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## Scott R. Sykes

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### EDUCATION

|                    |                                                                                             |
|--------------------|---------------------------------------------------------------------------------------------|
| Ph.D., Mathematics | University of Massachusetts, Amherst<br>Dissertation: Modern Applications of Lattice Theory |
| M.S., Mathematics  | University of Massachusetts, Amherst                                                        |
| B.S., Mathematics  | Pennsylvania State University                                                               |

### EMPLOYMENT

|                                     |  |                      |
|-------------------------------------|--|----------------------|
| University of West Georgia          |  |                      |
| Professor and Crider Chair          |  | 2020-present         |
| First Year Math Program Coordinator |  | 2020-present         |
| Associate Professor                 |  | 2002-2020            |
| Assistant Chair                     |  | Spring/Summer 2017   |
| UWISE Sumer Bridge Program Director |  | 2012-2015            |
| Director of Freshman Math           |  | 2004-2008, 2016-2020 |
| Assistant Professor                 |  | 1997-2002            |
| Amherst College                     |  |                      |
| Visiting Assistant Professor        |  | 1996-1997            |

### AWARDS

- UWG Bullseye Award for Student Success, 2024.
- University System of Georgia's Regents' Momentum Year Award for Excellence in Teaching and Curricular Innovation, Director of Program that won award, 2020.
- Best of the West Divisional Award, Academic Affairs, Strategic Imperative, September, 2015 and March, 2017
- UWG SAC Outstanding Faculty Member for College of Science and Mathematics, 2013
- College of Arts and Sciences Excellence in Teaching Award, 2009
- SUWG Student Government Association's Outstanding Faculty Member for College of Arts and Sciences, 2001
- MAA Project NExT Fellow, 1997-1998

### TEACHING EXPERIENCE

- Taught wide assortment of Mathematics classes for Undergraduates including College Algebra, Precalculus, Survey of Calculus, Elementary Statistics, Calculus 1, Calculus 2, Calculus 3, Geometry for Teachers, Applied Statistics, Elementary Linear Algebra, Survey of Algebra, Abstract Algebra, Linear Algebra, Advanced Calculus, College Geometry and Number Theory.
- Taught Graduate Courses Abstract Algebra, Linear Algebra, Modern Algebra I and Modern Algebra II.
- Taught sections of Honors College courses including Precalculus, Calculus 1, Calculus 2 and converted other courses to Honors College credit.
- Supervised Mathematics Senior Project course for 54 students

## PROFESSIONAL GROWTH

### Grants:

1. Faculty Learning Community for STEM IV grant, member, funded by BOR STEM IV grants, 2023.
2. Free Materials for MATH 1001 and 0997, PI, Affordable Learning Georgia Textbook Transformation Grant, **funded** for \$30,000, 2020-2021.
3. Targeted Interventions in Precalculus and Calculus 1, Co-PI, **funded** for \$50,000 per year by BOR STEM IV grants, 2019-2022.
4. University of West Georgia STEM Education Enhancement Plan (SEEP), Co-PI, **funded** for over \$100,000 per year by BOR STEM Education Improvement Plan grant, 2016-2019.
5. STEM to STEAM: Increasing Collaboration between the Sciences and Humanities, Co-PI BOR CCG Replication Grant **funded** for \$25,000, 2014-2015.
6. Wider Implementation of STEM Educational Reforms (WISER) Practices Planning Grant: Setting the Stage for Institutional Commitment to Evidence-Based Teaching and Learning, Co-PI, 2013-2015, **funded** by NSF WIDER Program for \$250,000.
7. University of West Georgia Institutional STEM Excellence (UWISE), member of the grant writing team (2011) and Program Director (2012-2015), **funded** and renewed yearly by BOR STEM II Initiative for approximately \$1.4 Million total from FY12-FY16.

### Publications:

1. The poset of unlabeled induced subgraphs of a finite graph, Algebra Universalis, 81:11 (2020).
2. Poset of Unlabeled Induced Subgraphs, Proceedings of the Algebras and Lattices in Hawaii Conference (2018), pp 107-111.
3. Convex Partitions of a Finite Lattice, Algebra Universalis, 56 (2007), pp 349-356.
4. Lattice Ordered Effect Algebras, Algebra Universalis, 49 (2003), pp 191-199.
5. Convex and Extendable Partitions of a Lattice, Electronic Notes in Discrete Mathematics, 2 (1998).
6. Finite Modular Effect Algebras, Advances in Applied Mathematics, 19 (1997), pp. 240-250.

### Presentations:

1. Multi-Disciplinary Perspectives on Teaching 'Go West Early' Students (panel), (with Peralta and Harte) UWG Innovations in Pedagogy Conference, Carrollton, GA, May 14, 2024
2. Using Sports Projects to Increase Student Engagement in Core Math Courses, (with Sohrabi, USC-Upstate), USG Teaching and Learning Conference, Athens, GA, April 15, 2024.
3. Small Teaching Strategies in Math to Improve Student Success (panel), UWG Innovations in Pedagogy Conference, Carrollton, GA, May 16, 2023.
4. Targeted Interventions in Calculus and Precalculus, (with Gordon and Carter), USG STEM Summit '22, virtual, May 23, 2022.
5. Targeted Interventions in Precalculus and Calculus 1 (poter), (with Gordon. Carmack, Carter, Gaquere, Johnson and Leach), AACU Transforming STEM Higher Ed 2021 Conference, virtual, November 5, 2021.
6. Building Momentum in Freshmen Math Courses (panel), (with Brodsky, Carmack, Carter, Johnson and Tran), USG Teaching and Learning Conference, Athens, GA, 2020. **[Accepted and Scheduled but Conference Cancelled due to COVID]**
7. More than Getting to Know our Students: Practical Steps on Academic Mindset, (with Carmack) Momentum Summit III, Athens, GA, January 28, 2020
8. Implementing Co-remediation in College Algebra and Using a No Cost Text (panel), (with Brodsky, Carmack, Carter, Johnson and Sohrabi) USG Teaching and Learning Conference, Athens GA, April 10, 2019.

9. *Order Properties of Unlabeled Induced Subgraphs*, MAA Southeastern Sectional Meeting, Cleveland TN, March 7, 2019.
10. *The Joys and Perils of Using an Online Assessment Tool to Support Student Learning*, UWG Innovations in Pedagogy Conference, Carrollton, GA, May 16, 2017.
11. *University of West Georgia Institutional STEM Excellence (UWise)*, (with Mruthinti, Harrison, and Khan) 5<sup>th</sup> Annual Georgia Scholarship of STEM Teaching and Learning Conference, Statesboro, GA, March 4, 2016.
12. *STEM Initiative*, (with Khan, Mruthinti, Harrison and Gantner) 4<sup>th</sup> Annual Georgia Scholarship of STEM Teaching and Learning Conference, Statesboro, GA, March 6, 2015.
13. *Increasing Student Success in Precalculus Using Science Applications*, UWG Innovations in Pedagogy Conference, Carrollton, GA, April 29, 2014.
14. *UWise Summer Bridge Program*, UWG Innovations in Pedagogy Conference, Carrollton, GA, April 29, 2014.
15. *University of West Georgia Institutional STEM Excellence (UWise)*, (with Mruthinti, Gaquere, Harrison, Hendricks, Khan and Gantner) 3<sup>rd</sup> Annual Georgia Scholarship of STEM Teaching and Learning Conference, Statesboro, GA, March 8, 2014.
16. *University of West Georgia Institutional STEM Excellence: UWise*, (with Gaquere and Harrison) 2<sup>nd</sup> Annual Georgia Scholarship of STEM Teaching and Learning Conference, Statesboro, GA, March 2013.
17. *PLTL Workshops in Precalculus and Calculus*, USG Regional STEM Institute: Engaging the STEM Students Inside and Outside the Classroom, Carrollton, GA, February 19, 2010.
18. *Lattice of Induced Subgraphs*, West Georgia REU, July 11, 2008.
19. *Generating Enthusiasm in Calculus and Precalculus*, MAA Southeast Regional Meeting, Auburn, AL, March 25, 2006.
20. *Lattice Ordered Effect Algebras*, AMS Southeast Sectional Meeting, Special Session on Quantum Structures, Atlanta, GA, March, 9, 2002.
21. *Lattice Ordered Effect Algebras*, Joint Mathematics Meeting, New Orleans, LA, January 10, 2001.
22. *The Convex Partitions of a Partially Ordered Set*, Joint Mathematics Meeting, Washington, DC, January 19, 2000.
23. *Lattice of Convex Partitions*, Ordinal and Symbolic Data Analysis Conference, Amherst, MA, September 29, 1998.
24. *The Lattice of Convex Partitions and the Lattice of Extendable Partitions of a Partially Ordered Set*, Joint Mathematics Meeting, Baltimore, MD, January 9, 1998.
25. *Finite Lattice Ordered Effect Algebras of Height Three*, Joint Mathematics Meeting, San Diego, CA, January 8, 1997.
26. *Effect Algebras as Partially Ordered Sets*, Joint Mathematics Meeting, Orlando, FL, January 10, 1996.

#### **Undergraduate Students Research Presentations**

1. *Manually Calculating Square Roots*, Parker Smitherman, At the Core: A First Year Mathematics and Writing Conference, 2022
2. *Discovering the Relationship between Rational Numbers and their Decimal Expansions*, Samantha Gentry, UWG Scholars Day Undergraduate Research Conference, 2019.
3. *Partially Ordered Sets and Convex Subsets*, Amelia Tallant and Hailey Swafford, UWG Undergraduate Research Conference, 2017.
4. *The Self-Duality of Some Complete Bipartite Graphs*, Andrea Chaney, KME National Convention, Philadelphia, PA, 2009 (won best student presentation award).

## SERVICE

### University:

- Faculty Senate, 2021-present
- General Education Assessment Committee, 2019-present
- Liaison to UWG PTR and P&T Committee, 2021-2022
- Regents Award Roundtable Talks, September 4 and 8, 2020
- UWG LEAP Summit, September 28, 2018
- UWG Provost's Symposium, July 11-12, 2018
- Gardner Institute Gateway to Completion Committee, 2016-19
- LEAP Steering Committee, 2016-19
- Provost Advisory Committee, 2014-2015
- COSM Dean Search Committee, 2012-2013
- Intercollegiate Athletics Committee, 2006-2008, 2013-2015
- First Year Experience Sub-Committee of the Strategic Enrollment Management Committee, 2005
- University Student Organization Judicial Committee, 2002-2004
- University Institutional Studies and Planning Committee, 2002-2004
- University Parking Appeals Committee, Faculty Representative, 2000-2002

### College:

- UC Leadership Retreat, June 29-30, 2021
- UC/CACSI Ad Hoc Split Committee, 2020-2021
- COSM Undergraduate Research Day (Chair), 2015, 2016
- UWISE Grant Planning Team, 2011
- COSM Policy and Procedures Committee, 2010-2012
- GEMS Executive Committee, 2005- 2008
- College of Arts and Sciences Tenure Committee, 2004-2006
- College of Arts and Sciences Faculty Advisory Committee, 2000-2002
- Mathematics Department Chair Search Committee, 2000-2001

### Department

- First Year Math Program Coordinator, 2020-present
- Director of Freshmen Math, 2004-2009 and 2016-2020
- KME Director, 2003-2015
- Freshmen Math Committee, (chair) 2004-2009, 2016-2019, (member) 2009-2011, 2014-2015
- Tenure Committee, (chair) 2003-2004, (member) 2004-2019
- Math Day Committee (chair) 2013-2017, (member) 2011-2013
- ALEKS and Emporium Committee, (chair) 2016-2017
- Student/Faculty Activities, (chair) 2010-2012, (member) 2003-2005, 2006-2010, 2013-2016
- Assessment Committee, 2018-2019
- Undergraduate Curriculum Committee, 2003-2006
- Search Committees, 2003-2004 and 2005-2006

### Book Reviews:

- *College Algebra and Trigonometry*, Abramson, OpenStax.
- *College Algebra (4<sup>th</sup> edition)*, Young, Wiley.
- *Precalculus*, Blitzer, Pearson.
- *Elementary Statistics*, Novidi and Monk, McGraw-Hill.

### **Grant Reviews**

- Georgia's Improving Teacher Quality Grants Program, Proposal Reviewer, 2015

### **Advising Experience**

- RPG Guide, 2008-2010
- University Faculty Orientation Leader, 2006 - 2008
- Graduation Guide, 2006-2007
- Advisor to approximately 10-20 Math majors each year, 1997-2020
- Assisted with advising and registering UWISE students each summer 2012-2015

### **K-12 Outreach:**

- Presented "1 or 2? An Introduction to the Mathematics Used in Sports Analytics", Math Day 2022, Carrollton, GA, March 4, 2022.
- Organized MATH DAY 2013 (over 300 students), 2014 (over 250 students), 2015 (over 275 students), 2016 (over 275 students) previous attendance was approximately 100-150 students per year.
- Presented talks at Darlington HS (March 2015), Bowdon HS (January 2015, October 2013), Bremen HS (January 2014), Carroll Central HS (December 2013), East Coweta HS (April 2013), Meadowcreek HS (January 2001)
- Attended Recruitment Events for UWISE including UWG Roadshows (2014), UWG Preview Days (2012-2014), COSM Preview Days (2014-2015), Scholarship Day (2015).
- Math Day Talks, March 4, 2022, March 14, 2003, April 27, 2001, April 20, 2000 and April 17, 1998.

### **Other Educational Activities**

- Attended *USG Momentum Summit VII*, January-February 2024, Online and Carrollton, GA
- Attended *USG Teaching and Learning Conference*, March 28-29, 2023, Athens, GA
- Attended *USG Momentum Summit VI*, February 2023, Online and Carrollton, GA.
- Attended *USG Teaching and Learning Conference, Regional Event*, April 1, 2022, University of West Georgia.
- Attended MAA Virtual Seminar, *Get in the Game: Sports Analytics Research and Its Outlets*, February 10, 2022, online
- Attended *USG Momentum Summit V*, February-March, 2022, online
- Attended *G2C Course Redesign Conference*, October 15, 2021, online
- Attended *UWG General Education Redesign Summer Institute*, July 14-15, 2021, Newnan, GA
- Attended virtual *USG Momentum Summit IV*, February 22-March 5, 2021, online
- Attended *USG Statistics Pathway Meeting*, November 18, 2020, online
- Attended *G2C Course Redesign Conference*, October 2 and 16, 2020, online
- Attended *USG Fall Corequisite (un)Academy*, October 15, 2020, online
- Attended *Fall Co-requisite Academy*, November 11, 2019, Middle Georgia State University
- Attended *STEM IV Kickoff Meeting*, October 29, 2019, University of Georgia
- Attended *G2C Fall 2019 Meeting*, October 18, 2019, Middle Georgia State University
- Attended *Statistics Pathway Meeting*, October 11, 2019, Middle Georgia State University
- Attended *Spring Co-requisite Academy*, April 5, 2019, University of North Georgia
- Attended *Momentum Summit II Meeting*, March 1, 2019, Peachtree City, GA.
- Attended *AACU Annual Meeting*, January 24-26, 2019, Atlanta, GA.
- Attended *G2C Fall 2018 Cohort 1 Meeting*, October 18, 2018, Middle Georgia State University
- Attended *Fall 2018 USG Co-Requisite Academy*, October 12, 2018, Gordon State College
- Attended *USG G2C Meeting*, April 27, 2018, Middle Georgia State University
- Attended *Spring 2018 USG Learning Support Academy*, March 23, 2018, Clayton State
- Attended *USG Momentum Year Summit*, February 16, 2018, Georgia Tech
- Attended *USG Learning Support Academy*, October 4, 2017, Atlanta Metropolitan College

- Attended *USG STEM Initiative Grantee Meeting*, May 17, 2017, Middle Georgia State University
- Attended *USG Gateway to Completion Meeting*, April 21, 2017, Clayton State University
- Attended *USG STEM Summit*, August 8, 2016, Middle Georgia State University
- Visited Georgia State University Math Emporium as part of Emporium Study, September 6, 2016.
- Attended *Gardner Institute, Teaching and Learning Academy*, April 1, 2016, Atlanta, GA.
- Attended *Improving STEM Outcomes Through Learning Science in College Algebra Summit*, March 2016, Tucson, AZ.
- Attended *G2C Launch Meeting*, February 3, 2016, Middle Georgia State University
- Attended *AACU: How Higher Education Can Lead on Equity, Inclusive Excellence and Democratic Renewal*, January 2016, Washington DC
- Attended *Supplemental Instruction: Improving Student Engagement, Performance & Course Completion*, March 2015, Webinar
- Attended *AACU Transforming STEM Higher Education Conference*, November 2014, Atlanta, GA
- Attended *College Completion: Focus on Transforming Mathematics Remediation*, November 2012, Athens, GA
- Member COSM Faculty Committee that visited UMBC, November 2012, Baltimore, MD
- Attended *MyMathLab Conference*, December 2007, Dunwoody, GA
- Attended *Precalculus Symposium*, March 2006, Austin, TX
- Member of Project NExT discussion list, 1997 – present
- Member Research in Undergraduate Mathematics Education discussion list, 1999 - present