

Curriculum Vitae
Chris D. Lynd

Education

- Dec 2012 Ph.D. in Mathematics, University of Rhode Island
Thesis: *On the Global Character of Some Systems of Rational
Difference Equations in the Plane*
Advisor: Dr. Gerasimos Ladas
- May 2009 M.S. in Mathematics, University of Rhode Island
- May 1995 B.S. in Mathematics Education, The Ohio State University

Teaching Experience

- 2018 – Associate Professor at Bloomsburg University, Bloomsburg, Pennsylvania
- 2013 – 2018 Assistant Professor at Bloomsburg University, Bloomsburg, Pennsylvania
- 2012 – 2013 Instructor at University of Rhode Island, Kingston, Rhode Island
- 2007 – 2012 Teaching Assistant at University of Rhode Island, Kingston, Rhode Island

Publications (Textbooks)

- C. D. Lynd, Finite Mathematics: For Today's Computer-Centered World, *Cognella Publishing*, (2022).
- C. D. Lynd, Critical Reasoning in Mathematics: Investigations into Problem-Solving, *Cognella Publishing*, (Available Summer 2024).

Publications (Articles)

- C. D. Lynd and J. W. Sharpe, Sequences Generated by Powers of the k^{th} -order Fibonacci Recurrence Relation, *The American Mathematical Monthly*, **125** no. 5 (2018) 443 – 446.
- D. A. Leshner and C. D. Lynd, Convergence Results for the Class of Periodic Left Nested Radicals, *Mathematics Magazine*, **89** no. 5 (2016) 319 – 335.
- C. D. Lynd, The Boundedness Characterizations of Three Families of Systems of Difference Equations, *Communications on Applied Nonlinear Analysis*, **21** no. 1 (2014) 1 – 20.
- C. D. Lynd, Using Difference Equations to Generalize Results for Periodic Nested Radicals, *The American Mathematical Monthly*, **121** no. 1 (2014) 45 – 59.

- C. D. Lynd, Using Invariant Manifolds to Solve an Anti-Competitive System of Difference Equations, *The International Journal of Difference Equations*, **7** no. 2 (2012) 163 – 174.
- C. D. Lynd, The Global Character of Solutions of an Anti-Competitive System of Rational Difference Equations, *Sarajevo Journal of Mathematics*, **8** no. 2 (2012) 323 – 336.
- E. Camouzis, C. M. Kent, G. Ladas, and C. D. Lynd, On the Global Character of Solutions of the System $x_{n+1} = \frac{\alpha_1 + y_n}{x_n}$ and $y_{n+1} = \frac{\alpha_2 + \beta_2 x_n + \gamma_2 y_n}{A_2 + B_2 x_n + C_2 y_n}$, *The Journal of Difference Equations and Applications*, **18** no. 7 (2012) 1205 – 1252.
- A. M. Bret, E. Camouzis, G. Ladas, and C. D. Lynd, On the Boundedness Character of a Rational System, *Journal of Numerical Mathematics and Stochastics*, **1** no. 1 (2009) 1 – 10.

Presentations

International Conferences

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| June 2023 | <i>Global Results for the class of Anti-Competitive Rational-Linear Systems of Difference Equations</i> , American Institute of Mathematical and Sciences 13 th International Conference on Dynamical Systems, Differential Equations and Applications, Wilmington, North Carolina |
| July 2022 | <i>Rational-Linear Anticompetitive Systems of Difference Equations</i> , International Society of Difference Equations 27 th International Conference on Difference Equations and Applications, Paris, France |
| July 2017 | <i>Anti-Competitive Systems of Difference Equations</i> , International Society of Difference Equations 23 rd International Conference on Difference Equations and Applications, Timișoara, Romania |

National Conferences

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| January 2018 | <i>The Asymptotic Behavior of the Solutions of a k^{th}-order Difference Equation</i> , Joint Meeting of the American Mathematical Society and the Mathematical Association of America, San Diego, California |
| January 2017 | <i>Undergraduate Research Projects in Discrete Dynamical Systems</i> , Joint Meeting of the American Mathematical Society and the Mathematical Association of America, Atlanta, Georgia |
| January 2015 | <i>Convergence Results for the Class of Periodic Left Nested Radicals</i> , Joint Meeting of the American Mathematical Society and the Mathematical Association of America, San Antonio, Texas |

- January 2014 *A Subclass of Anti-Competitive Systems Of Two, First-Order, Rational Linear Difference Equations*, Joint Meeting of the American Mathematical Society and the Mathematical Association of America, Baltimore, Maryland
- January 2013 *Undergraduate Research Opportunities in Systems of Difference Equations*, Joint Meeting of the American Mathematical Society and the Mathematical Association of America, San Diego, California
- January 2013 *Using Difference Equations to Generalize Results for Periodic Nested Radicals*, Joint Meeting of the American Mathematical Society and the Mathematical Association of America, San Diego, California
- January 2012 *The Global Character of Solutions of Rational Systems of Difference Equations*, Joint Meeting of the American Mathematical Society and the Mathematical Association of America, Boston, Massachusetts

Sectional Conferences

- April 2021 *The Class of Anti-Competitive Systems Of Two, First-Order, Rational Linear Difference Equations*, Eastern Sectional Meeting of the American Mathematical Society, Brown University
- April 2019 *The Class of Sequences of Nested Radicals*, Eastern Sectional Meeting of the American Mathematical Society, University of Connecticut
- May 2017 *Sequences Generated by Powers of the k^{th} -order Fibonacci Recurrence Relation*, Eastern Sectional Meeting of the American Mathematical Society, Hunter College
- November 2016 *The Global Dynamics of Several Systems of Non-Linear Difference Equations*, Southeastern Sectional Meeting of the American Mathematical Society, North Carolina State University
- November 2014 *Convergence Results for the Class of Periodic Left Nested Radicals*, Southeastern Sectional Meeting of the American Mathematical Society, University of North Carolina
- September 2013 *The Class of Anti-Competitive Systems Of Two, First-Order, Rational Linear Difference Equations*, Eastern Sectional Meeting of the American Mathematical Society, Temple University
- April 2013 *Anti-Competitive Systems of Rational Difference Equations*, Eastern Sectional Meeting of the American Mathematical Society, Boston College
- September 2012 *A Period-2 Trichotomy for a Family of Systems of Rational Difference Equations*, Eastern Sectional Meeting of the American Mathematical Society, Rochester Institute of Technology

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| June 2012 | <i>Undergraduate Research Opportunities in Difference Equations</i> , Eastern Sectional Meeting of the Mathematical Association of America, Central Connecticut State University |
| September 2011 | <i>Global Solutions of Systems of Difference Equations</i> , Eastern Sectional Meeting of the American Mathematical Society, Cornell University |
| April 2011 | <i>Using Difference Equations to Extend our Knowledge of Nested Radicals</i> , Eastern Sectional Meeting of the American Mathematical Society, Holy Cross |
| October 2010 | <i>Infinitely Nested Radicals as Particular Solutions to a General First-Order Difference Equation</i> , Eastern Sectional Meeting of the American Mathematical Society, Syracuse University |
| October 2009 | <i>On the Boundedness Character of a Rational System</i> , Eastern Sectional Meeting of the American Mathematical Society, Penn State University |

Refereed and Reviewed Papers for Journals

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| April 2023 | Reviewed a paper for Mathematical Reviews that was published in the <i>Electronic Journal of Qualitative Theory of Differential Equations</i> . |
| December 2019 | Reviewed a paper for Mathematical Reviews that was published in the conference proceedings for <i>The 23rd International Conference on Difference Equations and Applications</i> |
| May 2019 | Reviewed a paper for Mathematical Reviews that was published in <i>Mathematica Slovaca</i> |
| June 2018 | Reviewed a paper for Mathematical Reviews that was published in <i>The Journal of Fractional Calculus and Applications</i> |
| June 2018 | Reviewed a paper for Mathematical Reviews that was published in <i>Dynamics of Continuous, Discrete and Impulsive Systems Series B</i> |
| January 2018 | Reviewed a book titled <i>Patterns of Difference Equations with Periodic and Eventually Periodic Solutions</i> for Chapman & Hall/CRC |
| June 2017 | Refereed a paper that was submitted to <i>The American Mathematical Monthly</i> |
| June 2017 | Reviewed a paper for Mathematical Reviews that was published in <i>Opuscula Mathematica</i> |
| June 2017 | Reviewed a paper for Mathematical Reviews that was published in <i>Chaos, Solitons and Fractals</i> |

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| April 2017 | Invited to become a reviewer for Mathematical Reviews, which is a division of the American Mathematical Society |
| February 2015 | Refereed a paper that was submitted to <i>The American Mathematical Monthly</i> |
| January 2015 | Reviewed a book titled <i>Introduction to Difference Equations</i> for World Scientific Publishing |
| December 2014 | Refereed a paper that was submitted to the journal <i>Mathematical Methods in the Applied Sciences</i> |
| October 2014 | Refereed a paper that was submitted to the journal <i>Advances in Difference Equations</i> |
| September 2014 | Refereed a paper that was submitted to the journal <i>Advances in Difference Equations</i> |
| August 2014 | Refereed a paper that was submitted to the journal <i>Discrete Dynamics in Nature and Society</i> |
| March 2013 | Refereed a paper that was submitted to the journal <i>The American Mathematical Monthly</i> |
| December 2012 | Refereed a paper that was submitted to the journal <i>The American Mathematical Monthly</i> |

Grants and Awards

- Awarded a 1-Semester Sabbatical 2022
- 2018 Faculty Award for Teaching from the College of Science and Technology
I was awarded the Distinguished Faculty Award for Teaching from the College of Science and Technology at Bloomsburg University. This is an annual award that is given to a faculty member for excellence and innovation in teaching.
- Influential Professor Award 2017
I was selected by a student athlete, Abbey Remley, as her most influential professor. In the program from the 2016 – 2017 Husky Awards Banquet, she is quoted as saying: “I selected Dr. Lynd because for the past two semesters, he challenged me each and every day and made me work harder and smarter. I have had two of my hardest classes with Dr. Lynd and each time I needed help, he was always there to guide me in the right direction without handing me the answers. I think he has made me a better student because his work is always challenging, time consuming, and detail oriented, but the feeling of accomplishment when it’s over is so rewarding.”
- Bloomsburg University Travel Grants 2013, 2014, 2016, 2017, 2018, 2020, 2023
I received Faculty Professional Development Travel grants from Bloomsburg University to present talks at the national joint conference for the AMS and MAA, and for the international conference for AIMS.
- Graduate Faculty Status (2015 – Present)

- **Gerry Ladas Math Prize 2012**
This is an annual scholarship awarded by the mathematics department at the University of Rhode Island to a graduate student for outstanding research in mathematics.
- **Member of Pi Mu Epsilon 2009**
This is the honor society for graduate students in mathematics.
- **Teaching Assistantship at the University of Rhode Island 2007 – 2012**
- **Winner of the Infinifield Math Contest 2006**
This was a competition to count the number of possible game boards that could be built with the game pieces, while following the “building rules” in the instructions for the game.

Teaching

- **Student Research**
I coauthored a paper with a student, James Sharpe, that was published in *The American Mathematical Monthly* in 2018. This research was presented at the 2017 Southeastern sectional conference for the AMS and at the 2018 national conference for the AMS and MAA.

I coauthored a paper with a student, Devyn Leshner, that was published in *Mathematics Magazine* in 2016. This research was presented at the 2014 Southeastern sectional conference for the AMS and at the 2015 national conference for the AMS and MAA.

I worked with a student, Ben Mou, on a research project where we wrote a computer program that would estimate the different regions of parameter space associated with each type of solution for a system of difference equations. The program created a three-dimensional graph of the regions of parameter space to illustrate the global dynamics of the system. Ben presented his research at the 2017 Research Day at Bloomsburg University.

I worked with a student, Hannah Shriver, on her honors senior research project. The research project compared student retention rates, graduation rates, and scholarships awarded in the honors program at Bloomsburg University. Hannah presented her research at the 2017 Research Day at Bloomsburg University and to the honors program coordinators at BU to help them develop a plan for awarding scholarships that will maximize their retention rate.
- **Supplemental Learning Program**
I try to have a Supplemental Learning tutor for each of my classes. The tutors are students who earned an A in the course and have a desire to help other students. The tutors attend the classes and have office hours. Attendance data and student evaluations are collected and analyzed to assess the tutoring program. The results have always been positive.
- **Review for the Major Field Test: Calculus, Differential Equations, and Real Analysis**
I created a packet of material that synthesizes the content from the following courses: Math 482, Math 370, Math 270, Math 170, and Math 160. This packet is designed to help students prepare for the Major Field Test in Mathematics. From 2014 – 2020, I provided two-hour review sessions covering the content for the portion of the test on calculus, differential equations, and real analysis.
- **Review for the Major Field Test: Abstract Algebra and Linear Algebra**
I created a packet of material that presents all of the major definitions and theorems in Linear Algebra (Math 340) and Abstract Algebra (Math 480). This packet is designed to help students prepare for the Major Field Test in Mathematics. In 2016, I provided a two-hour review session covering the content for the abstract algebra portion of the test. From 2018 – 2021, I provided two-hour review sessions covering the content for the linear algebra portion of the test.

- **Advisor for the COMAP Math Modeling Competition**
From 2015 – present, I am the advisor for Bloomsburg University’s math modeling team in the COMAP international math modeling competition.
- **Coordinator for Applied Matrix Algebra**
From 2015 – 2017, I was the coordinator for Applied Matrix Algebra. My job was to ensure that consistent coverage and rigor was maintained across the different sections of Math 118.
- **Courses Taught at Bloomsburg University**
Math 101 Mathematical Thinking, Math 118 Applied Matrix Algebra, Math 130 Finite Mathematics, Math 140 Precalculus, Math 120 Mathematics for Health Sciences, Math 150 Essentials of Calculus, Math 250 Discrete Mathematics, Math 260 College Geometry, Math 320 Programming in Mathematics, Math 340 Linear Algebra, Math 360 Modern Geometry, Math 370 Differential Equations, Math 410 Mathematical Modeling, Math 482 Real Analysis 1, Math 488 Introduction to Topology, Math 492 Real Analysis 2, Math 498 Independent Study: Discrete Dynamical Systems, Math 499 Honors Independent Study: Honors Research Project.

Service

- **University Committees**
Elected Member of the General Education Council 2016 – 2018
- **College Committees**
COST Faculty Professional Development 2022 – present
COST Retention committee 2020 – 2021
COST Faculty Recognition Committee 2019 – 2020
COST Research Day Committee 2016 – present
Engineering Committee 2015 – 2016
- **Department Committees**
Faculty Evaluation Committee 2018 – 2022
Tenure, Promotion, and Sabbatical Committee 2020 – 2021
Math/CIS Adjunct Search and Screen Committee Secretary 2014, Chair 2015 – present
Math Tenure-Track Search Committee 2015 – 2016 and 2016 – 2017
Data Science Tenure-Track Search Committee 2016 – 2017 and 2017 – 2018
Math 5-Year Review Committee 2015 – 2016 and 2020 – 2021
Math Curriculum Committee 2013 – present, Co-Chair 2014, Chair 2021 – present
Data Science Curriculum Committee 2016 – 2018
Department Scholarship Committee 2014 – present, Chair 2014 – present
Math Education Committee 2013 – 2018
Math Recruitment and Retention Committee 2013 – present, Chair 2021 – present
Committee to Study Enrichment Courses 2016 – 2019
- **Spearheaded the Creation of a New Program for the Commonwealth University**
From 2021 – 2022, I chaired the curriculum committee when we created the mathematics program and the new program in applied mathematics. These were some of the first programs approved by the Commonwealth University.
- **Helped to Create the Course Math 103**
From 2022 – 2023, I chaired the curriculum committee and served on the subcommittee that created Math 103 Critical Reasoning in Mathematics, a general education course in critical reasoning. This was in response to a request from the departments of music education and secondary education.

- **Wrote Content for the New Website**
From 2022 – 2023, I was chair of the subcommittee that wrote all of the content for the Mathematics and Applied Mathematics webpages.
- **Coordinator for the Mathematical and Digital Sciences Seminar Series**
From 2017 – 2018, I organized, publicized, and scheduled the guest speakers and seminar talks.
- **Created the Course Math 320**
From 2015 – 2016, I created the course Math 320 Programming in Mathematics in response to feedback from the students and from the department's 5-year review.
- **TALE Ambassador for the Mathematical and Digital Sciences Department**
From 2015 – 2016, I was responsible for attending the sessions for Teaching and Learning (TALE) and reporting the information to the department.