

Dylan Murphy

Curriculum Vitae

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Personal Information

Full name Dylan Joseph Murphy
Citizenship USA

Education

2010 **S.B., Mathematics, Physics**, *University of Chicago*, Chicago, Illinois.
2019 **Ph.D., Mathematics**, *University of Arizona*, Tucson, Arizona.
Dissertation: Additions for Jacobi operators and the Toda hierarchy of lattice equations

Employment

2022–Present **Analyst, Baseball Research & Development**, *Tampa Bay Rays*, St. Petersburg, FL.
Designing and implementing Bayesian models for player performance forecasting.
2017–2021 **Lecturer**, *University of Arizona School of Information*, Tucson, AZ.
Teaching courses primarily in Bayesian statistics, information theory, and computation in the Python programming language.

Invited Presentations

Oct. 9, 2016	Geometry of discrete Schrödinger operators	<i>AMS Western Sectional Meeting Special Session on Integrable Systems and Soliton Equations</i>
Mar. 30, 2017	Algebraic geometry of scattering theory for orthogonal polynomials	<i>10th IMACS Conference Special Session on Painlevé Equations, Integrable Systems, and Random Matrices</i>
Jan. 17, 2020	Additions and the Toda hierarchy	<i>2020 Joint Mathematics Meetings Special Session on Random Combinatorial Structures, Complex Analysis, and Integrable Systems</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 UA Mathematics:

Math 112	College Algebra	<i>Spring 2011, Summer 2015 (online)</i>
Math 120R	Precalculus	<i>Fall 2011, Spring 2012, Summer 2012</i>
Math 122B	Calculus I	<i>Fall 2012</i>
Math 129	Calculus II	<i>Spring 2013, Fall 2013, Spring 2014, Spring 2015</i>
Math 196N	Calculus II Problem Solving Workshop	<i>Fall 2013</i>
Math 196V	Calculus III Problem Solving Workshop	<i>Spring 2014</i>
Math 263	Introduction to Statistics and Biostatistics	<i>Fall 2015, Spring 2016</i>

As Lecturer at UA School of Information:

ISTA 116	Statistical Foundations for the Information Age	<i>Fall 2017 – Spring 2020</i>
ISTA 130	Computational Thinking and Doing	<i>Fall 2018 – Fall 2019</i>
ISTA 311	Foundations of Information and Inference	<i>Fall 2018 – Spring 2021</i>
ISTA 331	Principles and Practice of Data Science	<i>Spring 2020 – Spring 2021</i>
ISTA 410/ INFO 510	Bayesian Modeling and Inference	<i>Fall 2020 – Spring 2021</i>

Service

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

Other Skills

Software	Python (with NumPy/SciPy, scikit-learn, Keras, and PyMC), Julia, R, Stan, MATLAB, git, \LaTeX
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