

Dwight Anderson Williams II, PhD (he/his)

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Curriculum Vitæ Summary

[Extended Curriculum Vitæ](#)

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Department of Mathematics, Morgan State University, 1700 E Cold Spring Lane, Baltimore, MD 21251

      

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.

Recent Research

Co-author names: [alphabetical in mathematics](#); [pre-baccalaureate/pre-doctoral](#) by date of submission.

Articles 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](#).

Articles 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*.

Talks

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| March 2024 | “Reduction (Super)algebras”, Algebra Seminar (online), UW-Milwaukee |
| March 2024 | “Lie superalgebras, representation theory, and mathematical physics”, Colloquium (online), Morgan State University |
| February 2024 | “Laplace’s equation, Dirac’s equation, and algebraic methods”, AMS UTA Seminar (online), The University of Texas at Arlington |
| November 2023 | “Extremal Equations & Algebraic Methods”, Early Career Math Colloquium (online) |

Exposition

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| 2022 | People Over Math: A Co-created Principle for Successful Research Communities. MAA FOCUS. Digital edition. Garcia, RE; Harris, PE; <u>Williams II, DA</u> ; <i>Martínez Mori, JC</i> ; <i>Monroe, CD</i> ; 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 . |
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Instructor of Record

Morgan State University

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| 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

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| Undergraduate: | MATH PO 032 Calculs III, MATH 101 PO Introduction to Analysis, MATH 171 PO Abstract Algebra I. |
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The University of Texas at Arlington

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| 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. |
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Advising

Undergrad

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| 2024–curr | Twymun Safford, Angeluis Sayavongsa-Vaughn. Morgan State University. <i>MANIM+MATH+MENTORING</i> . |
| 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 Thesis: 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

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| Committee | Actuarial Science (Dept.-special), Graduate Comprehensive Exam (Dept.-standing), Graduate Curriculum (Dept.-standing), Math Affinity Group (Statewide/University). |
| Membership | AMS , MAA , NAM . |
| Mentor | POWER (Black Male Initiative). |
| Organizer | Active learning seminars , AMS Special Sessions . |

