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| CONTACT      | The University of Texas at Arlington<br>Department of Mathematics<br>411 South Nedderman Drive<br>Box 19408<br>Arlington, TX 76019-0408                                                                                                                                                                                                                                                                                                                              | Office: 817.272.3261<br>dwight.williams@uta.edu<br>mathdwight.com |
| RESEARCH     | <p><b>theory of mathematics</b><br/>Lie (super)algebras, supermathematics, representation theory, algebra, connections between superalgebras, mathematical physics, and quantum groups</p> <p><b>community of mathematicians</b><br/>mathematicians within the African diaspora, underrepresented students in mathematics, history of mathematics, mentorship</p>                                                                                                    |                                                                   |
| EDUCATION    | <p><b>The University of Texas at Arlington</b>, Arlington, TX</p> <p>Ph.D., Mathematics, expected May 2020</p> <p>Dissertation: <i>Bases of Infinite Dimensional Representations of Orthosymplectic Lie Superalgebras</i></p> <p>Advisor: Dimitar Grantcharov</p> <p><b>The Florida State University</b>, Tallahassee, FL</p> <p>M.S., Pure Mathematics, May 2014</p> <p><b>Florida A&amp;M University</b>, Tallahassee, FL</p> <p>B.S., Mathematics, April 2012</p> |                                                                   |
| EMPLOYMENT   | Postdoctoral Research Associate (ECR-EHR Core Research Grant)<br>Iowa State University, Ames, Iowa<br>Supervisor: Michael Young<br>Research Mentor: Jonas Hartwig                                                                                                                                                                                                                                                                                                    | 2020 – 2022                                                       |
| DISTINCTIONS | Joint Mathematics Meetings Travel Grant<br>American Mathematical Society                                                                                                                                                                                                                                                                                                                                                                                             | 2019                                                              |
|              | International Congress of Mathematicians Travel Grant<br>American Mathematical Society                                                                                                                                                                                                                                                                                                                                                                               | 2018                                                              |
|              | Peer Mentor Award<br>The University of Texas at Arlington Department of Mathematics                                                                                                                                                                                                                                                                                                                                                                                  | 2018                                                              |
|              | Graduate Assistance in Areas of National Need (GAANN) Fellow<br>The University of Texas at Arlington                                                                                                                                                                                                                                                                                                                                                                 | 2017 – present                                                    |
| MEDIA        | <p>Research publications</p> <ol style="list-style-type: none"> <li>(In preparation; Joint with D. Grantcharov) Bases of infinite-dimensional tensor product representations of <math>\mathfrak{osp}(1 2n)</math>.</li> </ol>                                                                                                                                                                                                                                        |                                                                   |

## News and education

1. The International Congress of Mathematicians: A Math Conference for Everybody. (2018, Winter). *NAM Newsletter*. Retrieved from [http://www.nam-math.org/include/pages/files/newsletters/2018 Winter.pdf](http://www.nam-math.org/include/pages/files/newsletters/2018%20Winter.pdf)
2. CPALMS Perspectives Videos (2015) *Carbon foam and geometry*. Available at: <https://www.cpalms.org/Public/PreviewResourcePerspectivesVideo/Preview/128676>

## TALKS

2020

1. “*It looks like calculus*: Lie superalgebras acting on polynomials in commuting and anti-commuting variables” Mar  
Colloquium, California State Polytechnic University, Pomona
2. “Finding bases of new infinite dimensional representations of  $\mathfrak{osp}(1|2n)$ ” Mar  
Algebra/Number Theory/Combinatorics Seminar, Claremont Colleges
3. “Basis of an infinite-dimensional tensor product representation of  $\mathfrak{osp}(1|2n)$ ”, Jan  
The Joint Mathematics Meetings 2020, Denver, Colorado

2019

4. “Infinite-dimensional tensor product representations of  $\mathfrak{osp}(1|2n)$  and  $\mathfrak{gl}(2n)$ ”, Dec  
Algebra and Geometry Seminar, Iowa State University
5. “Bases of infinite-dimensional tensor product representations of  $\mathfrak{osp}(1|2n)$ ”, Nov  
Representation Theory Seminar, Baylor University
6. “*Incompleteness theorem*: a graduating graduate student’s hard-knocks lessons”, Oct  
Discussions in Algebra (DinA), The University of Texas at Arlington
7. “Basis of an infinite-dimensional tensor product representation of  $\mathfrak{osp}(1|2n)$ ”, Oct  
Algebra Seminar, University of North Texas
8. “Super Black Magic”, Oct  
Graduate Algebra Symposium, Texas A&M University
9. “Infinite-dimensional tensor product representations of orthosymplectic Lie superalgebras”, Aug  
Comprehensive Exam, The University of Texas at Arlington
10. “*Keeping up with the signs*: examples of Lie superalgebras and their representations”, Mar  
Colloquium, Sam Houston State University
11. “*...a Noether one...*: the lives of Malone-Mayes, Mirzakhani, & Noether”, Mar  
AMS UTA Graduate Seminar, The University of Texas at Arlington
12. “Infinite-dimensional representations of  $\mathfrak{osp}(1|2n)$ ”, Feb  
Southwest Local Algebra Meeting, The University of Texas at El Paso

2018

- 13. “Infinite-dimensional representations of  $\mathfrak{osp}(1|2n)$ ”,  
Blackwell-Tapia Conference, ICERM Nov
- 14. “Tensor product representations of  $\mathfrak{osp}(1|2n)$ ”,  
Discussions in Algebra (DinA), The University of Texas at Arlington Nov
- 15. “Angles of Andy... simple roots”,  
Discussions in Algebra (DinA), The University of Texas at Arlington Apr
- 16. “Gelfand-Tsetlin subalgebras”,  
Discussions in Algebra (DinA), The University of Texas at Arlington Mar

2017

- 17. “Supermathematics...”,  
UNT UTA OU Algebra Symposium, University of Oklahoma Oct
- 18. “Superalgebras”  
Discussions in Algebra (DinA), The University of Texas at Arlington Oct
- 19. “Magmas, loops, and other not-quite groups”,  
UNT UTA OU Algebra Symposium, The University of Texas at Arlington Apr
- 20. “Solutions to Hungerford exercises on *Hom and Duality*”  
Discussions in Algebra (DinA), The University of Texas at Arlington Feb

2016

- 21. “Survey of algebraic objects”  
Discussions in Algebra (DinA), The University of Texas at Arlington Oct

2013

- 22. “A complex investigation of Pythagorean triples”,  
Complex Analysis Seminar, The Florida State University Nov

2011

- 23. “Cyclotomy and representation Theory”,  
Iowa Summer Research Symposium, University of Iowa Jul

## ACTIVITIES

**Conferences, Seminars, Symposiums**

2<sup>nd</sup> Annual UTA College of Science & College of Engineering Diversity Stem Conference  
The University of Texas at Arlington (March 2020)

Graduate Algebra Symposium XIV  
Texas A&M University (October 2019)

NAM Undergraduate MATHFest XXIX  
Southern University of New Orleans (September 2019)

- Southwest Local Algebra Meeting  
The University of Texas at El Paso (February 2019)
- Blackwell-Tapia Conference 2018  
ICERM (November 2018)
- UNT UTA OU Algebra Symposium XII  
The University of Texas at Arlington (October 2018)
- NAM Undergraduate MATHFest XXVIII  
Spelman College (September 2018)
- Lie and Jordan Algebras, their Representations and Applications VIII  
Satellite Conference ICM  
Cusco, Peru (August 2018)
- International Congress of Mathematicians  
Rio de Janeiro, Brazil (August 2018)
- Texas-Oklahoma Representations and Automorphic Forms (TORA) IX  
University of Oklahoma (April 2018)
- UNT UTA OU Algebra Symposium X  
University of Oklahoma (October 2017)
- Lie Algebras, Superalgebras, and Applications  
AMS Fall Central Sectional Meeting  
University of North Texas (September 2017)
- UNT UTA OU Algebra Symposium IX  
The University of Texas at Arlington (April 2017)
- Algebra Seminar  
University of North Texas (2017 - present)
- UNT UTA OU Algebra Symposium VIII  
University of North Texas (November 2016)
- Discussions in Algebra (DinA)  
The University of Texas at Arlington (2016 - present)

### **Schools, Trainings, Workshops**

- Workshop on Symmetric Spaces, Their Generalizations, and Special Functions  
Fields Institute – University of Ottawa (May 2020)
- Southeastern Lie Theory Workshop XI:  
“Geometric and Categorical Representation Theory”  
Louisiana State University (May 2019)
- Representation Theory, Combinatorics, and Geometry  
University of Virginia (October 2018)
- Common Misconceptions in Undergraduate Mathematics Classrooms  
Center for the Integration of Research, Teaching, and Learning  
The University of Texas at Arlington (Fall 2018)
- Mathematics Education: Teaching Tips for Graduate Students  
Center for the Integration of Research, Teaching, and Learning  
The University of Texas at Arlington (Fall 2018)

2018 RTG Summer School “Lie Theory”  
University of Georgia (June 2018)

“Introduction to Git and GitHub”  
The University of Texas at Arlington (April 2018)

“ABCs of DMPs: Introduction to creating effective data management plans”,  
The University of Texas at Arlington (March 2018)

“Introduction to Python”,  
The University of Texas at Arlington (March 2018)

“Intro to Pivot - Funding”,  
The University of Texas at Arlington (February 2018)

“Publishing Your First Article”,  
The University of Texas at Arlington (February 2018)

“Shaping Your Academic Digital Identity”,  
The University of Texas at Arlington (February 2018)

## TEACHING

### Instructor of Record

Summer 2017 – Fall 2017 & Fall 2018 – Spring 2020

Business Calculus - The University of Texas at Arlington  
Calculus III (2 sections) - The University of Texas at Arlington  
College Algebra (Pilot) - The University of Texas at Arlington  
Linear Algebra (2 sections) - The University of Texas at Arlington  
Preparation for Calculus - The University of Texas at Arlington

Fall 2015 – Spring 2016

Business Calculus (4 sections) - Florida A&M University  
Intermediate Algebra (2 sections) - Florida A&M University

### Guest Lecturer

Abstract Algebra (Graduate) - The University of Texas at Arlington  
Lie Algebras (Graduate) - The University of Texas at Arlington  
Contemporary Mathematics - The University of Texas at Arlington  
Number Theory - The University of Texas at Arlington

### Teaching Assistant

Fall 2016 – Spring 2017 & Spring 2018

Preparation for Calculus (6 sections) - The University of Texas at Arlington

Fall 2012 – Spring 2014

Analytic Trigonometry (11 sections) - The Florida State University  
Calculus for Business (8 sections) - The Florida State University  
College Algebra (11 sections) - The Florida State University  
Precalculus Algebra (5 sections) - The Florida State University

### Grader

Spring 2018 & Spring 2019

Linear Algebra - The University of Texas at Arlington

## SERVICE

**Professional****Organizer***American Mathematical Society UTA Graduate Chapter*

- Founding president and website creator
- Graduate Student Seminar

*Visitors/Speakers*

- Mayowa Awe, Lockheed Martin
- Edray Goins, Purdue University (Currently: Pomona College)
- Mark Jackson, Raytheon
- Craig J. Sutton, Dartmouth College
- Talitha Washington, Howard University & National Science Foundation

*Discussions in Algebra (DinA)*

- Scheduled speakers for DinA at The University of Texas at Arlington

*Grad2Grad*

- Coordinated a peer-to-peer studying collaborative for graduate Linear Algebra and Analysis

**Panelist/Moderator***National Association of Mathematicians*

- NAM Undergraduate MATHFest XXIX, Southern University of New Orleans
- NAM Undergraduate MATHFest XXVIII, Spelman College

*The University of Texas at Arlington Department of Mathematics*

- GAANN Day 2018
- Gulf States Math Alliance Conference
- GAANN Day 2016

*National Alliance for Doctoral Studies in the Mathematical Sciences*

- Fifth Annual Mathematical Field of Dreams Conference, Arizona State University

**Committee Member***Mathematics Faculty Search Committee*

- Represented students in evaluating candidates for faculty positions in the Department of Mathematics at Florida A&M University

**Community****K-12 Mentor***Mid-Cities Math Circle (MC)<sup>2</sup>*

- Promoter of problem solving and mathematical fun amongst youth

*R. Frank Nims Middle School (Tallahassee, FL)*

- Created STEM lesson plans and taught 15 eighth graders on Saturday mornings

**Local Volunteer***Dallas-Fort Worth Metroplex*

- UT Arlington Calculus Bowl set-up crew member and pizza server
- Forth Worth Regional Science Fair safety inspector

**Advisor and Undergraduate Mentor***Florida-Georgia Louis Stokes Alliance for Minority Participation (LSAMP)*

- Adapted program as a recognized student organization (RSO) at The Florida State University
- Mentored 30 undergraduates from underrepresented backgrounds in scientific fields

MEMBERSHIPS

American Mathematical Society (National and Graduate Student Chapters)  
Association for Women in Mathematics  
Benjamin Banneker Association, Inc.  
College of Science Black Graduate Student Association  
National Association of Mathematicians

SKILLS

Computer software/languages  
Past Projects: MATLAB, Maple, L<sup>A</sup>T<sub>E</sub>X, Excel, Access, APL, C

REFERENCES

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