Dwight Anderson Williams II, PhD (he/his)

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Professional Appointments (post-PhD)

2023–curr **Assistant Professor**, Morgan State University.

2022–2023 **Visiting Assistant Professor**, Pomona College.

2022–2022 **Facilitator**, Math Leaders 4 Racial Justice.

2020–2021 **Postdoc Research Associate**, Iowa State University. Supervisor: Michael Young.

2021–2021 **Postdoctoral Research Advisor**, Mathematical Sciences Research Institute Undergraduate Program. Supervisors: Rebecca E. Garcia & Pamela E. Harris.

Education

2016–2020 **PhD in Mathematics**, The University of Texas at Arlington. Advisor: Dimitar Grantcharov.

2012–2014 **MS in Pure Mathematics**, The Florida State University.

2008–2012 **BS in Mathematics**, Florida A&M University.

Research Highlights

Co-author names: alphabetical in mathematics; **pre-baccalaureate**/*pre-doctoral* by date of submission.

In Mathematics

2024 **Symplectic differential reduction algebras and skew-affine generalized Weyl algebras** (Submitted).
arXiv: 2403.15968.
Hartwig, JT; Williams II, DA.

2023 **Interval and ℓ-interval rational parking functions** (Submitted).
arXiv: 2311.14055.
Aguilar-Fraga, T; Elder, J; Garcia, RE; *Hadaway, KP*; Harris, PE; *Harry, KJ*; *Hogan, IB*; *Johnson, J*; *Kretschmann, J*; *Lawson-Chavanu, K*; Martínez Mori, JC; *Monroe, CD*; *Quiñonez, D*; *Tolson III, D*; Williams II, DA.

2023 **On parking functions and the Tower of Hanoi**.
American Mathematical Monthly. DOI: 10.1080/00029890.2023.2206311.
Aguillon, Y; **Alvarenga, D**; Harris, PE; **Kotapati, S**; *Martínez Mori, JC*; *Monroe, CD*; **Saylor, Z**; **Tieu, C**; Williams II, DA.

2023 **Ghost center and representations of the diagonal reduction algebra of** $\mathfrak{osp}(1|2)$.
Journal of Geometry and Physics. DOI: 10.1016/j.geomphys.2023.104788.
Hartwig, JT; Williams II, DA.

2022 **Diagonal reduction algebra for** $\mathfrak{osp}(1|2)$.
Theoretical and Mathematical Physics. DOI: 10.1134/S0040577922020015 (for Russian version)
Hartwig, JT; Williams II, DA.

In Education

2024 **Opposing Dimensions in Mathematicians' Counter Narratives Written for Undergraduate Students**.
Research in Undergraduate Mathematics Education 26th Annual Conference. Proceedings (in press).
Melhuish, KM; *Guajardo, LR*; *Contreras, N*; Dawkins, PC; Diaz-Lopez, A; Garcia, RE; Lew, KM; Harris, PE; Roh, KH; Walker, S; Williams II, DA; Winger, A.

2021 **Informing Change: Stories of Graduate Students from Underrepresented Groups in Mathematics Doctoral Programs**.
Association for the Study of Higher Education 46th General Conference. Program book.
Westine, C; Sword, S; Young, M; *Bartel, M*; Williams II, DA; Harris, PE.

2021 **Studying Successful Doctoral Students in Mathematics from Underrepresented Groups**.
Accelerating Systemic Change Network (ASCN) & Network of STEM Education Centers (NSEC) Transforming Institutions Conference 2021. Poster webpage.
Sword, S; Young, M; Westine, C; Winger, A; *Bartel, M*; Williams II, DA; *McRoberts, C*; Sisneros-Thiry, S; Gates, M; Harris, PE.

Exposition

2022 **People Over Math: A Co-created Principle for Successful Research Communities**.
MAA FOCUS. Digital edition.
Garcia, RE; Harris, PE; Williams II, DA; *Martínez Mori, JC*; *Monroe, CD*; **Aguilar-Fraga, T**; **Aguillon, Y**; **Alofamoni Quiñonez, D**; **Alvarenga, D**; **Celestine, A**; **Gill, P**; **Hogan, IB**; **Johnson, J**; **Lawson-Chavanu, K**; **Liu, L**; **Ortiz, A**; **Quesada, L**; **Rivera Sánchez, CM**; **Soto, C**; **Tieu, C**; **Tolson III, D**; **van der Leeuw, J**; **Vargas, P**.

Instructor of Record

Morgan State University

Graduate: MATH 505 Abstract Algebra I, MATH 506 Abstract Algebra II.
Undergraduate: MATH 413 Algebraic Structures I, MATH 431 Mathematical Theory of Statistics I, MATH 432 Mathematical Theory of Statistics II.

Pomona College

Undergraduate: MATH PO 032 Calculs III, MATH 101 PO Introduction to Analysis, MATH 171 PO Abstract Algebra I.

The University of Texas at Arlington

Undergraduate: MATH 1302 College Algebra, MATH 1316 Mathematics for Economics and Business Analysis, MATH 1421 Preparation for Calculus, MATH 2326 Calculus III, MATH 3330 Introduction to Matrics & Linear Algebra.

Advising

Undergrad

2024-curr Twymun Safford, Angeluis Sayavongsa-Vaughn. Morgan State University. MANIM.

2023-2023 Irmak Bukey, Gisele Umutoni. Pomona College. MANIM (reduction algebras, trees, proofs).

2022-2023 Irmak Bukey, Pomona College. Senior Thesis: Reduction Algebras: Verifying Solutions to Laplace's Equation.

2022-2023 Andrew Shannon, Pomona College. Senior Theis: The Diffie-Hellman Problem in Lie Algebras Revisited.

2021-2021 Aaron Ortiz, Lauren J. Quesada, Cynthia Marie Rivera Sánchez. Mathematical Sciences Research Institute Undergraduate Program. Research Report: The defective parking space.

2021-2021 Tomás Aguilar-Fraga, Kobe Lawson-Chavanu, Dirk Tolson III. Mathematical Sciences Research Institute Undergraduate Program. Research Report: ℓ-Interval parking functions.

Sample of Service

Committee	Actuarial Science (Dept.-special), Graduate Comprehensive Exam (Dept.-standing), Graduate Curriculum (Dept.-standing), Math Affinity Group (Statewide/University).
Membership	AMS, MAA, NAM.
Organizer	Active learning seminars, AMS Special Sessions.
Referee	Communications in Algebra.