The University of Texas at Arlington Office: 817.272.3261 Contact Department of Mathematics dwight.willams@uta.edu 411 South Nedderman Drive Box 19408 Arlington, TX 76019-0408 Research Lie (super)algebras and Gelfand-Tsetlin theory EDUCATION The University of Texas at Arlington, Arlington, TX Ph.D., Mathematics, Expected: May 2020 Advisor: Dimitar Grantcharov The Florida State University, Tallahassee, FL M.S., Pure Mathematics, May 2014 Florida A&M University, Tallahassee, FL B.S., Mathematics, April 2012 DISTINCTIONS International Congress of Mathematicians Travel Grant 2018 American Mathematical Society Peer Mentor Award 2018 The University of Texas at Arlington Department of Mathematics Graduate Assistance in Areas of National Need (GAANN) Fellow 2017 - present The University of Texas at Arlington 2018 Talks 1. "Angles of Andy... Simple Roots", Apr Discussions in Algebra (DinA), The University of Texas at Arlington 2. "Gelfand-Tsetlin Subalgebras", Mar Discussions in Algebra (DinA), The University of Texas at Arlington 2017 3. "Supermathematics...", Oct UNT UTA OU Algebra Symposium, University of Oklahoma 4. "Superalgebras" Oct Discussions in Algebra (DinA), The University of Texas at Arlington 5. "Magmas, Loops, and Other Not-quite Groups", Apr UNT UTA OU Algebra Symposium, The University of Texas at Arlington 6. "Solutions to Hungerford Exercises on Hom & Duality" Feb Discussions in Algebra (DinA), The University of Texas at Arlington

Updated: July 2018

7. "Survey of Algebraic Objects"
Discussions in Algebra (DinA), The University of Texas at Arlington

Oct

2013

8. "A Complex Investigation of Pythagorean Triples", Complex Analysis Seminar, The Florida State University

Nov

2011

9. "Cyclotomy and Representation Theory", Iowa Summer Research Symposium, University of Iowa

Jul

#### ACTIVITIES

# Conferences, Symposiums, Talks

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

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)

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

"Publishing Your First Article",
The University of Texas at Arlington (February 2018)
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"Shaping Your Academic Digital Identity", The University of Texas at Arlington (February 2018)

#### TEACHING

## Instructor

Summer 2017 - Fall 2017

College Algebra (Pilot) - 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

Spring 2018

Graduate Abstract Algebra - The University of Texas at Arlington

Fall 2017

Number Theory - The University of Texas at Arlington Contemporary Mathematics - The University of Texas at Arlington

# Teaching Assistant

Spring 2018

Preparation for Calculus (2 Sections) - The University of Texas at Arlington

Fall 2016 – Spring 2017

Preparation for Calculus (4 sections) - The University of Texas at Arlington

Fall 2012 - Spring 2014

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

## Grader

Spring 2018

Linear Algebra - The University of Texas at Arlington

#### SERVICE

## **Professional**

## Organizer

American Mathematical Society Graduate Chapter

• President and founding member

Visitors/Speakers

- Edray Goins, Professor, Purdue University
- Craig J. Sutton, Associate Professor, Dartmouth University

Discussions in Algebra (DinA)

• Scheduler of talks for DinA at The University of Texas at Arlington

Grad2Grad

• Coordinator of a peer-to-peer studying collaborative for linear algebra and analysis

#### Panelist

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- $Cities Math Circle <math>(MC)^2$ 

- Promoter of problem solving and mathematical fun amongst youth
- R. Frank Nims Middle School
- 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

- 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 Chapter)

Association for Women in Mathematics (Student Chapter)

National Association of Mathematicians

Skills Computer software/languages

Past Projects: MATLAB, Maple, LATEX, Excel, Access, APL, C

References Dimitar Grantcharov

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Edray Goins

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Pomona College formerly: Purdue University

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