

# Thomas J. Pfaff

## Curriculum Vitae

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(Updated February 2018)

### Education

Syracuse University, Ph.D., Mathematics (Stochastic Processes, Adv. Dr. J.T. Cox)	May 1999
Syracuse University, M.S., Applied Statistics	May 1999
Syracuse University, Certificate of University Teaching	May 1999
Syracuse University, M.S., Mathematics	May 1994
State University of New York at Cortland, B.S., (Summa Cum Laude), Mathematics	May 1992
Ithaca College, B.S. Exercise Science	May 1990

### Professional Experience

Professor of Mathematics, Ithaca College	Aug 2013–Present
Associate Graduate Faculty of Exercise and Sport Sciences, Ithaca College	Aug 2001–Present
Director of Ithaca College Honors Program	May 2013–Dec 2016
Associate Professor of Mathematics, Ithaca College	Aug 2006–Aug 2013
Assistant Professor of Mathematics, Ithaca College	Aug 2001–Aug 2006
Summer Faculty in Mathematics, Cornell University	Summer 2002–2005
Assistant Professor of Mathematics, University of Wisconsin-Superior	Sept 1999–May 2001
Graduate Teaching Assistant in Mathematics, Syracuse University	Sept 1992–May 1999

### Administrative Experience

Director of the Ithaca College Honors Program, May 2013–Dec 2016. The director supervises two faculty who support Honors (portfolio coordinator and civic engagement coordinator), supervises three student workers (events coordinator, social media coordinator, and administrative assistant), supervises an RD with a 5-10 hour per week commitment to support Honors, supervises an administrative assistant with half their time dedicated to Honors, and houses the visiting international scholar selected every two years collaboratively with the Ithaca City of Asylum. The director also works closely with the Honors Student Advisory Board, an independent student body with its own bylaws and elections. A summary of director responsibilities with *Result Highlights* follows:

**Administration and Governance:** Chairs the Honors Steering Committee, implements the strategic plan and facilitates the renewal of the plan every few years, maintains governance and procedural documents, and assesses Honors courses and the program. *Result Highlights:* Initiated and facilitated implementation of a new strategic plan, including refined vision, mission, and goals in 2016.

**Admissions:** Coordinates the admission process with the admissions office in recruiting a class of 120 each year, and implements the internal admission process for Honors. *Result Highlights:* Initi-

ated an admissions experiment that demonstrated a significant increase in yield,  $p = 0.022$  in the group of students invited to apply to Honors as opposed to a control group that wasn't invited. Increased the yield on students invited to apply to Honors for three consecutive years and attained a 40% yield on students accepted to Honors in the last year. Initiated an open internal admissions process so student have a chance to enroll in the Honors Program after their first semester.

**Advising:** Provides and manages advising for all 400+ students enrolled in Honors and maintains student records, including verifying graduating seniors through the e-portfolio system. *Result Highlights:* Initiated and implemented changing the position of the RD of the Honors Residential Learning Community to assist in advising to significantly improve the advising of Honors students, including reviews of all juniors, in 2016.

**Alumni Relations:** Composes two alumni newsletters each year, organizes an alumni panel each spring, recruits an alumnus to speak at the senior banquet, and generally communicates with alumni. *Result Highlights:* Initiated the first alumni newsletters, organized the first two on-campus alumni panels, and invited the first alumni speaker at the senior banquet.

**Budget:** Manages a discretionary budget of about \$80,000 that supports programming and administers two types of grants for students. *Result Highlights:* Effectively managed a budget of \$80,000 to enhance the Honors Program for 3.5 years and initiated study abroad grants.

**Co-Curricular Programming and Community Building:** Coordinates, plans, and attends co-curricular programs including eight travel experiences, six major on-campus events, and a number of other smaller events each year. Acts as the advisor for *Symposium – The Honors Undergraduate Scholarly Journal*. *Result Highlights:* Increased the co-curricular programming by adding a number of events (backpacking and rock climbing in collaborations with the Outdoor Adventure Leadership Program, local farm tour, and spring swing) to improve the sense of community within the program. Secured better space for the program including more student lounge space.

**Communication:** Communicates with various stakeholders, maintains the Honors webpage, and develops and implements the program's social media strategy to inform and educate students, as well as engage alumni and parents. *Result Highlights:* Initiated and implemented a new social media plan centered around a blog that had nearly 13,000 views in its first year and increased the number of likes on the Facebook threefold to over 600 likes. Also improved the Honors webpage.

**Curriculum:** Recruits faculty to teach courses, maintains records, provides students with program completion information including a thesis and an electronic portfolio, and works with the Registrar's office to maintain the accuracy of degree evaluation especially for non-credit bearing activities, while offering 40 courses a year with a mix of 1 and 3 credit courses. Coordinates with the London Center to offer an Honors Course every fall, London as Text. *Result Highlights:* As the incoming director collaborated with the previous director, to create a completely revamped set of Honors requirements, including the inclusion of a thesis and an electronic portfolio, and then effectively implemented the new program. Initiated a number of new experiential courses including Tracking, Simple Machines, and the Life of Cayuga Lake.

**Engagement with the Broader Honors Community:** Attends the annual NCHC conference, reviews the Honors literature, and takes a leadership role in the Honors Community. *Result Highlights:*

- Co-authored a chapter *Seminars, Curricula, Rigor: Paradoxical Constraints on the Future of Honors* in the monograph *Present Successes and Future Challenges in Honors Education* in 2016.
- Faculty Development and Community Building: Provides Honors faculty with development opportunities and builds community among Honors faculty. *Result Highlights*: Initiated regular social events for Honors faculty and the faculty summer read, which included the review and discussion of a book in summer 2015 and 2016.
- Orientation: Coordinates with the Orientation Program to schedule and attend the meetings with students as well as the separate meeting with parents. *Result Highlights*: Initiated meeting with the parents of Honors students during orientation in addition to meeting with students starting in the summer of 2015.
- Partnership with Career Services: *Result Highlights*: Initiated a collaboration with the Office of Career Services in 2015 to create and implement the Honors Career Readiness Certificate.
- Partnership with the Office of Civic Engagement: *Result Highlights*: Collaborated with the Faculty Director of Service-Learning to help provide and support civic engagement opportunities for students, which was a new requirement for the Honors Program.
- Recruitment: Maintains recruitment materials, meets and speaks with accepted students and parents, attends all admissions events, coordinates an open house of the Honors Residential Learning Community in Lyon Hall for Ithaca Today, maintains an active presence on IC Peers, and collaborates with all schools and admissions to help improve yield. *Result Highlights*: Effectively used IC Peers, the admissions social media platform, in a way that had the Honors group the most active of all groups in the spring 2016. Regularly updated recruitment materials and collaborated with the deans during admissions.
- Residential Learning Community: Collaborates directly with Residential Life and meets monthly with AC, RD, and RAs to discuss events and programming, assessing the RLC, and approving student applications to the RLC. *Result Highlights*: Increased the number of students living in the Honors Residential Learning Community so that the building housed nearly all Honors students. Initiated and successfully had a computer and projector installed in a lounge to create the first smart lounge. Initiated the Explore Ithaca Program to incentivize students to learn about the College and the Ithaca Area.
- Teaching Responsibilities: Teaches one of the Honors ICSM courses in the fall and a one credit Honors course in the spring. *Result Highlights*: Effectively taught a humanities based Honors ICSM as a mathematician and statistician.

## Online Curriculum Materials

[Sustainability Math](#), blog, data sets, images, links, and resource materials for use in quantitative literacy and mathematics courses, especially calculus and statistics.

[Multidisciplinary Sustainability Modules: Integrating STEM Courses](#), materials resulting from NSF grant DUE-0837721.

## Refereed Publications (\* Student co-author)(( $\alpha$ ) Alphabetized Authors)

- Content for QL: Making the Case for the Power of Linear Regression. *Numeracy* (submitted)
- Figures and First Years: An Analysis of Calculus Students' Use of Figures in Technical Reports. Nathan J Antonacci\*, Michael Rogers, Thomas J Pfaff, Jason G Hamilton. *Numeracy* 10(2): Article 10. July 2017. 1–18. [link](#)
- Using Sustainability Themes and Multidisciplinary Approaches to Enhance STEM Education. Michael Rogers, Jason Hamilton, Thomas J. Pfaff, and Ali Erkan. *International Journal of Sustainability in Higher Education*, Vol. 16 Iss: 4, 2015, pp.523 – 536.
- Sustainability Education: The What and How for Mathematics. Jason Hamilton and Thomas J. Pfaff. *PRIMUS*, 24(1), 2014, 61–80. ( $\alpha$ )
- On Jargon: 21st Century Problems. Jason Hamilton, Thomas J. Pfaff, Michael Rogers, and Ali Erkan. *The UMAP Journal of Undergraduate Mathematics and Its Applications* 34(4), 2013, 327–338.
- Incorporating Sustainability and 21st Century Problem Solving into Physics Courses. Michael Rogers, Thomas J. Pfaff, Jason Hamilton, and Ali Erkan. *The Physics Teacher*. 51(6), 2013, 372–374.
- The Use of Statistics in Experimental Physics. Thomas J. Pfaff, M. Sipos, M. C. Sullivan, B. G. Thompson, and Max M. Tran. *Mathematics Magazine* 86(2), April 2013, 120–131. ( $\alpha$ )
- A Case Study on Regional Impacts of Climate Change: Peak Loads on the Power Grid in Rochester, New York. Scott Constable\*, Jason Hamilton, and Thomas J. Pfaff. *Journal of Environmental Studies and Sciences*. 3(1), 2013, 15–20. ( $\alpha$ )
- Studying the Impacts of Changing Climate on the Finger Lakes Wine Industry. Brian McGauvran\* and Thomas J. Pfaff. *Involve, A Journal of Mathematics* 5(3), 2012, 303–311. ( $\alpha$ )
- Period Life Tables: A Resource for Quantitative Literacy. Thomas J. Pfaff and Stanley Seltzer. *Numeracy* 5(1): Article 5. 2012. p 1–10. ( $\alpha$ ) [link](#)
- Sustainability Themed Problem Solving in Data Structures and Algorithms. Ali Erkan, Thomas J Pfaff, Jason Hamilton, and Michael Rogers. In SIGCSE '12: Proceedings of the 43rd SIGCSE technical symposium on Computer Science education, 9–14, New York, NY, USA, 2012. ACM.
- Averaging Sums of Powers of Integers. Thomas J Pfaff. *The College Mathematics Journal* 42(5), November 2011, 402–404.
- Educating Students about Sustainability while Enhancing Calculus. Thomas J Pfaff. *PRIMUS*, 21:4, April 2011, 338–350.
- Multidisciplinary Engagement of Calculus Students in Climate Issues. Thomas J. Pfaff, Ali Erkan, Michael Rogers, and Jason Hamilton. *Science Education and Civic Engagement, An International Journal*, Winter 2011, 52–56. [link](#)
- Go Figure, Calculus Students use of Figures and Graphs in Technical Report Writing. Thomas J. Pfaff, Michael Rogers, Ali Erkan, and Jason Hamilton. *Numeracy* 4(1): Article 6. January 2011. 1–5. [link](#)
- Chromatic Polynomial Identities: Algebra with the Chromatic Polynomial. Thomas J. Pfaff and Donny Tang\*. *The PME Journal* 13(3), Fall 2010, 159–166. ( $\alpha$ )

- Using Informal Inferential Reasoning to Develop Formal Concepts: Analyzing an Activity. Aaron Weinberg, Emilie Wiesner, and Thomas J. Pfaff. *The Journal of Statistics Education*, 18(2), 2010, 1–23.
- Multidisciplinary Collaborations in the Traditional Classroom-Wrestling with Global Climate Change to Improve Science Education. Michael Rogers, Jason Hamilton, Thomas J. Pfaff, and Ali Erkan. “Teaching the Earth,” a special edition of *Transformations: The Journal of Inclusive Scholarship and Pedagogy*, XXI(1), Spring/Summer 2010, 89–98.
- Use of Satellite Imagery in Multidisciplinary Projects. Ali Erkan, Jason Hamilton, Tom Pfaff, and Michael Rogers. In *SIGCSE 2010: Proceedings of the 41st SIGCSE technical symposium on computer science education*, pages 32–137, New York, NY, USA, 2010. ACM.
- Do Hands-On Activities Increase Student Understanding?: A Case Study. Thomas J Pfaff and Aaron Weinberg. *The Journal of Statistics Education* 17(3), 2009, 1–24. ( $\alpha$ )
- Measuring Resource Inequality: The Gini Coefficient. Michael T. Catalano, Tanya L. Leise, and Thomas J. Pfaff. *Numeracy* 2(2): Article 4. 2009, 1–24. ( $\alpha$ ) [link](#)
- Series that Probably Converge to One. Thomas J. Pfaff and Max M Tran. *Mathematics Magazine* 82(1), 2009, 42–49. ( $\alpha$ )
- The Chromatic Polynomial of  $P_2 \times P_n$ . Thomas J. Pfaff and Jasmine Walker\*. *Missouri Journal of Mathematical Sciences*, 20(3), 2008, 169–177. ( $\alpha$ )
- Deriving a Formula for Sums of Powers of Integers. Thomas J. Pfaff. *The PME Journal* 12(7), 2007, 425–430.
- Using the *Combinatorica* Package in *Mathematica* for Student Projects in Random Graph Theory. Thomas J. Pfaff and Michele Zaret\*. *Primus*, 16(4), 2006, 314–319. ( $\alpha$ )
- Statistics Projects Using Institutional Data. Thomas J. Pfaff. *PRIMUS* 16(1), 2006, 46–52.
- The N-Jugs and Water Problem. Thomas J. Pfaff and Max Tran. *The PME Journal* 12(1), 2004, 37–38. ( $\alpha$ )
- A New Approach to Macaulay Posets. S. Bezrukov, Thomas J. Pfaff, and V. Piotrowski. *Journal of Combinatorial Theory series A*, 105(2), 2004, 164–181. ( $\alpha$ )
- A Mean Field Model for Species Abundance. Thomas J. Pfaff. *Stochastic Processes and their Applications* 104(2), 2003, 325–347.
- The Generalized Jug Problem. Thomas J. Pfaff and Max Tran. *Journal of Recreational Mathematics* 31(2), 2002–2003, 100–103. ( $\alpha$ )
- Teaching Calculus Students How to Study. Matthew Boelkins and Thomas J. Pfaff. *PRIMUS*, 8(3), 1998, 253–264. ( $\alpha$ )

## Book Chapters (( $\alpha$ ) Alphabetized Authors)

- Social Justice and Sustainability: two perspectives on the same system in *Mathematics and Social Justice: Perspectives and Resources for the College Classroom*, Jason Hamilton and Thomas J. Pfaff (to appear) ( $\alpha$ )  
Eds: Gizem Karaali and Lily Khadjavi.

Normal Isn't "Normal" when it comes to Income in *Mathematics and Social Justice: Perspectives and Resources for the College Classroom*, Ted Galanthy and Thomas J. Pfaff (to appear) Eds: Gizem Karaali and Lily Khadjavi. ( $\alpha$ )

Get the Lead Out: The Connection between Lead and Crime in *Mathematics and Social Justice: Perspectives and Resources for the College Classroom*, Ted Galanthy and Thomas J. Pfaff (to appear) Eds: Gizem Karaali and Lily Khadjavi. ( $\alpha$ )

Seminars, Curricula, Rigor: Paradoxical Constraints on the Future of Honors in *Present Successes and Future Challenges in Honors Education*, Thomas J Pfaff and Robert Sullivan. Eds: Rob Glover and Katherine O'Flaherty. Rowan and Littlefield Publishers, August 2016. ( $\alpha$ )

Barron's FE Fundamentals of Engineering Exam, contributed chapter on Engineering Probability and Statistics, first printing 2008.

## Other Publications (\* Student co-author)(( $\alpha$ ) Alphabetized Authors)

STEM Educators Can No Longer Be Apolitical, *Inside Higher Ed*, February 5, 2018. [link](#)

Review of Painting by Numbers by Jason Makansi, *Numeracy* 11(1): Article 13. 2018. pp1-4. [link](#)

The Need for Slower Administrators, *Inside Higher Ed*, October 31, 2017. [link](#)

Academics as Suburbanites, with Robert Sullivan. *Inside Higher Ed*, December 6, 2016. ( $\alpha$ ) [link](#)

Review of Street-Fighting Mathematics: The Art of Educated Guessing and Opportunistic Problem Solving by Sanjoy Mahajan, *Numeracy* 8(2): Article 13. 2015. pp 1-5. [link](#)

The Case for Sustainability Education. Theme Essay for Math Awareness Month 2013. [link](#)

Balancing needs and seeking solutions for a complex changing world. The role of mathematics in addressing issues of sustainability, with Victor J. Donnay and Catherine A. Roberts. Theme Essay for Math Awareness Month 2013. [link](#)

Climate in the Classroom, Theme Essay for Math Awareness Month 2009. [link](#)

Does the Runs Created Formula Work for Division III Softball?, with Jenn Marro\*. *By the Numbers*, the newsletter of the SABR statistical analysis committee, Volume 17/3, August 2007, 13-15. ( $\alpha$ ) [pdf](#)

The Effects of Travel on Home-Field Advantage in Professional Baseball, with Andrew Boslett\* and Matt Hoover\*. *By the Numbers*, the newsletter of the SABR statistical analysis committee, Volume 17/2, May 2007, 19-22. ( $\alpha$ ) [pdf](#)

The Interleague Home Field Advantage, with Eric Callahan\* and Bryan Reynolds\*. *By the Numbers*, the newsletter of the SABR statistical analysis committee, Volume 16/2, May 2006, 9-10. ( $\alpha$ ) [pdf](#)

Book review of *Adam Spencer's Book of Numbers*, The MAA Online book review column, September 2004.

Book review of *Elementary Number Theory, Group Theory, and Ramanujan Graphs*, The MAA Online book review column, April 2004.

## Undergraduate Research Supervision

- A Case for Implementing College Admissions Test-Optional Policies*, Morgan Diegel. Presented at the J.J. Whalen Academic Symposium, April 2017. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2016.
- The Entitlement Endemic*, Aubrey Fleming. Presented at the J.J. Whalen Academic Symposium, April 2017. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2016.
- “Yes Means Yes” Beats “No Means No”*, Madeline Horowitz. Presented at the J.J. Whalen Academic Symposium, April 2016. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2015.
- Thinking Critically about Critical Periods*, Michele Hau. Presented at the J.J. Whalen Academic Symposium, April 2015. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2014.
- The Study of Mental Disorders Stigma: What Isn't Said Can Hurt You(th)*, Emma Sheinbaum. Presented at the J.J. Whalen Academic Symposium, April 2015. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2014.
- Redesigning the Freshman Experience at Ithaca*, Efosa Erhunmwunse. Presented at the J.J. Whalen Academic Symposium, April 2015. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2014.
- Closing the Gap: The Unique Challenge of Teens Living with Cancer*, Bryn Mugnolo. Presented at the J.J. Whalen Academic Symposium, April 2014. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2013.
- Preventing Stress at the Roots: A Look into RA Awareness on Gender Stress Differences*, Cailin Harro. Presented at the J.J. Whalen Academic Symposium, April 2014. The work presented was part of the research produced in an Honors Ithaca Seminar Course in the fall of 2013.
- The Impact of Global Warming on Energy Consumption*, Scott Constable, Ithaca College. Presented at the National Conference on Undergraduate Research (NCUR), Ithaca College, April 2011.
- How much AC? Climate Change and the Heat Index in Ithaca*, Brian McGauvran, Ithaca College Spring 2010. Presented at the J.J. Whalen Academic Symposium, April 2010.
- The Impact of Climate Change on Maple Syrup Production in Ithaca*, Ashley Bell, Ithaca College. Presented at the J.J. Whalen Academic Symposium, April 2010.
- Using Regional Climate Models to Assess Future Climate Change Impacts on the Finger Lakes Wine Industry*, Emily Backus and Brian McGauvran, Ithaca College. Presented at the J.J. Whalen Academic Symposium, April 2009.
- The Effects of Travel on Home Field Advantage in Professional Baseball*, Andrew Boslett and Matt Hoover, Ithaca College. Presented at the Hudson River Undergraduate Mathematics Conference, Siena College April 2007; and the J.J. Whalen Academic Symposium, March 2007.

- A Runs Created Formula for Softball*, Jenn Marro, Ithaca College. Presented at the J.J. Whalen Academic Symposium, March 2007.
- A Statistical Analysis of the Home Field Advantage in Baseball*, Eric Callahan and Bryan Reynolds, Ithaca College. Presented at the Hudson River Undergraduate Mathematics Conference, Westfield State College, April 2006; and the J.J. Whalen Academic Symposium, March 2006.
- Deletion and Contraction Games: (Chromatic) Polynomial Identities*, Donny Tang (part of Honors thesis), Ithaca College. Presented at the Hudson River Undergraduate Mathematics Conference, Williams College, April 2005; and the J.J. Whalen Academic Symposium, March 2005.
- The Chromatic Polynomial of  $P_2 \times P_n$* , Jasmine Walker, Ithaca College. Presented at the Hudson River Undergraduate Mathematics Conference, Williams College, April 2005; and the J.J. Whalen Academic Symposium, March 2005.
- How Many Edges are Needed to Make a Random Graph Connected?*, Michele Zaret, Ithaca College. Presented in the Junior Seminar in the Mathematics Department at Ithaca College, December 2004.
- The Odds of Landing on Boardwalk: A Mathematical Approach to Monopoly*, Mathew Darby and Lindsay Monk, Ithaca College. Presented at the Hudson River Undergraduate Mathematics Conference, Mt. Holyoke College, April 2004; and the J.J. Whalen Academic Symposium, March 2004.
- The PME Journal*, Published Solution to Problem 1023, by Eric Heinzman, Fall 2002.

## Master's Students (Statistical Advisor and Committee Member for Thesis in the School of Health Science and Human Performance)

- Kelly Brady, *Oxygen Consumption of Firefighters During Occupationally Specific Tasks*, Summer 2007.
- Chad Butts, *Effect of Respiratory Muscle Training on 20 km Cycling Time-Trial Performance*, Summer 2007.
- Karen Lynn Uhl-Smith, *The Effect of Two Days of Partial Sleep Deprivation on Indicators of Performance in Female Basketball Players*, May 2002.

## Invited Presentations or Workshops

- Hidden Curriculum*, Finger Lakes Project - Sustainability Curriculum Development Workshop, Wells College, NY, May 2017.
- New Course, co-Teaching Model*, Finger Lakes Project - Sustainability Curriculum Development Workshop, Wells College, NY, May 2017.
- Developing Collaborations Between Math and Science Through Sustainability Curriculum*, NYSMTP (NYS Master Teachers Program), SUNY Cortland, NY, Three 2-hour sessions in January 2017.
- Increasing Student Engagement through Multidisciplinary Sustainability Education*, PKAL (Project Kaleidoscope) DC Regional Meeting, University of Mary Washington, VA, November 2014.
- Multidisciplinary Sustainability Education Project Experience*, PKAL Upsate New York Regional Meeting, Ithaca College, NY, November 2014.
- Sustain This! Making Math Matter*, Wells College, NY, October 2014.



- Why, What, and How! Everything you Need to Know about Incorporating Sustainability into Mathematics Courses*, Four-hour Project NExT Course During MathFest, Portland, OR, August 2014.
- A Mathematician and an Environmental Scientist Walk into a Bar*, with Jason Hamilton. Hobart and William Smith College, Geneva NY, March 2014.
- A Mathematician and an Environmental Scientist Walk into a Bar*, with Jason Hamilton. MAA Undergraduate Student Activity, MathFest, Hartford CT, August 2013.
- Multidisciplinary STEM Engagement through Sustainability Education*, Penn State University, University Park, PA, September 2012.
- MAA Panel Discussion: Incorporation of the Mathematics of Climate Change and Sustainability into our Undergraduate Courses*, Joint Mathematics Meetings, Boston, MA, January 2012.
- Sustain This! Making Math Matter*, MAA Seaway Section Randolph Lecture, St. Bonaventure University, NY, October 2011.
- A Mathematical Tour of the State of the Planet*, MAA Undergraduate Student Activity, MathFest, Pittsburgh PA, August 2010.
- A Quantitative Look at Sustainability Issues*, Philips Exeter Academy, Exeter, NH, June, 2010.
- How Calculus can Participate in Multidisciplinary Sustainability Modules* with Ali S. Erkan, Jason G. Hamilton, and Michael Rogers, MAA-AMS-MER Invited Paper Session on Mathematics and Education Reform II: Climate, Sustainability, and the Curriculum, San Francisco CA, January 2010.
- The Calculus of Sustainability*, Diablo Valley College, Pleasant Hill, California, November 2009 (internet conference).
- Can you have Social Justice if your Village is under Water?* with Ali Erkan and Jason Hamilton at Developing a Good Heart in STEM: The 1st Summit on Incorporating Social Justice and Service-Learning into the STEM Curriculum, Ithaca College, Ithaca, NY, June 2009.
- What Can Mathematics do for Sustainability Curriculum?*, Dickinson College, Carlisle, Pennsylvania, May 2009. Followed by a two-hour workshop.
- Curriculum on Climate in the Classroom*, as part of a panel presentation on mathematics and climate for Cornell University's mathematics awareness month public lecture series, Cornell University, Ithaca, NY, April 2009.
- The Calculus of Sustainability*, Diablo Valley College, Pleasant Hill, California, April 2009 (internet conference).
- Education about the State of the Planet and Sustainability while Enhancing Calculus*, Acadia University, Wolfville, Nova Scotia, Canada, March 2009.
- Educating about the State of the Planet (or Sustainability) while Enhancing Calculus*, two-hour Minicourse at Seaway Section MAA Meeting, Syracuse University, Syracuse, NY, April 2008.
- Panel Discussion on Interdisciplinary Training Related to Climate Change*, Joint Mathematics Meetings, San Diego CA, January 2008.
- Educating about Sustainability while Enhancing Calculus*, Bowdoin College, Brunswick ME, November 2007.

- Peak Oil, CAFE Standards, and a Modeling Problem*, Bowdoin College, Brunswick ME, November 2007.
- Educating about Sustainability while Teaching Calculus*, Syracuse University Project Advance, Syracuse University's Lubin House, Manhattan NY, October 2007.
- Educating about Sustainability while Teaching Calculus*, Syracuse University Project Advance, Syracuse University, Syracuse, NY, October 2007.
- Educating about Sustainability while Teaching Calculus*, Mathematics of Social Justice Workshop, Middlebury College, Middlebury, VT, June 2007.
- Understanding and Controlling Randomness-A Simple Class Demonstration*. Spring Faculty Development Conference, Ithaca College, May 2007.
- Mathematical Ideas in Everyday Life*. State University of New York at Geneseo, December 2003.
- A Mean Field Model for Species Abundance*. Cornell University Probability Seminar, October 2003.
- Mathematical Observations-Math is Everywhere*. University of Wisconsin-Superior, April 2003.
- Handshaking to Sums of Power of Integers*. Lake Superior Seminar on Graphs, Algebra, and Combinatorics at University of Wisconsin-Superior, April 2003.
- Tiling the WWW*. State University of New York at Geneseo, November 2002.
- Closing the deal: The campus interview and beyond*. MAA-YMN Panel Discussion at the Joint Mathematics Meetings, San Diego, CA, January 2002.
- Panel Discussion on Career Advising for Undergraduates*. PFF day at Binghamton University, October 2001.
- Panel Discussion on Advising and Retaining Mathematics Students*, Project NExT colloquium at the Joint Mathematics Meetings, New Orleans, January 2001.
- Fun with Probability*, University of Minnesota Duluth, November 2000.
- Probability,  $\pi$  and  $e$* , State University of New York at Cortland, April 1999.
- A Panel Discussion on Math after Graduation: Cortland Graduates Speaking from Experience*, State University of New York at Cortland, November 1998.
- Making the Implicit Explicit: Teaching Study Skills*, State University of New York at Oswego, April 1998.
- Polyominoes*, State University of New York at Geneseo, November 1997.
- Probability,  $\pi$  and  $e$* , State University of New York at Oswego, October 1997.

## MAA Minicourses

- Making Math Relevant: A Multidisciplinary Sustainability Module for Calculus*, with Jason Hamilton (invited by the MAA) four-hour Minicourse at MathFest, Hartford CT, August 2013.
- Making Math Relevant: A Multidisciplinary Sustainability Module for Calculus*, with Jason Hamilton (invited by the MAA) four-hour Minicourse at MathFest, Madison WI, August 2012.
- Educating about the State of the Planet and Sustainability while Enhancing Calculus*, four-hour Minicourse at the Joint Mathematics Meetings, San Francisco CA, January 2010.

*Educating about the State of the Planet and Sustainability while Enhancing Calculus*, four-hour Minicourse at the Joint Mathematics Meetings, Washington D.C., January 2009.

## Colloquia/Seminar Talks/Misc

*The Dissonance between Classroom Rigor and Lifelong Learning\Curiosity*, NCHC Conference, Denver, CO, November 2014.

*A Mathematician and an Environmental Scientist Walk into a Bar*, with Jason Hamilton. Ithaca College Math Exploration Day. Ithaca NY, April 2014.

*Honors Dialog on the Many Facets of Sustainability*, facilitated Roundtable Discussion with two other faculty, National Collegiate Honors Council (NCHC) Conference, New Orleans, November 2013.

*On Journalism*, Student Journalism Society, Ithaca College, February 2013.

*The Big Talk - A Sustainability Panel Discussion*, Ithaca College, December 2012.

*Mathematician or Environmentalist?*, Department of Environmental Sciences and Studies, Ithaca College, September 2012.

*Raising Awareness of Environmental Issues in Statistics Courses* MAA Session on Quantitative Reasoning and the Environment, Joint Mathematics Meetings, San Francisco, CA, January 2010.

*Multidisciplinary Sustainability Modules: Integrating STEM Courses*, with Ali S. Erkan, Jason G. Hamilton, and Michael Rogers, MAA Poster Session on Projects Supported by the NSF Division of Undergraduate Education at the Joint Mathematics Meetings, San Francisco, CA, January 2010.

*Inflection Points and Polar Bears* with Jason G. Hamilton, Ithaca College, Mathematics Colloquium, Dec 2009.

*Running the Numbers: Enhancing Calculus through Education about Sustainability*, AASHE (Association for the Advancement of Sustainability in Higher Education) Conference, Raleigh, NC, November 2008.

*Peak Oil: The Other Problem*, Ithaca College Sustainability Cafe, February 2008.

*Educating about Sustainability while Teaching Calculus*, MAA contributed paper session, Joint Mathematics Meetings in San Diego, CA, January 2008.

*MATH 400/MAT 500 What's the Difference? A Look at MAT-Number Theory*, Ithaca College Mathematics Colloquium, November 2007.

*Integrating Sustainability into Calculus: Enhancing Calculus while Meeting Joint Science Academies and United Nation Goals on Education in Sustainability*, Seaway Section MAA Meeting, SUNY Oneonta, April 2007.

*Integrating Sustainability into Mathematics: Enhancing Calculus while Meeting Joint Science Academies and United Nation Goals on Education in Sustainability*, High School Mathematical Exploration Day (talk presented to the teachers), Ithaca College, April 2007.

*Integrating Sustainability into Calculus: Enhancing Calculus while Meeting Joint Science Academies and United Nation Goals on Education in Sustainability*, Ithaca College Mathematics Colloquium, February 2006.

*The On-Line Encyclopedia of Integer Sequences*, Contributed Sequence A123531, October 2006.

*Integrating Sustainability into Calculus: A Quantitative Look at Energy Policy*, Ithaca College Sustainability Day, October 2006.

*Special Averages with Sums of Powers of Integers*, MAA contributed paper session, Joint Mathematics Meetings in San Antonio, TX, January 2006.

*Statistics Class Projects Using Institutional Data*, MAA Session on Using Real-World Data, Joint Mathematics Meetings in Atlanta, GA, January 2005.

*Statistics Class Projects Using Institutional Data*, Seaway Section MAA Meeting, Buffalo, NY, November 2004.

*Handshaking to Sums of Powers of Integers*, MAA contributed paper session, Joint Meetings in Phoenix, AZ, January 2004.

*The N-Jugs and Water Problem*, Seaway Section MAA Meeting, Rochester NY, November 2003.

*Handshaking to Sums of Powers of Integers*, Ithaca College, Mathematics Colloquium, April 2003.

*Probability and Statistics - Curriculum Thoughts*, Ithaca College, Mathematics Colloquium, February 2003.

*Taking Advantage of Institutional Research Data*, MAA Session on Best Statistics Projects, Joint Mathematics Meetings in Baltimore, MD, January 2003.

*Handshaking to Sums of Powers of Integers*, Seaway Section MAA Meeting, Potsdam, NY, November 2002.

*An Alternative Approach to Graphing the Inverse of a Function*, MAA contributed paper session, Joint Mathematics Meetings in New Orleans, LA, January 2001.

*Monopoly and Markov Chains*, Syracuse University Graduate Mathematics Conference, Syracuse, NY, April 1997.

*A Brief Introduction to LaTeX*, Syracuse University Mathematics TA Orientation, Syracuse, NY, Aug 1996 and 1997.

*The Eight Queens Problem*, Syracuse University Graduate Mathematics Conference, Syracuse, NY, March 1996.

## Problems Posed

*Math Horizons*, with Max M. Tran, Problem 200, April 2006.

*Math Horizons*, Problem 185, Nov. 2004.

*The College Mathematics Journal*, Problem 763, Nov. 2003.

*The College Mathematics Journal*, Problem 737, Nov. 2002.

*The College Mathematics Journal*, Problem 726, May 2002.

*The Pi Mu Epsilon Journal*, Problem 1044, Fall 2002.

## Honors and Distinctions

Ithaca College Center for Faculty Excellence Faculty-in-Residence, AY 2017–2018 and 2018–2019.

Sabbatical: Spring 2017.

Inducted into the [PHI Kappa Phi Honors Society](#): November 2016

[Erdos Number](#): 3.

Deans Merit Award: Spring 2015.

Department Merit Award: Spring 2011.

Department Merit Award: Spring 2010.

Faculty Development Award: Three credit of release time for AY 2010–2011.

Profiled in [FUSE](#): Real Stories. Real Students. The Ithaca College Experience, December 2009.

NCAR-Visitor Funds: Received funding by NCAR (National Center for Atmospheric Research) to visit for three days in the summer of 2009.

Ithaca College Academic Project Grant: \$750 to support the project Assessing Hands-on Statistics Activities with Aaron Weinberg.

Principal Investigator of the National Science Foundation Grant DUE-0837721. Multidisciplinary Sustainability Modules: Integrating STEM Courses, \$149,104 from June 1, 2009 through May 31, 2012, with Ali Erkan-Computer Science, Jason Hamilton-Ecology, & Michael Rogers-Physics.

Department Merit Award: Spring 2009.

NCAR-Visitor Funds: Received funding by NCAR (National Center for Atmospheric Research) through their RSVP (Research and Supercomputing Visitors Program) to visit for three days in the summer of 2008.

Faculty Development Award: Three credit of release time for AY 2008-2009.

Sabbatical: Fall 2007.

Department Merit Award: Spring 2007.

Profiled in the Ithacan (student newspaper), October 2006.

Sustainability Mini-Grant: Spring 2006.

Faculty Development Award: Three credit of release time for AY 2006-2007.

Department Merit Award: Spring 2005.

Faculty Development Award: Three credit of release time for AY 2004-2005.

Faculty Development Award: Three credit of release time for AY 2003-2004.

Faculty Development Award: Three credit of release time for AY 2002-2003.

Actuary Exam Course I Passed, November 2000, score 10.

[Project NExT](#) 2000-2001 Fellow: One of 70 fellows selected to participate.

Donald E. Kibbey Prize: Presented by the Syracuse University Mathematics Department in recognition of exceptional performance as a teaching assistant, April 1998.

Outstanding Teaching Assistant: Presented by the TA Program of the Graduate School at Syracuse University, Spring 1994.

Alumni Achievement Award: Presented by The Cortland Alumni Association, April 1992.

Certificate of Academic Achievement: Presented by the faculty at Cortland College, May 1992.

Varsity Crew: Varsity letters from Ithaca College, Spring 1988,1989,1990.

## Service to College

Chair, Mathematics Curriculum Committee, AY 2017–2018.

Advisor to IC Club Baseball, Spring 2015–Present.

Director of the Ithaca College Honors Program, May 2013–December 2016.

Ithaca College Facility and Planning Committee, AY 2015–2016.

ICSM Steering Committee, AYs 2013–2016.

Research Council, AYs 2013–2016.

Ithaca College Master Planning Committee, AYs 2013–2015.

CP Snow Committee, AYs 2013–2015.

Ithaca College Facility and Planning Committee, AYs 2011–2013.

Chair, Mathematics Department Vision and Mission Committee, AY 2010–2011.

Recreational Sports Advisory Board, Spring 2010–Spring 2011.

Honors Program Steering Committee, Spring 2010–Spring 2013.

Mathematics Department Personnel Committee, AY 2009–2010.

Ithaca College Facility and Planning Committee, AYs 2008–2011.

Four-year personnel review committee in Physics, Spring 2009.

Mathematics Assessment Committee, AY 2008–2009.

H & S Faculty Senate Vice President, AY 2008–2009.

College Wide Search and Selection Review Committee, Spring 2006–Spring 2007.

Chair, two-year personnel review committee in Physics, AY 2006–2007.

Mathematics Curriculum Committee, AY 2006–2007.

H & S Faculty Senate Vice President, AY 2006–2007.

H & S Faculty Senate, AYs 2006–2009.

H & S Faculty Senate, AYs 2003–2006.

Chair, Mathematics Service Course Committee, AYs 2002–2005.  
 Ithaca College Core Experience Task Force, Spring 2003–Spring 2005.  
 Mathematics Curriculum Committee, AY 2002-2003, 2004–2005.  
 Faculty Co-Advisor to PME and Math Club, AYs 2001–2004.  
 CFRD Reviewer for Release Time, Fall 2003.  
 H & S Community Task Force, AY 2002–2003.

#### University of Wisconsin-Superior

Faculty Advisor to the Math and Comp. Sci. Club, AY's 1999-2001.  
 Campus Physical Development Committee, AY 2000-2001.

#### Syracuse University

University Steering Committee, Preparing Future Faculty, AY's 1997–1999).  
 President, Mathematics Graduate Organization, AY 1997–1998.  
 Graduate Student Leader for the Preparing Future Professors Project, Feb. 1996–May 1997.  
 Future Professoriate Project Participant, AY's 1995–1999.

### Service to Mathematics

Subject Editor, Statistics and Mathematics, for *PRIMUS* (Problems, Resources, and Issues, in Mathematics Undergraduate Studies, January 2017 – Present.  
 2013 Math Awareness Month Committee which reports to the Joint Policy Board for Mathematics (JPBM), a collaborative effort of the AMS, ASA, MAA, & SIAM.  
 Ad hoc Invited Address Committee for MathFest 2013, appointed by the President of the Mathematical Association of America. October 2011–August 2013.  
 Local organizer for the June 11 and 12, 2009, conference: Developing a Good Heart in STEM: The 1st Summit on Incorporating Social Justice and Service-Learning into the STEM Curriculum.  
 MAA Seaway Section Liaison, Fall 2004–Present.  
 Local Organizer for the Spring 2006 MAA Seaway Section meeting.

#### Referee(d) for

*The College Mathematics Journal*  
*Mathematics Magazine*

*Numeracy*

*The Pi Mu Epsilon Journal*

*PRIMUS*

## Service to Community and Outreach

[Ithaca STEM Advocates Board](#), Fall 2015–Present.

Presented a Sustainability and Mathematics talk to two Calculus classes, Fayetteville-Manlius High School, Syracuse, NY, January 2014.

Spoke to four 7th grade classes about the mathematics of pool at Boynton Middle School Math Day, March 2012.

Answering Sustainability Questions with a Calculus Class, Fayetteville-Manlius High School, Syracuse, NY, May 2008.

Answering Sustainability Questions with two Calculus Classes, Fayetteville-Manlius High School, Syracuse, NY, January 2008.

Speaker at Ithaca High School Career Day Spring 2004.

Speaker at Ithaca High School Career Day Spring 2002.

## Courses Taught

### Ithaca College

HNRS 22001 (1 credit) What is Fair? Balancing the U.S. Budget; S15

HNRS 23009 (1 credit) Numbers in the News; S14, S16

HNRS 30000 (1 credit) Honors Capstone; F16

ICSM 11049 ICSM-HNRS Why are we Here? Student Culutre and the Problem of College; F13, F14, F15, F16

IISP 10500 (1 credit) Exploring the Options; F17

Math 10700 Fundamental of Applied Calculus; F02, F03, F04, F05, SM 06, F06

Math 10800 Applied Calcuuls; F17

Math 10803 Calculus for Decision Making; F01

Math 11100 Calculus I; F02, F08, F09, F10, F11, F12, S16

Math 14400 Business Statistics; S03–S13, SM 06

Math 15900 Introductin to R; S18

Math 21100 Calculus III; F01

Math 21400 Differential Equations; S11, S12, S13



Math 22100 Data Analysis with ArcGIS; So8

Math 24400 Statistics with Probability; So2

Math 25000 Problem Solving Seminar; So3, Fo3, So4, Fo4, So7

Math 26502 Honors Seminar: Oil, Energy and the Future of Society: Fo9, Si1, Si2

Math 27000 Mathematical Reasoning with Discrete Mathematics; So7, So9

Math 30500 Introduction to Analysis; So3

Math 31600 Probability and Statistics; Fo3, Fo5

Math 40200/42100 Theoretical Discrete Math; So2, So4, So6, So8, Si0, Si4

Math 41000 Theoretical Continuous Math; F17

Math 43000 Mathematical Modeling; F10, F14

Math 50200/58000/57000 Number Theory/Connections between Secondary and Advanced Algebra (for MAT Program); SM 07, SM13, SM15

Math 50200/58000/56000 History of Mathematics (for MAT Program); SM 08, SM12, SM14, SM16

### Cornell University

Math 171 Statistics; SM 05

Math 291 Calculus I for Engineers Mathematics; SM 03, SM 04

Math 293 Engineering Mathematics; SM 02

### University of Wisconsin-Superior

Math 371 Statistics; So1

Math 241 Calculus II; So0, So1

Math 130 Statistics; F99, Foo, So0, So1

Math 370 Probability; F99, Foo

Math 455 Abstract Algebra; Foo

Math 380 Mathematical Modeling; So0

Math 101/102 College Algebra; F99

### Syracuse University

Math 122 Statistics; S99

Math 296 Calculus II; S95, S98

Math 295 Calculus I; F97

Math 397 Calculus III; F96

Math 221 Statistics; S96

Math 285 Calculus I (non-majors); F93, F94, F95

Math 286 Calculus II (non-majors); S94

Math 194 Pre-Calculus; SM94

## Conferences Attended

AAC&U 2018 Annual Meeting, Washington, DC, January 2018.

National Collegiate Honors Council (NCHC) Conference, Chicago, IL, November 2015.

PKAL DC Regional Meeting, University of Mary Washington, VA, November 2014.

National Collegiate Honors Council (NCHC) Conference, Denver, CO, November 2014.

National Collegiate Honors Council (NCHC) Conference, New Orleans, LA, November 2013.

NCHC Summer Camp for New Honors Deans/Directors, Lincoln, NE, June 2013.

MathFest, Hartford, CT, August 2013.

MathFest, Madison, WI, August 2012.

Joint Mathematics Meetings, Boston, MA, January 2012.

MPE (Math for Planet Earth) Sustainable Planet Curriculum Workshop, DIMACS, NJ, October 2011. (Invited to Attend).

MAA Seaway Section Meeting, St. Bonaventure University, NY, October 2011.

National Collegiate Honors Council Conference, Kansas City, MO, October 20–24, 2010.

MathFest, Pittsburgh, PA, August 2010.

Joint Mathematics Meetings, San Francisco, CA, January 2010.

Joint Mathematics Meetings, Washington D.C., January 2009.

AASHE (Association for the Advancement of Sustainability in Higher Education) Conference, Raleigh, NC, November 2008.

Seaway Section MAA Meeting, Syracuse University, NY, April 12, 2008.

Joint Mathematics Meetings, San Diego, CA, January 2008.

Mathematics of Social Justice Workshop, Middlebury College, Middlebury, VT, June 2007.

Seaway Section MAA Meeting, SUNY Oneonta, Oneonta, NY, April 2007.

Seaway Section MAA Meeting, Ithaca College, Ithaca, NY, April 2006.

Joint Mathematics Meetings, San Antonio, TX, January 2006.

Joint Mathematics Meetings, Atlanta, GA, January 2005.

Seaway Section MAA Meeting, Canisius College, Buffalo, NY, November 2004.  
Seaway Section MAA Meeting, SUNY Cortland, Cortland, NY, April 2004.  
Joint Mathematics Meetings, Phoenix, AZ, January 2004.  
Seaway Section MAA Meeting, RIT, Rochester, NY, November 2003.  
Seaway Section MAA Meeting, Alfred University, Alfred, NY, April 2003.  
Joint Mathematics Meetings, Baltimore, MD, January 2003.  
Seaway Section MAA Meeting, SUNY Potsdam, Potsdam NY, November 1-2, 2002.  
Joint Mathematics Meetings, San Diego, CA, January 2002.  
MAA summer meeting, Madison, WI, August 2001.  
Joint Mathematics Meetings, New Orleans, LA, January 2001.  
History of Mathematics Conference, Menomonie, WI. September 2000.  
MAA summer meeting, L.A., CA, August 2000.  
Wisconsin Section MAA meeting, Superior, WI, April 2000.  
Joint Mathematics Meetings, San Antonio, TX, January 1999.  
Joint Mathematics Meetings, Baltimore, MD, January 1998.

## Professional Memberships

Association of American Colleges & Universities (AACU)  
Society for Industrial and Applied Mathematics (SIAM)