The University of Texas at Arlington Office: 817.272.3261 Contact Department of Mathematics dwight.willams@uta.edu Box 19408 1225 West Mitchell Arlington, TX 76019-0408 Lie (super)algebras, representation theory, Gelfand-Tsetlin theory Research **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 2018 International Congress of Mathematicians Travel Grant American Mathematical Society Graduate Assistance in Areas of National Need (GAANN) Fellow 2017 - present The University of Texas at Arlington 2018 Talks 1. "Gelfand-Tsetlin Subalgebras", Mar Discussions in Algebra (DinA), The University of Texas at Arlington 2017 2. "Supermathematics...", Oct UNT UTA OU Algebra Symposium, University of Oklahoma 3. "Superalgebras" Oct Discussions in Algebra (DinA), The University of Texas at Arlington 4. "Magmas, Loops, and Other Not-quite Groups", Apr UNT UTA OU Algebra Symposium, The University of Texas at Arlington Feb 5. "Solutions to Hungerford Exercises on Hom & Duality" Discussions in Algebra (DinA), The University of Texas at Arlington 2016 6. "Survey of Algebraic Objects" Oct Discussions in Algebra (DinA), The University of Texas at Arlington 2013 7. "A Complex Investigation of Pythagorean Triples", Nov Complex Analysis Seminar, The Florida State University 2011 8. "Cyclotomy and Representation Theory", Jul

Iowa Summer Research Symposium, University of Iowa

Updated: April 2018

#### 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 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)

Discussion in Algebra (DinA)

The University of Texas at Arlington (2016 - present)

## Memberships

American Mathematical Society

Association for Women in Mathematics (Student Chapter)

#### 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

Discussions in Algebra (DinA)

2017 - present

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

Grad2Grad 2017

• Coordinator of a peer-to-peer studying collaborative for Linear Algebra and Analysis courses

## Panelist

National Alliance for Doctoral Studies in the Mathematical Sciences

- "FGAP Program", Gulf States Math Alliance Conference, The University of Texas at Arlington. (February 2017)
- "Fields of Summer Programs", Fifth Annual Mathematical Field of Dreams Conference, Arizona State University. (October 2011)

#### Committee Member

Mathematics Faculty Search Committee

2012

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

# Community

K-12 Mentor

2016 – present

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

• Promoter of problem solving and mathematical fun amongst youth

R. Frank Nims Middle School

2011-2012

- Mathematics and Science Tutorial Enhancement Program
- Created STEM lesson plans and taught 15 eighth graders on Saturday mornings

#### **Local Volunteer**

Dallas-Fort Worth Metroplex

2016 - present

- UT Arlington Calculus Bowl set-up crew member and pizza server
- Forth Worth Regional Science Fair safety inspector (2017)

# Advisor and Undergraduate Mentor

Florida-Georgia Louis Stokes Alliance for Minority Participation 2012 – 2016

- Guided formation of the program as a recognized student organization (RSO) at The Florida State University
- Mentored 30 undergraduates from underrepresented backgrounds in scientific fields
- Developed and led monthly meetings to improve the likelihood of students advancing to graduate school

## Skills Computer software/languages

• Past Projects: Matlab, Maple, LATEX, Excel, Access, APL, C

## References Dimitar Grantcharov

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Florida A&M University