

Dylan Murphy

Curriculum Vitae

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Personal Information

Full name Dylan Joseph Murphy
Born October 17, 1987 (Arizona, USA)
Citizenship USA

Education

2006–2010 **S.B., Mathematics, Physics**, *University of Chicago*, Chicago, Illinois.
2010–present **Ph.D. Candidate, Mathematics**, *University of Arizona*, Tucson, Arizona, Expected graduation summer 2018.

Employment

2017–present **Lecturer**, *University of Arizona School of Information*, Tucson, Arizona.

Research Interests

- Discrete and continuous integrable systems
- Orthogonal polynomials on the real line and unit circle
- Machine learning for text, metadata, and information science applications

Seminar Talks

Sep. 2, 2014	Tridiagonal matrix models and stochastic operators	<i>UA Mathematics Analysis, Dynamics, and Applications Seminar</i>
Apr. 22, 2015	Random orthogonal polynomials on the line and the circle	<i>UA Mathematics Mathematical Physics and Probability Seminar</i>
Nov. 10, 2015	Difference equations and scattering problems for orthogonal polynomial recurrence coefficients	<i>UA Mathematics Analysis, Dynamics, and Applications Seminar</i>
Apr. 27, 2016	Darboux transformations: from continuous to discrete	<i>UA Mathematics Mathematical Physics and Probability Seminar</i>
Oct. 9, 2016	Geometry of discrete Schrödinger operators	<i>AMS Western Sectional Meeting Special Session on Integrable Systems and Soliton Equations (invited)</i>
April 1, 2017	Algebraic geometry of scattering theory for orthogonal polynomials	<i>IMACS Conference on Nonlinear Waves Special Session on Painleve Equations, Integrable Systems, and Random Matrices (invited)</i>

Fellowships and Awards

- Fall 2014 U. of Arizona Mathematics Department VIGRE Fellowship
2016 U. of Arizona College of Science Galileo Circle Scholar

Teaching

As Graduate Teaching Assistant/Associate at U. of Arizona Mathematics:

- Math 112 College Algebra *Spring 2011, Summer 2015 (online)*
Math 120R Precalculus *Fall 2011, Spring 2012, Summer 2012*
Math 122B Calculus I *Fall 2012*
Math 129 Calculus II *Spring 2013, Fall 2013, Spring 2014, Spring 2015*
Math 196N Calculus II Problem Solving Workshop *Fall 2013*
Math 196V Calculus III Problem Solving Workshop *Spring 2014*
Math 263 Introduction to Statistics and Biostatistics *Fall 2015, Spring 2016*
As Lecturer at U. of Arizona School of Information:
ISTA 116 Statistical Foundations for the Information Age *Fall 2017, Spring 2018 (in person and online)*

Service

- 2014–2016 U. of Arizona Mathematics Graduate Student Colloquium *Organizer*
2013, 2015 U. of Arizona Mathematics Integration Workshop *Graduate Assistant*
for new graduate students
2014 U. of Arizona Mathematics Department *Senior Graduate Instructor,*
Summer qualifying exam sessions *Geometry/Topology*

Other Skills

- Software Python (NumPy/SciPy), Julia, C, C++, R, MATLAB, L^AT_EX
Languages English (native), Esperanto (intermediate), Japanese (basic)