellence in Teacher Education (CETE) annual conference, Barnard College.
November 2011	MAA EPADEL Conference, Bryn Mawr College.
May 2012, 2013	Tri-College 2 day workshop on Environmental Studies.
May 2014	Tri-College 2 day workshop on Environmental Studies (Organizer).
May 2015	Bryn Mawr Environmental Studies Program 1 day workshop (Organizer).
May 2016	K. Chernov Memorial Dynamical Systems Conference, Birmingham Alabama
October 2018	2018 Workshop in Dynamical Systems in memory of A. Katok, Penn State
March 2019	Critical Issues in Education: Mathematical Modeling, MSRI, Berkeley CA

Colloquia:

April 1988	Bryn Mawr College
February 1990	University of Minnesota
February 1990	University of Toronto
February 1990	Haverford College
February 1990	Bryn Mawr College
March 1990	Georgia Tech University
March 1990	Williams College
September 1991	Haverford College
November 1991	Swarthmore College
February 1993	Drexel University, Physics Department
April 1993	U.C. Santa Barbara
November 1994	Haverford College
October 1999	Haverford College
October 2004	Villanova University
April 2005	Stevens Institute of Technology
November 2005	Bryn Mawr College
October 2011	Stockton State College
September 2015	Vassar College
April 2017	Hofstra University
March 2019	Ithaca College

Seminar Lectures:

March 1986	Cal Tech Dynamics Seminar
June 1986	CUNY Graduate Center Dynamics Seminar
October 1986	ETH Zurich Analysis Seminar
January 1987	McGill University Analysis Seminar

June 1987	University of Bern, Dynamics Seminar
November 1987	Rutgers University, Mathematical Physics Seminar
December 1987	Institute for Advanced Study, Dynamics Seminar
March 1988	Penn State University, Applied Math Seminar
July 1988	University of Rome, Analysis Seminar, 2 lectures
July 1988	Mathematical Institute of the Hungarian Academy of Sciences, Budapest
August 1988	Technical University of Berlin, Mathematical Physics Seminar
November 1988	Institute for Advanced Study, Dynamics Seminar
June 1989	University of California, Berkeley, Dynamics Seminar
January 1990	University of Michigan, PDE-Dynamics Seminar
February 1990	IMA, Minneapolis, Dynamics Seminar
May 1990	University of Minnesota, Geometry Seminar
July 1991	University of Gottingen, Analysis Seminar
July 1991	University of Bielefeld, Dynamics Seminar
October 1991	University of Pennsylvania, Geometry - Topology Seminar
October 1991	Stockton State College, Mathematics Seminar
January 1992	Penn State University, Mills College Summer Program Reunion
July 1992	Northwestern University, Dynamics Seminar
October 1992	SUNY Stony Brook, Dynamics Seminar
October 1992	University of Maryland, Dynamics Seminar
December 1992	University of Arizona, Dynamics Seminar
March 1993	Institute for Advanced Study, Geometry Seminar
April 1993	CUNY Graduate Center, Dynamics Seminar
April 1993	Princeton University, series of 2 lectures in Lewowicz's Dynamics Seminar
May 1993	University of Delaware, Dynamics Seminar
April 1994	University of Pennsylvania, Geometry - Topology Seminar
April 1996	University of Pennsylvania, Geometry - Topology Seminar
June 1997	Euler Institute, St. Petersburg, Russia, Dynamical Systems Seminar
September 1998	MSRI Dynamical Systems Seminar
October 1998	U.C. Berkeley Dynamical Systems Seminar
March 1999	University of Arizona Dynamical Systems Seminar
April 1999	Northwestern University Dynamical Systems Seminar
April 1999	Notre Dame University Geometry Seminar
June 1999	University of Southern California Dynamics Seminar
March 2000	University of Pennsylvania, Geometry - Topology Seminar
July 2003	Barcelona Dynamical Systems Seminar.
February 2004	University of Pennsylvania, Geometry - Topology Seminar
April 2013	City College of New York, School of Education, Department of Teaching, Learning, and Culture, Seminar on the Math of Sustainability.
April 2014	STEM Colloquium for the Noyce Teacher Scholar Program at Barnard College.
September 2015	Budapest University of Technology and Economics
September 2015	Budapest Semester in Mathematics

November 2015	Pomona College
October 2023	Penn State University
October 2024	Saint Andrews University
	University of Edinburgh

Education Workshops and Programs

March 1992	Temple University. Chautauqua Short Course Program, Lectured on Chaos theory.
April 1992	Bryn Mawr College. Organized a three part lecture series on chaos for school teachers in the Philadelphia area; gave lecture on the mathematics of chaos.
Summer 1993	Bryn Mawr-Spelman Undergraduate Research Program, faculty supervisor.
Summer 1996	Bryn Mawr College. Faculty supervisor for undergraduate research program in mathematics.
July 1997, June 1998, August 2000.	Bryn Mawr College. Co-Director of two week Chaos and Computers Institute for Philadelphia school.
June 2001	Organized day long workshop on math and science pedagogy for area faculty in preparation for spring 2002 Changing Pedagogies course.
May 2004	Bryn Mawr College. Organizer, half day workshop on math and science pedagogy for faculty from Tri-Co.
August 2004	Invited participant in TIMSS mathematics lessons work session, Racine, WI.
Sept 2004 – May 2005	Bryn Mawr College. Organizer and facilitator for monthly pedagogy seminar for college and secondary math and science faculty. MSPGP subaward.
October 2004	Bucknell University. New pedagogical approaches, 1 hour workshop with math faculty.
February 2005	Cheltenham High School Math Dept, presentation on Formative Assessment.
April 2005	Octorara Middle/High School Math Dept, presentation on Formative Assessment
August 2005	Radnor High School Math Dept, presentation on Formative Assessment
October 2005	Haverford School District, presentation on Formative Assessment
May 2005	Haverford College. Organizer, one day workshop on math and science pedagogy for faculty from MSPGP partner IHEs.
August 2005	MSPGP-PKAL Leadership Planning Institute. Organizer and co-facilitator of 3 day leadership institute.
November 2005	Northwestern University. Faculty workshop on How People Learn and Formative Assessment.

November 2005	Bryn Mawr College. Computer Graphics workshop for Coopertown Elementary School students leading to their participation in undergraduate poster session.
January – May 2006	Organizer and co-facilitator of MSPGP monthly pedagogy seminar on Formative Assessment lead by Dr. Dylan Wiliam, attended by 40 secondary and IHE faculty.
February 2006	MSPGP Math Disciplinary Faculty Symposium, TIMSS video study: Ichiro Japanese lesson.
February 2006	Drew University. Faculty workshop on How People Learn and Formative Assessment.
June 2006	Bryn Mawr College. and MSPGP. Organizer, one day workshop on assessment in math and science education, Dr. George Bodner, Purdue University, keynote speaker. For faculty from Bryn Mawr, Haverford and MSPGP partner IHEs.
August 2006	MSPGP-PKAL Leadership Planning Institute. Organizer and co-facilitator of 4 day leadership institute.
September 2006	Colonial School District, presentation on How People Learn to 24 middle school and high school math teachers.
November 2006	Pennsauken School District, presentation on How People Learn and Formative Assessment to 40 middle school and high school math teachers.
January – May 2007	Lincoln University. Facilitated four part series on How People Learn and Formative Assessment for math, science, and education faculty.
April 2007	Bryn Mawr College. Organizer, workshop on Student Centered Discussion Techniques led by Dr. Eric Mazur, Harvard University, for Higher Ed and Secondary educators from the MSPGP.
June 2007	St. Joseph's University, workshop on How People Learn and Formative Assessment to faculty pedagogy seminar.
July 2007	Workshop on How People Learn for Cherry Hill School District for 40 math and science teachers.
November 2007	Ridley High School. 2 day workshop on Modeling Physics and Modeling Chemistry high school curriculum, led by Mr. Larry Dukerich, Arizona State University. Member, Planning Group.
February 2008	Workshop on How People Learn for Interboro School District for 20 math teachers.
March 2008	Bryn Mawr College. Organizer, workshop on "Strategies that support Students Success in Math and Science", Dr. Freeman Hrabowski, President of University Maryland Baltimore County, keynote speaker. For Higher Ed faculty from the MSPGP.
April, May 2008	Two workshops with teachers from the Haverford School District on using the Haverford open space site for educational purposes.
June 2008	MSPGP IHE Pedagogy Conference: Exploring the Brain:

	Implications for Teaching. Member of Conference Planning Committee.
August 2008	Workshop on How People Learn for Cherry Hill School District for 35 math and science teachers.
December 2008	Chaotic Billiards, presentation to 9th grade science class at Haverford High School.
May 2009	Participant, NSF sponsored conference on Social Network Analysis.
May 2009	Organized and facilitated half-day workshop on Quantitative Reasoning at Bryn Mawr for 35 faculty and administrations. Dr. Corri Taylor, Wellesley University, keynote speaker.
May 2009	St. Joseph's University, workshop on How People Learn and Formative Assessment to faculty pedagogy seminar.
November 2010	Northwestern University. Presentation to Math Dept on Math and Sustainability.
April 2011	St. Joseph's University, Keynote speaker, Sigma Xi induction ceremony.
May 2011	Haverford High School, presentations to 170 students on the Haverford Reserve, Geothermal Energy and Mathematics.
June 2011	St. Joseph's University, workshop on How People Learn and Formative Assessment to faculty pedagogy seminar.
May 2012	Bryn Mawr College, 3 day conference: Building a Network of Liberal Arts institutions to support STEM Teacher Preparation. Lead organizer.
July 2012, 2013	Bryn Mawr College, 2 week HHMI summer institute for 18 secondary teachers on math and sustainability
March 2013	MAA PREP curriculum development workshop: Educating with Math for a Sustainable Future.
June 2013	St. Joseph's University, workshop on How People Learn and Formative Assessment to faculty pedagogy seminar.
July 2013	PREP MAA workshop, Undergraduate Sustainability Experiences in Mathematics, led one day of the week long workshop.
June 2014	World Affairs Council of Philadelphia, Teacher Workshop: Connecting Global Literacy with STEM Education presentation on Math and Sustainability.
October 2016	Bryn Mawr College Parents Weekend: Math and Sustainability.
October 2016	Distinguished Visiting Scholar, University of Hawaii West Oahu. Gave series of 4 talks on Math and Sustainability.
April 2018	School District of Philadelphia, Teacher Symposium, Mathematics in Sustainability.
June 2018	St. Joseph's University, workshop on How People Learn and Formative Assessment to faculty pedagogy seminar.
April 2021	MAA Virtual Programming mini-course, Why Should Sustainability Be Part of What We Teach? with Tom Pfaff, 4.5 hour zoom course over three days, April 26, 27, 38, 2021.

Education Conference Presentations

December 2004	National Research Council MSP Workshop, Washington DC. Panelist: Finding common ground between IHE and K-12 educators; examples of implementation.
November 2005	EPDEL section of MAA, Service Learning panelist.
January 2006	2006 MSP Learning Network Conference. Washington DC. Workshop jointly presented with Cathy Carol. Going to Scale: Supporting the People Who Work with Teachers of Elementary Mathematics.
May 2006	Lafayette College. The Mathematics of Social Justice. Course Development Workshop. Keynote speaker: What is Possible?
January 2007	2007 MSP Learning Network Conference. Breakout session presentation: Pedagogy Seminar for Math and Science Faculty: Vehicle for Change.
June 2007	Presentation on Formative Assessment at MSPGP IHE Millennial Learners Conference; Member of Conference Planning Committee.
October 2007	MSPGP 2nd Annual Conference for Research in Math and Science Education. New Course Design: Changing Pedagogies in Math and Science Education; Member of Conference Planning Committee.
December 2007	Leveraging Impact: From the classroom to a regional STEM Compact, presentation at NSF and DOE Mathematics and Science Partnerships STEM Summit
September 2008	PHEEND Conference on Service Learning, Cabrini College; spoke about the MSPGP and the START Environmental Sustainability project.
November 2008	MSPGP 3rd Annual Conference for Research in Math and Science Education. Changing Pedagogies in Math and Science Education: An Assessment of Course's Impact on recruiting students into education. Joint with Julie Zaebst.
January 2009	2009 Joint Mathematical Meetings, MAA Session on College Algebra. How Mathematics Can Contribute to Solving the Problems Facing the World: Building Civic Engagement into Mathematics Courses as a Way to Motivate and Inspire Students.
January 2009	2009 MSP Learning Network Conference. Breakout session presentation: Assessing the Effectiveness of a New Course in Math and Science Education in Recruiting Math and Science Majors into Education.
July 2010	2010 Noyce Program National Conference. (i) Breakout session presentation: Building on a Baseline Survey to Strengthen

	Program Design**,** Donnay, Alice Lesnick and Joy Quill. (ii) Poster presentation: The Bryn Mawr – Haverford Noyce program.
July 2011	Noyce Program National Conference, Breakout session presentations: (i) How People Learn. (ii) Noyce Partnerships: Building Connections- Developing Synergies- Adding Value.
October 2011	Noyce Northeast Regional Conference, Philadelphia. Breakout session presentation: How People Learn.
January 2012	2012 MSP Learning Network Conference. Breakout session presentation: Infusing Issues in Sustainability Science Across the Curriculum to Motivate Improved Teaching and Learning in STEM.
October 2012	CETE (Consortium for Excellence in Teacher Education) annual conference, Mt Holyoke College. Report on the May 2012 conference: Building a Network of Liberal Arts institutions to support STEM Teacher Preparation.
March 2014	Noyce Northeast Regional Conference, Philadelphia. Breakout session presentation: Mathematics and Sustainability.
March 2014	Southeastern Pennsylvania Section of the American Association of Physics Teachers, Spring Meeting, Villanova University. Breakout session presentation: Mathematics and Sustainability.
June 2015	Philadelphia Regional Noyce Partnership, teacher workshop on Math and Sustainability.
February 2016	PHENND Service-Learning Conference: Math and Sustainability for the Philadelphia School District Green Futures plan.
October 2016	Panelist at Philadelphia Education Fund networking event: Informal STEM & University Partnerships.
August 2017-May 2018	Co-facilitator for 60 hour professional development course on Education for Sustainability for 14 School District of Philadelphia secondary teachers.
March 2019	Pa. Assoc. Environmental Educators, presentation on EFS teacher leadership project at the School District of Philadelphia.,
May 2019	PHEEND Conference on Education for Sustainability, School District of Philadelphia, presentation on EFS teacher leadership project at the School District of Philadelphia.
November 2019	PRNP Workshop on Integrating STEM with Everyday Life. Exemplar Lesson: *Buying a car: Free Choice or Government Regulation?*
November 2024	School District of Philadelphia's Family Math Day at Temple University. Making a Sierpinski Triangle out of K'Nex.
May 2025	PAMTE Symposium presentation: Recruiting Students into Math Teaching.

Expository Lectures on Mathematics:

November 1989	Princeton University, Public lecture
May 1990	University of Minnesota UMTYMP program,
October 1990	Bryn Mawr College, Parents Day,
March 1991	Bryn Mawr College, The Campaign for Bryn Mawr Opening Weekend
April 1991	Bryn Mawr College, Math Awareness Week
October 1991	Bryn Mawr College, Alumni Council
October 1993	Thomas Paine Unitarian Universalist Fellowship
October 2000	Bryn Mawr College, Parents Day
December 2000	Bryn Mawr College, Visual Cultures seminar
September 2001	Arcadia University, Graduate Colloquium Series
April 2002	St. Joseph's University, Math Awareness Day speaker
October 2002	Indiana University Undergraduate Colloquium
April 2003	Bryn Mawr College, Math Awareness Week speaker
October 2005	Bucknell University Undergraduate Colloquium
February 2006	Drew University Undergraduate Colloquium
April 2013	Abraham Lincoln High School, Philadelphia, PA. Earth Day presentation on Math and Sustainability
April 2022	Delaware County Earth Day, presentation on Education for Sustainability.

Publications:

1. Geodesic flow on the two-sphere, Part I: Positive measure entropy, Ergod. Th. & Dynam. Sys. 8 (1988), 531-553.

2. Geodesic flow on the two-sphere, Part II: Ergodicity, Dynamical Systems, Springer Lecture Notes in Math., Vol. 1342 (1988), 112-153.

3. Using integrability to produce chaos: billiards with positive entropy, Comm. Math. Phys. 141 (1991), 225-257.

4. Joint with C. Liverani, Potentials on the two-torus for which the Hamiltonian flow is ergodic, Commun. Math. Phys. 135 (1991), 267-302.

5, Physical examples of linked twist maps with chaotic dynamics in Twist Mappings and Their Applications, R. McGehee and K. Meyer, Eds, Springer-Verlag (1993).

6. Transverse Homoclinic Connections for Geodesic Flows, Hamiltonian Dynamical Systems: History, Theory and Applications, H.S. Dumas, K.R. Meyer and D.S. Schmidt, Eds, Springer-Verlag (1995), 115-125.

7. Elliptic islands in generalized Sinai billiards, Ergod. Th. & Dynam. Sys. (1996), 16, 975-1010.

8. Joint with K. Burns, Embedded surfaces with ergodic geodesic flow, Inter. J. of Bifurcation and Chaos, Vol. 7, No. 7 (1997) 1509-1527.

9. Non-ergodicity of two particles interacting via a smooth potential, J. of Statistical Physics, Vol. 96, Nos. 5/6 (1999) 1021-1048.

10. Chaotic geodesic motion: an extension of M.C. Escher's Circle Limit Design, pp. 318-333, M.C. Escher's Legacy: A Centennial Celebration Schattschneider, Doris; Emmer, Michele (Eds.) 2003, Springer-Verlag, (refereed publication).

11. Joint with C. Pugh, Anosov geodesic flows for embedded surfaces, Astérisque 287 (2003), 61-69 in Geometric methods in Dynamics II - Volume in honor of Jacob Palis, W. de Melo, M.Viana, J.C. Yoccoz (Ed.)

12. Creating transverse homoclinic connections in planar billiards, *Zap. Nauchn. Sem. S.-Peterburg. Otdel. Mat. Inst. Steklov. (POMI)* **300** (2003), Teor. Predst. Din. Sist. Spets. Vyp. 8, 122--134, 287.

13. Joint with C. Pugh, Finite horizon Riemann Structures and Ergodicity, Ergod. Th. & Dynam. Sys. (2004) 24, 89 - 106.

14. Perspectives on Mathematics Education Projects in a Service-Learning Framework, in Mathematics in Service to the Community, MAA Notes #66, Charles Hadlock editor, 2005.

15. Destroying ergodicity in geodesic flows on surfaces, Nonlinearity 19 (2006) 149-169.

16. Joint with A. Root and J. Zaebst, Changing Pedagogies Course: a study of the effectiveness of a new course in recruiting STEM majors into education 2008.

17. Civic Engagement via Differential Equations, UMAP Journal 33.4 (2013) 387-392.

18. Using sustainability to incorporate service-learning into a mathematics course: a case study, PRIMUS special issue on Service Learning 23.6 (2013) 519-537.

19. Joint with Catherine A. Roberts and Thomas J. Pfaff, Balancing needs and seeking solutions for a complex changing world. The role of mathematics in addressing issues of sustainability. Introductory essay for Mathematics Awareness Month 2013 – the Mathematics of Sustainability, January 2013. Available at https://ww2.amstat.org/mam/2013/essays.html

20. Sustainability, Service-Learning and Student Engagement, theme essay for Mathematics Awareness Month 2013 – the Mathematics of Sustainability. March 2013. Available at https://ww2.amstat.org/mam/2013/essays.html

21. Joint with Dan Visscher, A new proof of the existence of embedded surfaces with Anosov geodesic flow, Regular and Chaotic Dynamics, 23 (6):685-694 (2018).

22. Joint with Jane Long and Mary O'Keefe, Hands-on outreach activities using fractal geometry, MAA Focus, Dec 2018/Jan 2019, 20-23.

23. Discovering Bifurcation, UMAP journal, 43 (2) (2022) 97-107.

24. Solar Panels, Euler's Method and Community-based Projects: Connecting Differential Equations with Climate Change, *CODEE Journal*: Vol. 17, Article 12 (2024). Available at: https://scholarship.claremont.edu/codee/vol17/iss1/12

25. Empowering students (and faculty): Using math to make a difference, MAA Focus, 45 (2) (April/May 2025), 52 - 54.

26. Joint with Kris Pasia and Priita Peterson, Solar panel installation: a cost-benefit analysis, UMAP journal, 46 (2) (2025) 115 – 146.

Expository:

1. I think, therefore I sum, Bryn Mawr Alumnae Bulletin, Fall 1991.
2. The Mathematics of Climate Change, Bryn Mawr Alumnae Bulletin, Spring 2016.

Educational Materials

- The Topology and Geometry of the Costa surface, a 5 minute video produced in collaboration with B. Butoi, S. Levy, T. Munzner, and M. Teodorescu, (1995)

- Seraut-the-dots, School Arts (2005) Vol 105, November 2005, p. 43. Instructions on how to carry out a collaborative learning, hands-on art project for 2nd graders.

- Family of Five Math Lesson: the Mathematical Content, joint with Ned Wolff, for West Ed's Leadership Curriculum for Mathematics Professional Development project, 2005.

- Using TIMSS Videos to Improve Learning of Mathematics: A Resource Guide, Richard Askey and Patsy Wang-Iverson, Editors, 2005. I am acknowledged for contributing to the resource guide and for reviewing the guide.

- Quick Images: the Mathematical Content, joint with Ned Wolff , for West Ed's Leadership Curriculum for Mathematics Professional Development project, 2006.

- The Pit and the Pendulum, Mathematical Commentary for the Interactive Mathematics Program, joint with Ned Wolff, 2006.

- Introduction to the principles of How People Learn and Formative Assessment, a professional development protocol, MSPGP report, 2007.

- Differential Equations and Civic Engagement, in SIGMAA-QL Newsletter, October 2007; in Civic Matters--A Catalyst for Community Dialogue, a publication of the Civic Engagement Office at Bryn Mawr College, Issue 2, April 2008.

- Ordinary Differential Equations, Mathematical Modeling in Real World Situations. Donnay's course curriculum was chosen as a SENCER Model Course for 2008 for its efforts to improving science learning by supporting engagement with complex civic issues. See http://www.sencer.net/Resources/models.cfm .

- Theme poster for Mathematics Awareness Month 2013 – the Mathematics of Sustainability and interactive poster with associated interactive mini-essays. Joint with Thomas J. Pfaff and staff from the American Mathematical Society. March 2013. Available at /http://www.mathaware.org/index.html

- Artic Sea Ice and Linear Equations, joint with William Bauldry and Thomas J. Pfaff. Algebra 1 and pre-calculus lesson plans and teachers guide. For Sustainability Counts educational component of Mathematics Awareness Month 2013 – the Mathematics of Sustainability. March 2013. Available at https://ww2.amstat.org/mam/2013/.

- Atmospheric CO2 Levels and Rates of Change, joint with Thomas J. Pfaff. Lesson plan and teachers guide. For Sustainability Counts educational component of Mathematics Awareness Month 2013 – the Mathematics of Sustainability. March 2013. Available at https://ww2.amstat.org/mam/2013/.

- Solar Panels, Energy and Area under the Curve, Lesson plan and teachers guide. For Sustainability Counts educational component of Mathematics Awareness Month 2013 – the Mathematics of Sustainability. March 2013. Available at https://ww2.amstat.org/mam/2013/.

- Ted-Ed video on Billiards and Climate Change. October 2014. At http://ed.ted.com/lessons/is-our-climate-headed-for-mathematical-chaos-victor-j-donnay

Exhibits

- The Costa surface video is displayed (1995-1997) at the Maryland Science Museum as part of their permanent exhibition on mathematics. Also part of their traveling exhibit.
- Created a set of color prints of computer generated pictures of embedded surfaces with ergodic geodesic flow. Displayed at :

  Artist Market, Norwalk Ct, as part of Beyond Escher exhibit, November 1998.
  MSRI, Berkeley CA, summer 1999.
  Bryn Mawr College Gallery, fall 2000.

One of these images was used for the cover of the text Differential Geometry and Topology by K.Burns and M. Gidea, Chapman & Hall/CRC, 2005.

- Participatory math-art event to create the world's largest Sierpinski Triangle out of K'NEX pieces, Wagner Fee Institute of Science of Philadelphia, April 2016; Bryn Mawr College, April 2019.

Web Materials

Co-directed a summer research program (1996) for Bryn Mawr undergraduates with D. Kumar in which the students made interactive Java applets that illustrate the notions of regular and chaotic motion in dynamical systems.

Other Educational Related Work

Member of NSF site review team for the Georgia state MSP project, June 2005.
Representative for PA to Achieve Algebra 2 Test Question Review panel, May 2007.
Participant in PA State review process for Achieve science standards, July 2007.
Board Member, 21st Century Partnership for STEM Education, the non-profit successor to the MSPGP, 2007 - .
Member, Organizing Committee, NSF January 2008 National MSP Learning Network Conference.
Member of the five person Pennsylvania Department of Education team for the Achieve/ACE/NASH/SHEEO Algebra II meeting, October 2008 in Washington, D.C.
Participant in the American Diploma Project Achieve Algebra II Data Review Session, May 2008, Chicago, Il.
Member, Organizing Committee, NSF January 2009 National MSP Learning Network Conference.
Chair, Advisory Committee, for national 2013 Mathematics Awareness Month – the Mathematics of Sustainability. September 2012 – April 2013. Recruited the Advisory Committee. Developed the theme poster. Solicited collection of 21 essays on the theme of Mathematics of Sustainability. Developed a K-16 educational component called Sustainability Counts. Available at: https://ww2.amstat.org/mam/2013/
Member of Advisory Committee (Chair of Education Subcommittee) for Sustainable Climate Risk Management (SCRiM), NSF funded research network. 2012 – 2017.
Member of Advisory Committee, for Engaging Mathematics: Building a National Community of Practice, NSF funded education project directed by SENCER, 2013 – 2017.

Publications in which I was interviewed:

How to use math to take your pool game up a notch, by Sarah Wells, August 16, 2021, online version of Popular Mechanics,
How to use math to beat your friends at pool, by Sarah Wells and Courtney Linder, December 28, 2021, print edition of Popular Mechanics.

Courses Taught:

- Math 101, Calculus 1
- Math 102, Calculus 2
- Math 201, Multivariable Calculus
- Math 202, Linear Algebra
- Math 205, Theory of Probability with Applications
- Math 210, Differential Equations with Applications
- Math 251, Chaotic Dynamical Systems
- Math 295, Topics in Math:
    - Math Modeling and Sustainability
- Math 301, Real Analysis I
- Math 302, Real Analysis II
- Math 351, Chaotic Dynamical Systems
- Math 398/399, Senior Conference.
    - Differential Geometry
    - Math Modeling and the Environment
    - Chaotic Dynamical System
    - Math Modeling and Sustainability
- Math 403, Supervised work*. Overseen senior thesis on dynamical systems, differential geometry, mathematical epidemiology, energy analysis, water quality analysis.
- Math 501, Graduate Real Analysis I
- Math 502, Graduate Real Analysis II
- Education 220, Changing Pedagogies in Math and Science

Five of my students have won the EPaDel MAA Student Mathematical Paper Prize Competition:

- Naomi Hamermesh, 2010, ***Mathematical modeling of climate change***
- Kathryn Link, 2012, ***Worm Disease (Dracunculiasis): Opening a mathematical can of worms!***
- Madeline Hanson-Colvin, 2014, ***Everywhere Continuous Nowhere Differentiable Functions***
- Westley Mildenhall, 2017, ***Chaotic Systems of Geodesics on Surfaces of Revolution***
- Shefali Ramakrishna, 2022, ***Numerical Methods in Issues of Sustainability***