

Daniel M. Look

St Lawrence University
Associate Professor of Mathematics
Rutherford Professor of Mathematics
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Education

- **Ph.D. Mathematics** Dissertation: *Perturbations of Complex Polynomials and Circle Inversions*
1999-2005
Boston University, Boston, MA.
- **M.A. Mathematics** Thesis: *Classifying Topological 2-Disk Intersections in the Plane*
1996-1998
University of Maine, Orono, ME.
- **B.A. Mathematics**
1992-1996
University of Maine, Orono, ME.

Teaching Experience

- St. Lawrence University 2009-Present – Associate Professor of Mathematics (2012-Present), Assistant Professor of Mathematics (2009-2012)
- American Public University 2011-2017 – Adjunct Professor of Mathematics
- Boston University 2011-2016 (Summers only) – Adjunct Professor
- Harvard University 2011-2015 (Summers only) – Adjunct Professor
- Boston University Fall 2011 – Adjunct Professor
- Williams College 2008-2009 – Visiting Assistant Professor of Mathematics
- Indiana University of Pennsylvania 2005-2008 – Assistant Professor of Mathematics
- Boston University Academy 2004-2005 – Adjunct Mathematics Faculty
- Boston University 1999-2005 – Graduate Teaching Fellow
- University of Maine Spring 1999 – Mathematics Instructor
- University of Maine 1996-1998 – Graduate Teaching Assistant

Publications

1. *The Parameter Plane and Dynamics for 2-Circle Inversion with Complex Radii*, In Preparation
2. *Capture Sierpiński Carpet Julia Sets for n -Circle Inversions*, In Preparation

3. *A Bounded Sequence of Bitranstive and Capture Sierpiński Carpet Julia Sets for 3-Circle Inversions*, In Preparation
4. *Apollonian Spokes in n -Circle Inversion Parameter Space*, Submitted
5. *An Infinite Sequence of Wall-to-Wall Sierpiński Carpets for $z \mapsto \lambda(z + \frac{1}{z})$* , Submitted
6. *Stylometry and Collaborative Authorship: Eddy, Lovecraft, and ‘The Loved Dead’* with A. Gladwin and M. Lavin, *Digital Scholarship in the Humanities*, Vol. 32, Issue 1, April (2017), 123-140.
7. *Queer Geometry and Higher Dimensions: Mathematics in the fiction of H. P. Lovecraft*, *Lovecraft Annual*, Issue 10 (2016), 101-120.
8. *Checkerboard Julia Sets for Rational Maps* with P. Blanchard, F. Çilingir, D. Cuzzocreo, R. L. Devaney, and E. Russell, *The International Journal of Bifurcations and Chaos*, 23, No. 2 (2013), 48-60.
9. *Statistics in the Hyborean Age: An Introduction to Stylometry via Conan the Barbarian*, “Conan meets the Academy: Multidisciplinary Essays on the Enduring Barbarian”, Ed. J. Prida, McFarland Press (2012), 103-121.
10. *Classifying Simple Closed Curve Pairs in the 2-Sphere and a Generalization of the Schoenflies Theorem* with R. Franzosa and I. Gotchev, *Topology and its Applications*, 158 (2011), 748-760.
11. *Sierpinski Carpets as Julia sets for Imaginary 3-Circle Inversions*, *Journal of Difference Equations and Applications*, Vol. 16, Issue 5,6 (2010), 705-713.
12. *The Dynamics of Two and Three Circle Inversion*, *Fundamenta Mathematicae*, 199 (2008), 227-247.
13. *Singular Perturbations of z^n* with R. L. Devaney, M. Holzer, M. Moreno Rocha, and D. Uminsky, “Transcendental Dynamics and Complex Analysis”, *London Math Society Lecture Notes Series*, Vol. 348, Cambridge University Press, eds. P. Rippon and G. Stallard, (2008), 111-137.
14. *Sierpinski Carpets and Gaskets as Julia Sets of Rational Maps* with P. Blanchard, R. L. Devaney, M. Moreno Rocha, P. Seal, S. Siegmund, and D. Uminsky, “Dynamics on the Riemann Sphere: A Bodil Branner Festschrift”, Eds. P. Horth and C. Petersen, *European Mathematical Society*, (2006), 97-119.
15. *A Criterion for Sierpinski Curve Julia Sets for Rational Maps* with R. L. Devaney, *Topology Proceedings*, 30 No. 1 (2006), 1-17.
16. *Locally Sierpinski Julia Sets of Weierstrass Elliptic \wp Functions* with J. Hawkins, *International Journal of Bifurcation and Chaos*, 16, No. 5 (2006), 1505-1520.
17. *Sierpinski Curve Julia Sets and Singular Perturbations of Complex Polynomials* with P. Blanchard, R. L. Devaney, P. Seal, and Y. Shapiro, *Ergodic Theory and Dynamical Systems*, 25 (2005), 1047-1055.
18. *Symbolic Dynamics for a Sierpinski Curve Julia Set* with R. L. Devaney, *Journal of Difference Equations and Applications*, 11 (2005), 581-596.
19. *Buried Sierpinski Curve Julia Sets* with R. L. Devaney, *Discrete and Continuous Dynamical Systems*, 13 (2005), 1035-1046.
20. *The Escape Trichotomy for Singularly Perturbed Rational Maps* with R. L. Devaney and D. Uminsky, *Indiana University Mathematics Journal*, 54 (2005), 1621-1634.
21. *Perturbations of Complex Polynomials and Circle Inversion Maps* Boston University Doctoral Thesis

Awards

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- 2019-2026 Rutherford Chair in Mathematics
 - 2018-2019 Selected to give the annual Piskor (research) Lecture at St. Lawrence University

Senior Year Experience Research Projects (* indicates Honors Projects)

- 2021 - Skylar Ratcliffe (*) *The Dynamics of Circle Inversions*
- 2020 - Mairead Drake *Naive Bayes, Sentiment Analysis, and “The Hitchiker’s Guide to the Galaxy”*
- 2019 - Emily Casey-Wagemaker *Deconstructing discipline: A mixed methods analysis of disciplinary policies in New York States Capital District*
- 2019 - Xizhao (Amber) Liu *Robinson or Doyle?, Authorship Attribution and The Hounds of The Baskervilles*
- 2019 - Zeyu Lu *Knot Polynomials and Graph Theory*
- 2018 - Andrea Mossey *Graph Theory and Infectious Diseases*
- 2017 - Allison Macri *Fractals, Forgeries, and Forensics: Using Fractal Analysis to Identify Forged Handwriting*
- 2015 - Nat Shenton (*) *The Double Pendulum: A Case Study in Chaos Theory*
- 2015 - Brett Smith *Introductory SIR Analyses*
- 2014 - John Balderston (*) *Foxes, Hipsters, and the Internet Meme: A Comprehensive Model of Today’s First-World Social Epidemic*
- 2014 - Alex Gladwin (*) *“[Who?] can write no more”?: Stylometry, Authorship, and “The Loved Dead”*
- 2014 - Thomas Lehmann (*) *Allometric Scaling Theory and a Test of Area-Preserving Branching in Trees*
- 2013 - Kathryn Christensen (*) *Fixed-Point Iteration Methods* (Joint with Dr. Ivan Ramler)
- 2013 - Roelof Groenwald (*) *Next Generation Matrices for Epidemic Models*
- 2013 - Luke Reed (*) *Compartmental Models: An Epidemiological Application of Ordinary Differential Equations*
- 2013 - Devlin Rutherford (*) *Fractal Geometry and its Applications to Volcanology*
- 2013 - Alex Root *Exploratory Complex Dynamics*

Summer Fellows

- 2021 - Alyssa Bigness *TBA*
- 2021 - Alexandra Hill *TBA*
- 2020 - Skylar Ratcliffe (Clare Boothe Luce Fellowship) *Artistic Mathematics and Mathematical Art - Group Theory and the art of M.C. Escher*

Related Work and Service

- Has served as a referee for the following subjects and journals/books:
 - Complex Dynamics
 - * *Monatshefte für Mathematik* - 2019
 - * *AMS Contemporary Mathematics (CONM) book series* - 2019
 - * *Topology and its Applications* - 2016
 - * *The American Mathematical Monthly* - 2011, 2013, 2015
 - * *SIAM Undergraduate Research Online* - 2012
 - * *Journal of Difference Equations and Applications* - 2011
 - * *Topology Proceedings* - 2008, 2009, 2011
 - * *Proceedings of the American Mathematical Society* - 2008
 - * *Nonlinear Dynamics* - 2007
 - * *International Journal of Bifurcations and Chaos* - 2006
 - Text Mining, Stylometry, Sentiment Analysis
 - * *Journal of the Fantastic in the Arts* - 2018
- 2017-2019, 2020-Present Presider for St. Lawrence University Faculty Meetings
- 2020-Present St. Lawrence University Faculty Council Recording Secretary
- 2019-Present Faculty Advisor for the Table-Top Games Club
- 2017-Present Diversity Advocate for University Search Committees
- 2013-Present Faculty Advisor for the HUB Theme House
- 2010-Present Faculty Advisor for St. Lawrence University's Anime Club
- 2009-Present Organizer for π athlon, the annual departmental celebration of π day
- Spring 2021 Diversity Advocate for Geology VAP Search
- 2017, 2018, 2020: Co-Organizer for Mathematics Conference and Competition of Northern New York (MCCNNY) held Fall 2017, Fall 2018, Spring 2020
- 2017-2019 St. Lawrence University Faculty Council
- 2015-2019 Chair of St. Lawrence University's Department of Mathematics, Statistics, and Computer Science's Assessment Committee
- 2015-2019 Chair of St. Lawrence University's Department of Mathematics, Statistics, and Computer Science
- 2010-2019 Faculty Advisor for St. Lawrence University's chapter of Pi Mu Epsilon (Honorary National Mathematics Society)
- 2018-2019 Search Committee for Mathematics/Statistics visiting position
- 2018-2019 Search Committee for Data Science tenure-track position
- 2018-2019 London abroad program student selection committee
- 2017-2018 Search Committee for Data Science tenure-track position
- 2017-2018 Read names for Commencement
- 2017 Co-PI on a (successfully funded) NSF grant for the Hudson River Undergraduate Mathematics Conference

- 2017 Member of a three person team responsible for defining and submitting a proposal for a new Data Science position
- 2010-2017 St. Lawrence University Academic Affairs Committee
- 2016 Acting Area Chair for the Pulp Studies section for the national PCA Conference
- 2015 Member of a four person grant proposal team seeking an HHMI grant to aid first generation, under-represented students in STEM fields (in the end the grant was unfunded)
- 2015 Planning committee for Fall 2015 MAA Seaway Section Meeting
- 2014-2015 Search Committee Chair for Mathematics tenure-track position
- 2013-2015 Chair of St. Lawrence University's Academic Affairs Committee
- 2010-2015 Faculty Advisor for Q-Club; St. Lawrence University's Department of Mathematics, Statistics, and Computer Science student group
- 2013 Wrote a review of *Visions of Infinity: The Great Mathematical Problems* by Ian Stewart for *The American Statistician*
- 2012-2013 Co-chair for St. Lawrence University's Academic Affairs Committee
- 2011 Served on a committee of three responsible for organizing the Dynamics portion of the Spring Topology and Dynamics Conference 2011
- 2010-2011 Faculty Delegate for Academic Affairs Committee to Board of Trustees
- 2009-2011 AP Calculus Reader
- 2010 Reviewed the text *Dynamics and Linear Algebra* by Colonius and Kliemann for the American Mathematical Society
- 2010 Panelist for the session *Motivating the Unmotivated: Getting Students to Buy Into Your Course, the Next Course, and the Math Major* at Mathfest
- 2010 Co-Organized an Invited Paper Session titled *Complex Dynamics and Undergraduate Research* at Mathfest
- 2006-2008 Faculty Advisor for the IUP chapter of Students for a Democratic Society
- 2006-2008 Faculty Advisor for the Eta chapter of the coeducational National Honors Fraternity $\Phi\Sigma\Pi$ at IUP
- 2006-2008 IUP Mathematics Department Representative on University Senate
- 2006 Served as a panelist regarding graduate school at the SUMS (Shenandoah Undergraduate Mathematics and Statistics) conference at James Madison University
- 2005 Helped \LaTeX third edition of *Differential Equations* by P. Blanchard, R. L. Devaney, and G. Hall
- 2003 Helped proofread second edition of *Differential Equations, Dynamical Systems and An Introduction to Chaos* by M. W. Hirsch, S. Smale, and R. L. Devaney

Talks

1. MAA Seaway Section Special Event October 8, 2020
Panel/Workshop: Coordinating Group-work Remotely
2. Joint Meeting of the PCA/ACA, Washington DE April 17-20, 2019
Not Your Parents' Autobots - The Evolution of Gender and Sexuality in US/UK Transformers Fiction

3. Piskor Lecture at St. Lawrence University April 9, 2019
Nancy Drew and the Secret of the Whispering Words: A Text Mining Exploration of the Nancy Drew Series
4. International Conference on the Fantastic in the Arts, Orlando, FL March 13-17, 2019
Lovecraft of Eddy: The Contested Authorship of 'The Loved Dead'
5. Midwestern Popular Culture Association Fall Meeting, Indianapolis, IN October 4-6, 2018
Exploring Collaborative Authorship in the Pulps using Stylometry
6. International Conference on the Fantastic in the Arts, Orlando, FL March 14-18, 2018
Dimension and Non-Euclidean Geometry in Lovecraft's Fiction
7. Joint Meeting of the AMS/MAA in San Diego, CA January 10-14, 2018
Revisiting Complex 2-Circle Inversion (Invited Talk)
8. NecronomiCON, Providence, RI August 17-20, 2017
H.P. Lovecraft's use of Non-Euclidean Geometry (Invited Talk)
9. International Conference on the Fantastic in the Arts, Orlando, FL March 22-26, 2017
Uses of Mathematics and Physics in Early 20th Century Horror
10. Midwestern Popular Culture Association Fall Meeting, Chicago, IL October 7-9, 2016
Weird Tales from the Fourth Dimension! - Uses of Higher Dimension from the Pulps to Comic Books
11. Robert E. Howard Days in Cross Plains, TX June 10-12, 2016
*Stylometric Results on the Authorship of *Almuric* (Invited Talk)*
12. Popular Culture Conference "We'd like to avoid any Imperial entanglements': Empire in popular culture" at College of St. Joseph April 8-9, 2016
A Stylometric look at the Empire of Robert E. Howard's Conan Writings
13. Joint Meeting of the PCA/ACA, Seattle, WA March 22-25, 2016
The Stylometer in the Dark: A Stylometric Discussion of the Posthumous Collaborations of L. Sprague de Camp and Robert E. Howard
14. International Conference on the Fantastic in the Arts, Orlando, FL March 16-20, 2016
The Stylometer in the Dark: A Stylometric Discussion of the Posthumous Collaborations of L. Sprague de Camp and Robert E. Howard
15. MAA Seaway Section Meeting, St Lawrence University November 6-7, 2015
Stylometry and the Seldon Crisis: Using Stylometry to Categorize Novels in Asimov's Foundation Universe
16. Northeast Meeting of the PCA/ACA at Colby-Sawyer College October 30-31, 2015
Intra-author Stylometry: Distinguishing Works from a Single Author
17. NecronomiCON, Providence, RI August 20-22, 2015
Panel Member for *The Science of H.P. Lovecraft*
18. Popular Culture Conference "Sequels, Serials, and Remakes: Recycling Fictions in the Fantastic Sphere" at College of St. Joseph April 10-11, 2015
Stylometry and the Seldon Crisis: Using Stylometry to Categorize Novels in Asimov's Foundation Universe
19. Joint Meeting of the PCA/ACA, New Orleans, LA April 1-4, 2015
[Who] Can Write No More?: The Contested Authorship of CM Eddy's "The Loved Dead"
20. Southwest Meeting of the PCA/ACA, Albuquerque, NM February 11 - 14, 2015
Stylometry and the Seldon Crisis: Can Mathematics detect stylistic changes in Asimov's Foundation Series?
21. Joint Meeting of the AMS/MAA, San Antonio, TX January 10-13, 2015
Addressing the Contested Authorship of CM Eddy's "The Loved Dead" using Stylometry

22. Midwestern Popular Culture Association Fall Meeting, Indianapolis, IN October 3-5, 2014
It Came From.....The Fourth Dimension!!: Comic Panels and Higher Dimensions
23. Hudson River Undergraduate Mathematics Conference at Marist College April 26, 2014
It Came from the Fourth Dimension: Visualizing Higher Dimensions via the Art of Comic Books
24. Joint Meeting of the PCA/ACA in Chicago, IL April 18, 2014
The Cosmic Angle Regarding: Mathematics and the Fiction H. P. Lovecraft
25. Popular Culture Conference “American Horror from the Great Depression to the Great Recession” at College of St. Joseph April 11-12, 2014
Towards a Horrific Ecosystem– Joint with J. Prida
26. Annual Meeting of the Eastern Psychological Association in Boston, MA March 14, 2014
Horrific Ecosystems – Joint with J. Prida
27. Mathematics Conference and Competition of Northern New York at Clarkson University February 28, 2014
Flatland and the Art of Comic Books
28. Joint Meeting of the AMS/MAA in Baltimore, MD January 16, 2014
It Came from the Fourth Dimension: Visualizing Higher Dimensions via the Art of Comic Books
29. *Thriving in a Connected World* Technology Conference at SUNY Canton November 2, 2013
Livescribe and Pen-Capture Devices
30. Science Cafe Potsdam, NY and Canton, NY October 15-16, 2013
Who Wrote That? An Introduction to Stylometry
31. Popular Culture Conference “Weird Lovecraft” at College of St. Joseph April 12-13, 2013
The Mathematics of H.P. Lovecraft
32. Hudson River Undergraduate Mathematics Conference at Williams College April 6, 2013
Fractals, Chaos, and Newton’s Method
33. Faculty Cafe at St. Lawrence University February 15, 2013
Introduction to Stylometry
34. Invited Lecture at the United States Military Academy at West Point May 11, 2012
Differential Equations and the Undead
35. Hudson River Undergraduate Mathematics Conference at Western New England University April 21, 2012
Fractals from Circles
36. Popular Culture Conference “The Enduring Barbarian” at College of St. Joseph April 13-14, 2012
Statistics in the Hyborean Age: An Introduction to Stylometry via Conan the Barbarian
37. Spring Topology and Dynamical Systems Conference at Universidad Nacional Autonoma de Mexico, Mexico City, Mexico March 22-24, 2012
Connectedness Locus and Dynamics of Complex 2-Circle Inversion
38. Q-Club talk at St. Lawrence University March 2, 2012
Complex Dynamics and the Mandelbrot Set
39. Joint Meeting of the AMS and MAA in Boston, MA January 5, 2012
Organizing effective Math Club events
40. Special Seminar at Endicott College December 6, 2011
Relationships between Mathematics and Art
41. Dynamics Seminar at Boston University November 21, 2011
General Overview of n -Circle Dynamics

42. Differential Equations across the Curriculum, a conference in honor of Paul Blanchard's 60th Birthday at Gustavus Adolphus College June 23-26, 2011
Some thought on Differential Equations and the Undead in the Classroom (Invited Talk)
43. Clay Institute Workshop: Trends in Complex Dynamics, Cambridge, MA May 17, 2011
Complex Dynamics and 2-Circle Inversions
44. Spring 2011 Pi Mu Epsilon Induction at SUNY Plattsburgh April 27, 2011
Beauty in Chaos: An Introduction to Complex Dynamics and Julia Sets (Invited Talk)
45. Hudson River Undergraduate Mathematics Conference at Skidmore College April 16, 2011
Introduction to Stylometry
46. MAA Seaway Section Meeting at Nazareth College April 2, 2011
Visual Complex Dynamics
47. Spring Topology and Dynamical Systems Conference at The University of Texas at Tyler March 17-19, 2011
Symbolic Dynamics and Bifurcations for a Family of Circle Inversion Maps
48. Mathfest in Pittsburgh, PA August 5-7, 2010
Introduction to Complex Dynamics via Multiple Circle Inversions
49. AIMS Conference on Dynamical Systems, Differential Equations and Applications at Dresden University of Technology in Dresden, Germany May 25-28, 2010
Checkerboard Julia Sets
50. Hudson River Undergraduate Mathematics Conference at Keene State College April 17, 2010
A Parameter Plane for Symmetric Circle Inversion
51. Spring Topology and Dynamical Systems Conference at Mississippi State University March 18-20, 2010
Checkerboard Julia Sets
52. Dynamics Seminar at Boston University March 15, 2010
Some Remarks on the Dynamics of 2-Circle Inversion
53. Mathematics Club talk at SUNY Potsdam November 12, 2009
Mathematics and Horror
54. Q-Club talk at St. Lawrence University October 30, 2009
Mathematics and Horror
55. Hudson River Undergraduate Mathematics Conference April 18, 2009
Symmetric Circle Inversion
56. Mathematics Colloquium at Adelphi University January 18, 2009
A Parameter Plane for Symmetric Circle Inversion
57. Mathematics Colloquium at St. Lawrence University January 3, 2009
A Parameter Plane for Symmetric Circle Inversion
58. Joint Meeting of the AMS/MAA in Washington D.C. January 5-8, 2009
Imaginary Circles and Sierpinski Carpets
59. Dynamics Seminar at Boston University October 27, 2008
Complex Circle Inversions and Sierpinski Carpets
60. Faculty Seminar at Williams College October 3, 2008
Imaginary Circles and Sierpinski Carpets
61. Dynamical Systems and Topology Conference in honor of Robert L. Devaney's 60th Birthday in Tossa de Mar, Catalunya, Spain April 21-25, 2008
Cantor, Apollonius and Sierpinski: Julia Sets Generated from 3-Circle Inversion Maps (Invited Talk)

62. MAA Alleghany Mountain Section Meeting at the University of Pittsburgh April 11-12, 2008
Cantor, Apollonius and Sierpinski: Julia Sets Generated from 3-Circle Inversion Maps
63. Mathematics Colloquium at Indiana University of Pennsylvania February 5, 2008
Cantor, Apollonius and Sierpinski: Julia Sets Generated from 3-Circle Inversion Maps
64. The First Joint Meeting of the American Mathematical Society and the Polskie Towarzystwo Matematyczne at the University of Warsaw in Warsaw, Poland July 31-August 3, 2007
The Dynamics of a Circle Inversion Map
65. Allegheny Section Meeting of the MAA at Mercyhurst College April 13-14, 2007
Introduction to the Mandelbrot Set
66. Spring Topology and Dynamical Systems Conference at University of Missouri at Rolla March 29-31, 2007
The Dynamics of a Circle Inversion Map
67. PA-SSHEMA conference at Bloomsburg University March 23-24, 2007
Dynamics of Circle Inversion
68. Mathematics Colloquium at Bates College March 14, 2007
Introduction to Complex Dynamics via the Quadratic Map and a Circle Inversion Map
69. Spring Southeastern Section Meeting of the AMS at Davidson College March 3-4, 2007
The Dynamics of a Circle Inversion Map
70. Complex Analysis course meeting at Indiana University of Pennsylvania March 1, 2007
Introduction to Complex Dynamics
71. Mathematics Colloquium at Juniata College November 6, 2006
Beauty in Chaos: An Introduction to Complex Dynamics and Julia Sets
72. MAA Alleghany Mountain Section Meeting at Juniata College April 7-8, 2006
Sierpinski Curve Julia Sets for the Weierstrass Elliptic \wp -Function
73. SSHE-MA Conference at Edinboro University of Pennsylvania March 31-April 1, 2006
Buried Sierpinski Curve Julia Sets
74. Spring Topology and Dynamical Systems Conference at University of North Carolina at Greensboro March 23-25, 2006
Sierpinski Curve Julia Sets for the Weierstrass Elliptic \wp -Function
75. Mathematics Colloquium at Indiana University of Pennsylvania February 23, 2006
Geometry Gone Wild: An Introduction to Complex Dynamics and Julia Sets
76. Mathematics Colloquium at Indiana University of Pennsylvania October 18, 2005
Buried Sierpinski Curve Julia Sets
77. Mathematics Seminar at Colby College March 30, 2005
Beauty from Chaos: Complex Dynamics and the Mandelbrot Set
78. Mathematics Seminar at Indiana University of Pennsylvania March 21, 2005
An Escape Trichotomy for Singularly Perturbed Polynomials
79. Spring Topology and Dynamical Systems Conference at Berry College March 19, 2005
Buried Sierpinski curve Julia sets
80. Topology and Dynamics Seminar at University of Alabama at Birmingham March 16, 2005
Buried Sierpinski curve Julia sets
81. Dynamics Seminar at Boston University March 14, 2005
Thesis Defense

82. Analysis and Probability Seminar at University of Connecticut
An Escape Trichotomy for Singularly Perturbed Polynomials March 2, 2005
83. Mathematics Seminar at Bowdoin College
Beauty from Chaos: Complex Dynamics and the Mandelbrot Set February 21, 2005
84. Workshop on Holomorphic Dynamics at the University of Warwick, UK
An Escape Trichotomy for Singularly Perturbed Polynomials December 9, 2004
85. Northeastern Section Meeting for the Mathematical Association of America at the Worcester Polytechnic Institute
An Escape Trichotomy for Singularly Perturbed Polynomials November 20, 2004
86. Mathematics Colloquium at the University of Maine
An Escape Trichotomy for Singularly Perturbed Polynomials November 11, 2004
87. Midwest Dynamical Systems Seminar at the University of Cincinnati
An Escape Trichotomy for Singularly Perturbed Polynomials October 23, 2004
88. Mathematics Seminar at Tufts University
The Dynamics of Circle Inversion April 30, 2004
89. Complex Analysis course meeting at Tufts University
Apollonian Gaskets and Circle Inversion April 30, 2004
90. Spring Topology and Dynamical Systems Conference at the University of Alabama, Birmingham March 25, 2004
An Escape Trichotomy for Singularly Perturbed Polynomials
91. Dynamics Seminar at Boston University
An Escape Trichotomy for Singularly Perturbed Polynomials March 15, 2004
92. Graduate Student Dynamics Seminar at Boston University
Complex Dynamics and Circle Inversions March 15, 2004

Talk (Attended but did not Present)

1. Course Hero Virtual Education Summit '20 July 29-31, 2020

Talks (non-professional)

1. Nerdfest III at The Wind Up Space, Baltimore, MD
To the Third Dimension..and Beyond! or Doctor Dan's Adventures in Dimension June 6, 2009
2. Nerdfest II held at Load of Fun Studios, Baltimore, MD
Infinity May 17, 2008
3. Beware the Pides of March held at The Sidebar Tavern, Baltimore, MD
Pi March 13, 2008
4. Nerdfest held at The Hamilton Arts Collective, Baltimore, MD
Fractals April 7, 2007

Outreach Activities

- SOAR Class *September 12 and 19, 2018*
Taught a two-session course on Stylometry open to community members
- International Science and Engineering Fair at SUNY Potsdam *March 11, 2017*
Coordinated a team of four Science Fair Judges in the Middle School category
- Mathematics Faculty for Upward Bound Regional Math/Science Program *Summers 1997-2010*
Coordinated Mathematics and Statistics for the Upward Bound summer program.
- Mathematics Field Day at Boston University *October 29, 2002; October 29, 2003; October 28, 2008; October 27, 2010*
Gave a presentation on Knot Theory to roughly 600 High School students.
- Joint Meeting for the AMS/MAA *2007-2009*
Judged Undergraduate Poster Competition
- M.I.T. Splash *November 22 and 23, 2008*
Taught four short-courses to highly-motivated 7-12 grade students.
- Indiana University of Pennsylvania Science Festival *May 5, 2006, May 4, 2007, and May 2, 2008*
Gave a presentation on Fractals for participating High School students
- ARIN Mentorship at Indiana University of Pennsylvania *Spring 2006 and Spring 2008*
Presented material on Knot Theory, Chaos, and Fractals to High School participants
- Mathematics Career Talk at Indiana High School *October 20, 2005*
Spoke on the field of mathematics and mathematics careers
- Mathmeet 2004 at Colby College *November 6, 2004*
Aided undergraduate mathematics team with Putnam competition style problems.

Professional Societies

- Popular Culture Association/American Culture Association
- International Association for the Fantastic in the Arts
- American Mathematical Society
- Mathematical Association of America
- Sigma Xi (Scientific Research Society)
- Phi Kappa Phi (Honors Society)
- Pi Mu Epsilon (Honorary National Mathematics Society)