

Houssein El Turkey

Education

- 2008–2014 **Ph.D., Mathematics**, *University of Oklahoma*, OK, USA.
Dissertation: *Complexity of Modules over Lie Superalgebras*. Advisor: Prof. J. Kujawa.
- 2006–2008 **M.S., Mathematics**, *The American University of Beirut*, Beirut, Lebanon.
Thesis: *Generalizations of Boolean Rings*. Advisor: Prof. H. Abu Khuzam
- 2002–2006 **B.S., Mathematics**, *Beirut Arab University*, Beirut, Lebanon.
Undergraduate Thesis: *El-Gamal Cryptosystems*. Advisor: Prof. A. Kassar

Academic Positions

- 2020–Present **Associate Professor, Mathematics**, *University of New Haven*, CT, USA.
- 2021–Present **Faculty Fellow at the Center for Teaching Excellence**, *University of New Haven*, CT, USA.
- 2017–2021 **Mathematics Coordinator**, *University of New Haven*, CT, USA.
- 2014–2020 **Assistant Professor, Mathematics**, *University of New Haven*, CT, USA.
- 2008–2014 **Graduate Teaching Assistant, Mathematics**, *University of Oklahoma*, OK, USA.
- 2006–2008 **Graduate Assistant, Mathematics**, *The American University of Beirut*, Lebanon.

Teaching Experience

Courses Taught

- 2014–Present **University of New Haven.**
- Quantitative Reasoning (S15, SUII18)
 - Business Calculus (F15)
 - Calculus I (SUII15, 2 sections in F16, SUII17, 3 sections in F17, SUII18, 2 sections in F18 including Honors section, 2 sections in F19 including Honors section)
 - Calculus II (2 sections in F14, S15, substituted for 2 sections in F15, 2 sections in S16, Honors section in S19)
 - Calculus III (F15, SUII 16, 2 sections in S17, SUII 20, 2 sections in F20, SUII 21, F21, S22)
 - Foundations of Mathematics (S18, S19)
 - Discrete Mathematics for Computing (2 sections in S21, F21)
 - Introduction to Number Theory (F16)
 - Linear Algebra (F17)
 - Modern Algebra (F15; Independent Study with 3 students in S16; Independent Study with one student in S17)
 - Linear Algebra II (F20)
 - Topics Course: Cryptography (Independent Study with one student in SUII17)
 - Department Seminar (F15)
 - Independent Study (1 cr./1 student in F15, S16, F16; 1 cr./2 students SUII16; 1 cr./2 students in F17; 2 cr./2 students in S18; 1 cr./1 student in F18, S19; 1 cr./2 students in F19; 2 cr. /1 student in S20; 1 cr./1 student in F20; 2 cr./1 student in S21)
- 2008–2014 **University of Oklahoma.**

- College Algebra (F10)
- Pre-Calculus and Trigonometry (F13, Substitute Lecturer for 2 months)
- Pre-Calculus For Business, Life and Social Sciences (S12, S12)
- Calculus and Analytic Geometry I (SU12, Recitation Section in F09)
- Calculus and Analytic Geometry II (SU10, SU11, SU13, Recitation Sections in S10, F11, F12, F13)

Research Interests

Undergraduate Mathematics Education; Representation Theory of Lie Superalgebras.

Undergraduate Research

2014–Present **University of New Haven.**

- Honors Thesis Co-advisor, with Elizabeth Sirett (S22)
- Rainbow Number of Linear Equations, with Nathan Waskiewicz (F18–S19); Spencer Hopwood (F19); Hurian Semeghini (S19)
- Frobenius Number of Numerical Semigroups, with Alec Shackett and Andrew Svitlik (F17–S18)
- Covering Number of Finite Rings, with Cassandra Pray (F15–S17)

Publications

The publications in pure mathematics have equal contributions. Authorship of SoTL articles is ordered by level of contribution.

Published Book Chapter

- Savic, M., Karakok, G., Tang, G., **El Turkey, H.**, & Naccaratto, E. (2017). Formative Assessment of Creativity in Undergraduate Mathematics: Using a Creativity-in-Progress Rubric (CPR) on Proving. An invited book chapter to R. Leiken & B. Sriraman, editors. *Mathematical Creativity and Giftedness, Interdisciplinary Perspectives from Mathematics and Beyond*, Springer International Publishing AG, 23–46.

Peer-Reviewed Journal Articles

- Satyam, R., Savić, M., Cilli-Turner, E., **El Turkey, H.**, & Karakok, G. (2021). Exploring the Role of Students' Views of Creativity on Feeling Creative. *International Journal of Mathematical Education in Science and Technology*. DOI: <https://doi.org/10.1080/0020739X.2021.1961032>
- Ansaldi, K., **El Turkey, H.**, Hamm, J., Nu'Man, A., Warnberg, N., & Young, M. (2020). Rainbow Numbers of \mathbb{Z}_n for $a_1x_1 + a_2x_2 + a_3x_3 = b$. *Integers*, Volume 20, A51.
- **El Turkey, H.**, Shackett, A., & Svitlik, A. (2020). Exploring Bounds for the Frobenius Number. *Mathematics Exchange*, Volume 14, no.1, 1–8.
- **El Turkey, H.**, Turki, S., & Kottegoda, Y. (2019). Two Implementations of Pre-class Readings in Calculus Courses. *PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies*. Available at <https://doi.org/10.1080/10511970.2019.1666331>.
- **El Turkey, H.** (2018). Complexity of Simple Modules over Lie Superalgebra $\text{osp}(k|2)$. *Journal of Pure and Applied Algebra*, **222**(1), 181–190.
- **El Turkey, H.**, Tang, G., Savic, M., Karakok, G., & Cilli-Turner, E. (2018). The Creativity-in-Progress Rubric (CPR) on Proving: Two Teaching Implementations and Students' Reported Usage. *PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies*, **28**(1), 57–79. Available at <http://dx.doi.org/10.1080/10511970.2017.1346735>.

- Omar, M., Karakok, G., Savic, M., **El Turkey, H.**, & Tang, G. (2018). “I Felt Like a Mathematician”: Homework Problems to Promote Creative Effort and Metacognition. *PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies*. Available at <https://doi.org/10.1080/10511970.2018.1475435>.
- Tang, G., **El Turkey, H.**, Cilli-Turner, E., Savic, M., Karakok, G., & Plaxco, D. (2017). Inquiry as an Entry Point to Equity in the Classroom, *International Journal of Mathematical Education in Science and Technology*, **48**(1), S4–S15.
- Liu, D. and **El Turkey, H.** (2017). Exploration of Task Performance Tests in Physics Laboratory. *European Journal of Physics*, **38**(6), 065701 (9pp).
- **El Turkey, H.** and Pray, C. (2017). A Note on the Covering Number of Some Finite Rings. *Minnesota Journal of Undergraduate Mathematics*, **2**(1). Available at: <https://mjum.math.umn.edu/index.php/mjum/article/view/41>.
- **El Turkey, H.** (2016). Complexity of Modules over Lie Superalgebras. *Journal of Algebra*, **445**, 365–393.
- **El Turkey, H.** and Kujawa, J. (2013). Presenting Schur Superalgebras. *Pacific Journal of Mathematics*, **262**(2), 285–316.

Refereed Conference Proceedings

- **El Turkey, H.**, Karakok, G., Cilli-Turner, E., Tang, G., Savic, M., & Satyam, R. (In press). A Framework for Designing Creativity-Based Tasks.
- Satyam, R., Savic, M., Tang, G., **El Turkey, H.**, & Karakok, G. (In press). Teacher Actions to Foster Creativity in Calculus, submitted to *Proceedings of the 25th Annual Conference on Research in Undergraduate Mathematics Education*, Boston, MA, 2022.
- Tang, G., Savic, M., Satyam, R., **El Turkey, H.**, & Karakok, G. (In Press). “The reason why I didn’t like [math] before is because I never felt creative”: Affective Outcomes from Teaching Actions to Foster Mathematical Creativity in Calculus 1, submitted to *Proceedings of the 25th Annual Conference on Research in Undergraduate Mathematics Education*, Boston, MA, 2022.
- Karakok, G., **El Turkey, H.**, Savic, M., Tang, G., Cilli-Turner, E. & Regier, P. (2020). Creativity-in-Progress Rubric on Problem Solving at the Post-secondary Level. In A.I. Sacristán, J.C. Cortés-Zavala, & P.M. Ruiz-Arias (Eds.). *Proceedings of the 42nd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 986–990). Mexico. <https://doi.org/10.51272/pmena.42.2020>
- Cilli-Turner, E., Savic, M., Tang, G., **El Turkey, H.**, & Karakok, G. (2020). Sources of Evolution of University Students’ Views on Mathematical Creativity. In A.I. Sacristán, J.C. Cortés-Zavala, & P.M. Ruiz-Arias (Eds.). *Proceedings of the 42nd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1069–1073). Mexico. <https://doi.org/10.51272/pmena.42.2020>
- **El Turkey, H.**, Karakok, G., Tang, G., Regier, P., Savic, M., & Cilli-Turner, E. (2020). Tasks to Foster Mathematical Creativity in Calculus I. In S. Karunakaran, C. Rasmussen, J. Rabin, M. Wawro, & S. Brown (Eds.). *Proceedings of the 23rd Annual Conference on Research in Undergraduate Mathematics Education* (pp. 579–588). Boston, MA.
- Tang, G., Savic, M., , Regier, P., & Cilli-Turner, E., Karakok, G., & **El Turkey, H.** (2020). Shifting Pedagogical Beliefs into Action through Teaching for Mathematical Creativity. In S. Karunakaran, C. Rasmussen, J. Rabin, M. Wawro, & S. Brown (Eds.). *Proceedings of the 23rd Annual Conference on Research in Undergraduate Mathematics Education* (pp. 959–965). Boston, MA.

- Cilli-Turner, E., , Savic, M., Karakok, G., **El Turkey, H.**, & Tang, G. (2019). Tertiary Students' Ever-changing Views on Mathematical Creativity. In J. Pettigrew, L. Rylands, D. Shearman, & A. Yeung (Eds.). *Proceedings of the 12th Delta Conference on the Teaching and Learning of Undergraduate Mathematics and Statistics* (pp. 11–18). Fremantle, Australia. http://swandelta.org/assets/documents/2019_Swan_Delta_Proceedings.pdf
- Cilli-Turner, E., Savic, M., **El Turkey, H.**, & Karakok, G. (2019). An Initial Investigation into Teacher Actions that Specifically Foster Mathematical Creativity. In M. Nolte (Eds.). *Proceedings of the 11th International Conference on Mathematical Creativity and Giftedness*. Hamburg, Germany.
- Savic, M., **El Turkey, H.**, Tang, G., Karakok, G., Cilli-Turner, E., Plaxco, D., & Omar, M. (2017). Pedagogical practices that foster mathematical creativity at tertiary-level proof-based courses. In D. Pitta–Pantazi (Eds.). *Proceedings of the 10th International Conference on Mathematical Creativity and Giftedness*. Nicosia, Cyprus. http://www.cyprusconferences.org/mcg10/files/Proceedings_MCG10_FinalPublication.pdf
- Turki, S. and **El Turkey, H.** (2017). Implementation of Pre and Post Class Readings in Calculus. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, S. Brown (Eds.). *Proceedings of the 20th Annual Conference on Research in Undergraduate Mathematics Education*. San Diego, CA. <http://sigmaa.maa.org/rume/RUME20.pdf>
- Savic, M., Plaxco, D., Wenger, M., Cilli-Turner, E., Tang, G., **El Turkey, H.**, & Karakok, G. (2017). C×N: Investigating the creative proving process using neuroscience methods. In A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, S. Brown (Eds.). *Proceedings of the 20th Annual Conference on Research in Undergraduate Mathematics Education*. San Diego, CA. <http://sigmaa.maa.org/rume/RUME20.pdf>
- Tang, G., **El Turkey, H.**, Cilli-Turner, E., Savic, M., Karakok, G., & Plaxco, D. (2017). Inquiry as an access point to equity in the classroom. In: A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, S. Brown (Eds.). *Proceedings of the 20th Annual Conference on Research in Undergraduate Mathematics Education*. San Diego, CA. <http://sigmaa.maa.org/rume/RUME20.pdf>
- Savic, M., **El Turkey, H.**, Tang, G., Karakok, G., Cilli-Turner, E., Plaxco, D., & Omar, M. (2017). Pedagogical practices for fostering mathematical creativity in proof-based courses: Three case studies. In: A. Weinberg, C. Rasmussen, J. Rabin, M. Wawro, S. Brown (Eds.). *Proceedings of the 20th Annual Conference on Research in Undergraduate Mathematics Education*. San Diego, CA. <http://sigmaa.maa.org/rume/RUME20.pdf>
- Karakok, G., Savic, M., Tang, G., & **El Turkey, H.** (2015). Mathematicians' Views on Undergraduate Students' Creativity. In: K. Krainer, N. Vondrova (Eds.). *Proceedings of the 9th Congress of the European Society for Research in Mathematics Education* (pp. 1003–1009). Prague, Czech Republic.
- Tang, G., **El Turkey, H.**, Savic, M., & Karakok, G. (2015). Exploration of Undergraduate Students' and Mathematicians' Perspectives on Creativity. In T. Fukawa-Connelly, N.E. Infante, K. Keene, M. Zandieh (Eds.). *Proceedings of the 18th Annual Conference on Research in Undergraduate Mathematics Education*. Pittsburgh, PA, 1008–1015. <http://sigmaa.maa.org/rume/RUME18-final.pdf>
- Savic, M., Karakok, G., Tang, G., & **El Turkey, H.** (2015). Developing a Creativity-in-Progress Rubric on Proving. In T. Fukawa-Connelly, N.E. Infante, K. Keene, M. Zandieh (Eds.). *Proceedings of the 18th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 954–960). Pittsburgh, PA. <http://sigmaa.maa.org/rume/RUME18-final.pdf>

- Savic, M., Karakok, G., Tang, G., **El Turkey, H.** & Stubblefield, M. (2015). How Can We Assess Undergraduate Students' Creativity in Proof and Proving? Proceedings of the 8th Annual Conference of Mathematical Creativity and Giftedness, International Group for Mathematical Creativity and Giftedness (pp. 107–111). Denver, CO, . <https://drive.google.com/file/d/0B1W-oFlzfvpopU5Ma0g5RjZPRWc/view>

Submitted Book Chapters

- Savic, M., Satyam, R., **El Turkey, H.**, Karakok, G., & Tang, G. (submitted). Mathematical Creativity at the Tertiary Level: A Systematic Review of the Literature. In S. Chamberlin, P. Liljedahl & M. Savic (Eds.), *Mathematical Creativity: A Developmental Perspective* (pp. —). New York, NY: Springer.
- Karakok, G., Tang, G., Cilli-Turner, E., **El Turkey, H.**, Savic, M., & Satyam, R. “Creativity is Contagious” and “Collective”: Progressions of Undergraduate Students' Perspectives on Mathematical Creativity. In S. Chamberlin, P. Liljedahl, & M. Savic (Eds.), *Mathematical Creativity: A Developmental Perspective* (pp. —). New York, NY: Springer.

Submitted Journal Articles

- **El Turkey, H.** and Waskiecwiz, N. (Submitted). On Rainbow Numbers of \mathbb{Z}_n for $x_1 + x_2 = 4x_3$.

Non Peer-Reviewed Articles

- Tang, G., Cilli-Turner, E., Savic, M., **El Turkey, H.**, Omar, M., & Karakok, G. (2019). Reflections on Teaching for Mathematical Creativity. *AMS Blogs*. <https://blogs.ams.org/matheducation/2019/01/15/reflections-on-teaching-for-mathematical-creativity/>
- Karakok, G., Savic, M., Tang, G., **El Turkey, H.**, Plaxco, D., & Naccaratto, E. (2016). Creativity-in-Progress Rubric (CPR) on Proving: A Formative Assessment Tool for Proof-Based Courses. *MAA FOCUS*, **36**(1), February–March Issue of 2016.

Work in Progress

- Tang, G., Satyam, R., Savic, M., **El Turkey, H.**, Karakok, G., & Cilli-Turner, E.. Teaching Actions to Foster Mathematical Creativity and their Affective Outcomes.
- Cilli-Turner, E., Satyam, R., Savic, M., & Tang, G., **El Turkey, H.**, Karakok, G.. Towards a New Paradigm in Defining Mathematical Creativity: Inclusion of the Tertiary Student Perspective
- Karakok, G., **El Turkey, H.**, Savic, M., Cilli-Turner, E., Tang, G., & Satyam, R.. Fostering Mathematical Creativity in a Coordinated Calculus Course Setting.

Other

- Karakok, G., **El Turkey, H.**, Savic, M., Tang, G., Naccarato, E., Plaxco, D. (2016). Creativity-in-Progress Rubric on Proving–Enhancing Student Creativity. A peer-reviewed paper for presentation at the 13th International Congress on Mathematical Education, Hamburg, Germany. Note: ICME-13 DIDN'T DO PROCEEDINGS FOR ALL TOPICAL STUDY GROUPS.

Organizing & Facilitating Workshops & PD

- Mar 2022 “**Advocating for Students of Color in Educational Settings**”, Organized a CTE Workshop presented by Dr. Pamela Harris, Williams College, and Dr. Aris Winger, Georgia Gwinnett College; University of New Haven, West Haven, CT, USA.
- Nov 2021 “**Workshop 2: An Introductory Guide to Scholarship of Teaching and Learning**”, A CTE Workshop co-facilitated with Dr. Emilie Hancock from Central Washington University; University of New Haven, Virtual, USA.
- Oct 2021 “**Workshop 1: An Introductory Guide to Scholarship of Teaching and Learning**”, A CTE Workshop co-facilitated with Dr. Emilie Hancock from Central Washington University; University of New Haven, Virtual, USA.

- Sep 2021 **“Everyone is More Anxious: How to Support Students’ Mental Health”**, A CTE Workshop/Panel presented by Dr. Melissa Whitson (PSYC), Helena Cole (CSS), and Paige Bartels (CAPS); University of New Haven, Virtual, USA.
- Fall 2021 **Professional Development for REACT Fellows**, I co-facilitated with Dr. Milos Savic (U. of Oklahoma) weekly virtual PD sessions with instructor participants in an NSF grant project, USA.

Selected Presentations

Invited Speaker

- Mar 2022 **“Designing Calculus Tasks to Foster Creative Mathematical Thinking”**, Math Education Seminar-copresented with Milos Savic; University of Oklahoma, Virtual, USA.
- Mar 2022 **“Designing Calculus Tasks to Foster Creative Mathematical Thinking”**, Math Education Seminar-copresented with Milos Savic; University of Kentucky, Virtual, USA.
- Nov 2020 **“Designing Effective Online Quizzes/Exams”**, CTE Workshop; University of New Haven, Virtual, USA.
- Mar 2020 **“Fostering Creativity in the Calculus Classroom”**, Mathematics Colloquium; Western New England University, Springfield, MA, USA.
- Apr 2019 **“Complexity of Modules over Various Lie Superalgebras”**, American Mathematical Society (AMS) Eastern Sectional Meeting; University of Connecticut, Hartford, CT, USA.
- Apr 2018 **“Exploring Intersections of Teaching for Creativity, Equity, and Inquiry Instruction”**, Mathematics Teaching Seminar; University of Connecticut, Storrs, CT, USA.
- Sep 2017 **“Complexity and z -complexity over Lie Superalgebra $\mathfrak{osp}(k|2)$ ”**, American Mathematical Society (AMS) Southeastern Sectional Meeting; University of Central Florida, Orlando, FL, USA.
- Apr 2017 **“Can you buy 43 Chicken McNuggets?”**, 2017 PME Induction and Mathematics Awards Ceremony, The Rhode Island Beta Chapter of Pi Mu Epsilon; Rhode Island College, North Providence, RI, USA.
- Apr 2016 **“Explicitly Valuing Mathematical Creativity in Proof-Based Courses”**, Mathematics Education Seminar; University of Connecticut, Storrs, CT, USA.
- Sep 2014 **“Complexity and z -complexity over Lie Superalgebras”**, AMS Central Sectional Meeting; University of Wisconsin–Eau Claire, Eau Claire, WI, USA.

Presenter

- Nov 2022 **“Designing Calculus Tasks to Foster Creative Mathematical Thinking”**, Virtual Fall MAA Northeastern Sectional Meeting, USA.
- Feb 2020 **“Tasks that Foster Mathematical Creativity in Calculus I”**, The 2020 Conference on Research in Undergraduate Mathematics Education, Boston, MA, USA.
- Jan 2020 **“Tasks that Foster Mathematical Creativity in Calculus I”**, Joint Math Meetings, Denver, CO, USA.
- Aug 2019 **“An Initial Investigation into Teacher Actions that Specifically Foster Mathematical Creativity”**, The 11th International Mathematical Creativity and Giftedness Conference (MCG11), Joint presentation with E. Cilli-Turner and M. Savic, Hamburg, Germany.
- Jan 2018 **“Two Implementations of Pre-class Readings in Calculus”**, Joint Mathematics Meetings, San Diego, CA, USA.
- Jan 2018 **“Exploring the Intersection of Fostering Mathematical Creativity and Inquiry Teaching”**, Joint Mathematics Meetings, Joint presentation with M. Savic, San Diego, CA, USA.

- Feb 2017 **“Implementing Pre/Post Class Readings in Calculus”**, *The 20th Conference on Research in Undergraduate Mathematics Education*, San Diego, CA, USA.
- Feb 2017 **“Pedagogical Practices for Fostering Mathematical Creativity in Proof-Based Courses: Three Case Studies”**, *The 20th Conference on Research in Undergraduate Mathematics Education*, Joint presentation with M. Savic, G. Karakok, G. Tang, & M. Omar, San Diego, CA, USA.
- Aug 2016 **“Implementation of Pre-class Readings in Calculus”**, *Mathematical Association of America (MAA) MathFest*, OH, USA.
- Jan 2016 **“Addressing Creativity in an Introductory Proof Course”**, *Joint Mathematics Meetings*, Joint presentation with M. Savic, Seattle, OR, USA.
- Aug 2015 **“Discussing Mathematical Creativity at the Undergraduate Level”**, *MAA MathFest*, Washington DC., USA.
- Feb 2015 **“Exploration of Undergraduate Students’ and Mathematicians’ Perspectives on Creativity”**, *The 18th Conference on Research in Undergraduate Mathematics Education*, Pittsburgh, PA, USA.
- Nov 2014 **“A Research-Based Rubric to Assess Students’ Creativity in Proof and Proving”**, *MAA Northeastern Sectional Meeting*; SCSU, New Haven, CT, USA.
- Jun 2014 **“Utilizing a Research-Based Rubric to Assess Students’ Creativity in Proof and Proving”**, *The 17th Annual Legacy of R.L. Moore IBL Conference*, Joint presentation with M. Savic, G. Karakok, G. Tang, & M. Stubblefield, Denver, CO, USA.
- May 2014 **“Complexity of Modules over Lie superalgebras”**, *Southeastern Lie Theory Workshop*; University of Georgia, Athens, GA, USA.
- Apr 2013 **“Presenting Schur Superalgebras”**, *The 3rd Graduate Research Conference in Algebra and Representation Theory*; Kansas State University, Manhattan, KS, USA.
- Mar 2013 **“Complexity of the Simple and Kac Modules over $\mathfrak{osp}(2|2n)$ ”**, *TORA IV : Texas - Oklahoma Representations and Automorphic Forms IV*; U. of North Texas, Dallas, TX, USA.

Co-authored Talks/* is Presenter

- Feb 2022 **“The reason why I didn’t like [math] before is because I never felt creative: Affective Outcomes from Teaching Actions to Foster Mathematical Creativity in Calculus 1”**, *The 2022 Conference on Research in Undergraduate Mathematics Education*, G. Tang*, R. Satyam, M. Savic, H. El Turkey, G. Karakok, Boston, MA, USA.
- Feb 2022 **“Teacher Actions to Foster Creativity in Calculus”**, *The 2022 Conference on Research in Undergraduate Mathematics Education*, R. Satyam*, G. Tang, M. Savic, H. El Turkey, G. Karakok, Boston, MA, USA.
- Feb 2020 **“Shifting Pedagogical Beliefs into Action Through Teaching for Mathematical Creativity”**, *The 2020 Conference on Research in Undergraduate Mathematics Education*, G. Tang*, M. Savic, E. Cilli-Turner, P. Regier, G. Karakok, & H. El Turkey, Boston, MA, USA.
- Jun 2019 **“University Instructors’ Pedagogical Changes as a Result of Focusing on Mathematical Creativity”**, *The 2nd International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019)*, G. Tang*, M. Savic*, H. El Turkey, E. Cilli-Turner, & G. Karakok, Nepal.
- Feb 2017 **“Inquiry as an Access Point to Equity”**, *The 20th Conference on Research in Undergraduate Mathematics Education*, G. Tang*, H. El Turkey, E. Cilli-Turner, M. Savic, D. Plaxco, & G. Karakok, San Diego, CA, USA.
- Feb 2017 **“ $C \times N$ Investigating the Creative Proving Process Using Neuroscience Methods”**, *The 20th Conference on Research in Undergraduate Mathematics Education*, M. Savic*, D. Plaxco*, M. Wenger, E. Cilli-Turner, G. Tang, H. El Turkey, & G. Karakok, San Diego, CA, USA.

- Nov 2016 **“The Covering Number of Some Finite Rings”**, *MAA Northeastern Sectional Meeting; Trinity College*, H. El Turkey and C. Pray*, Hartford, CT, USA.
- Nov 2016 **“Implementation of Pre-class Readings in Calculus”**, *MAA Northeastern Sectional Meeting; Trinity College*, S. Turki* and H. El Turkey, Hartford, CT, USA.
- Jul 2016 **“Creativity-in-Progress Rubric on Proving-Enhancing Student Creativity”**, *The 13th International Congress on Mathematical Education*, G. Karakok*, H. El Turkey, M. Savic, G. Tang, E. Naccarato, & D. Plaxco, Hamburg, Germany.
- Nov 2015 **“Using the Creativity-in-Progress Rubric in an Inquiry-Based Introductory Proof Course”**, *The 10th Southern Hemisphere Conference on the Teaching and Learning of Undergraduate Mathematics and Statistics*, G. Tang*, G. Karakok*, M. Savic, H. El Turkey, E. Naccarato, Brent Hancock, Port Elizabeth, South Africa.
- Oct 2015 **“Understanding the Proving Process with the Lens of Mathematical Creativity”**, *AMS Western Sectional Meeting; California State University*, G. Karakok*, G. Tang, H. El Turkey, E. Naccarato, D. Plaxco, Fullerton, CA, USA.
- Feb 2015 **“Understanding the Proving Process with the Lens of Mathematical Creativity”**, *The 18th Conference on Research in Undergraduate Mathematics Education*, M. Savic*, G. Karakok, G. Tang, H. El Turkey, Pittsburgh, PA, USA.

Poster

- Jan 2020 **“Reshaping Mathematical Identity by Valuing Creativity in Calculus”**, *Joint Math Meetings*, Denver, CO, USA.
Jointly presented with G. Karakok and E. Cilli-Turner.
- May 2018 **“Implementations of Pre-class Readings in Calculus”**, *The Bucknall Conference on Effective Teaching Strategies; University of New Haven*, West Haven, CT, USA.
Poster presented by S. Turki.
- Apr 2018 **“Exploring Bounds for the Frobenius Number”**, *Spuyten Duyvil Undergraduate Mathematics Conference; SCSU*, New Haven, CT, USA.
Poster presented by students: A. Shackett & A. Svitlik.
- Oct 2011 **“Presenting Schur Superalgebras”**, *AMS Central Sectional Meeting; University of Nebraska*, Lincoln, NE, USA.
Poster mentored by J. Kujawa.

Departmental Talks

- Mar 2020 **“Fostering Creativity in the Calculus Classroom”**, *Department Seminar Series; University of New Haven*, West Haven, CT, USA.
- Apr 2018 **“Exploring Intersections of Teaching for Creativity, Equity, and Inquiry Instruction”**, *Department Seminar Series; University of New Haven*, West Haven, CT, USA.
- Mar 2017 **“McNugget Numbers”**, *Math & Physics Club; University of New Haven*, West Haven, CT, USA.
- Nov 2016 **“The Covering Number of Finite Rings”**, *Math Department Seminar; University of New Haven*, West Haven, CT, USA.
- Feb 2016 **“Explicitly Valuing Mathematical Creativity in Proof-Based Courses”**, *Math Department Seminar; University of New Haven*, West Haven, CT, USA.
- Nov 2014 **“Prime Numbers”**, *Math & Physics Club; University of New Haven*, West Haven, CT, USA.
- Nov 2014 **“Algebras...An Abstract Version of College Algebra”**, *Math Department Seminar; University of New Haven*, West Haven, CT, USA.
- Feb 2013 **“Left and Right Derived Functors”**, *Student Algebra Seminar; University of Oklahoma*, Norman, OK, USA.

- Feb 2012 “**Connection between Projective Representations and the Second Cohomology Group**”, *Graduate Student Seminar; University of Oklahoma*, Norman, OK, USA.
- May 2011 “**A Presentation of the Schur Algebra and Superalgebra**”, *Algebra and Representation Theory Seminar; University of Oklahoma*, Norman, OK, USA.
- Oct 2010 “**Schur-Weyl Duality between Partition Algebras and the Symmetric Group**”, *Student Algebra Seminar; University of Oklahoma*, Norman, OK, USA.

Selected Conferences & Workshops

- May 2022 **2022 Change DIAL Conference: Change in Departments and Institutions via Active Learning** , *University of Nebraska*, Virtual, USA.
- Spring 2022 **The Inclusive STEM Teaching Project Course**, *NSF-funded Program*, Virtual, USA.
- Summer 2021 **2021 PEER-Chicago Workshop**, *Depaul University*, Virtual, USA.
- Fall 2020 **Advocating for Students of Color in Mathematics**, *American Mathematical Society*, Virtual, USA.
- Jul 2019 **REUF Continuation Week: Research Experiences for Undergraduate Faculty**, *The American Institute of Mathematics*, San Jose, CA, USA.
- Jun 2018 **Inquiry-Based Learning Workshop**, *The Mathematical Association of America's Carriage House*, Washington, D.C., USA.
- Jun 2018 **REUF: Research Experiences for Undergraduate Faculty**, *The American Institute of Mathematics*, San Jose, CA, USA.
- Jun 2018 **The 2018 Summer School on Lie Theory**, *University of Georgia*, Athens, GA, USA.
- May 2018 **The Bucknall Conference on Effective Teaching Strategies**, *University of New Haven*, West Haven, CT, USA.
- Apr 2018 **The Spuyten Duyvil Undergraduate Mathematics Conference**, *SCSU*, New Haven, CA, USA.
- Mar 2018 **Exploring Teaching and Learning Through Inquiry-Oriented Linear Algebra**, *UB-Yale STEM Seminar Series, University of Bridgeport*, Bridgeport, CT, USA.
- Feb 2018 **Critical Issues in Mathematics Education 2018: Access to mathematics by opening doors for students currently excluded from mathematics**, *MSRI*, Berkeley, CA, USA.
- Nov 2017 **MAA Northeastern Sectional Meeting**, *Sacred Heart University*, Fairfield, CT, USA.
- Apr 2017 **Embedded Support: How it helps, Why it works**, *Eastern Connecticut State University*, Willimantic, CT, USA.
- Nov 2016 **Transforming Undergraduate STEM Education: Implications for 21st Century Society**, *EAAC&U*, Boston, MA, USA.
- Nov 2016 **MAA Northeastern Sectional Meeting**, *Trinity College*, Hartford, CT, USA.
- Oct 2016 **Circle on the Road**, *Courant Institute of Mathematical Sciences*, New York University, New York, NY.
- Oct 2016 **RUME with a View**, *University of Oklahoma*, Norman, OK.
- May 2016 **Algebraic Groups, Quantum Groups and Geometry**, *University of Virginia*, Charlottesville, VA, USA.
- Aug 2015 **Project NExT Workshop**, *Washington DC.*, USA.
- Jun 2015 **Conference on Representation Theory, Number Theory and Invariant Theory (In honor of Roger Howe)**, *Yale University*, New Haven, CT, USA.
- May 2015 **Conference on Representation Theory and Related Topics**, *University of Connecticut*, Storrs, CT, USA.
- Jan 2015 **Joint Mathematics Meetings**, *San Antonio, TX*, USA.

- Sep 2014 **Discovering the Art of Teaching Mathematics IBL Workshop**, *Quinnipiac University*, Hamden, CT, USA.
- Nov 2013 **Conference on Geometric Methods in Representation Theory**, *University of Missouri*, Columbia, MO, USA.
- Apr 2012 **AMS Central Sectional Meeting**, *University of Kansas*, Lawrence, KS, USA.
- Apr 2012 **TORA II : Texas - Oklahoma Representations and Automorphic Forms II**, *Oklahoma State University*, Stillwater, OK, USA.
- Jun 2011 **Southeastern Lie Theory Workshop III: Finite and Algebraic Groups**, *University of Virginia*, Charlottesville, VA, USA.
- May 2010 **Second Southeastern Lie Theory Conference and VIGRE Summer School**, *University of Georgia*, Athens, GA, USA.

Fellowships & Grants

Fellowships

2021–2023 **CTE Faculty Fellow.**

As a faculty fellow at the Center for Teaching Excellence, I will support our faculty through professional development opportunities on various topics (e.g., Scholarship of Teaching and Learning (SoTL), teaching online, inclusive pedagogy, high-impact practices). I will prepare programming and deliverables that will enhance pedagogy across the university. The selection to the program includes 3 credit release per semester and an annual stipend (\$2500 per year).

2019–2022 **University Research Scholar.**

Appointment as a URS is intended to enhance the competitive position of faculty to secure external funding to continue their work. With this recognition, the University of New Haven provides additional support for University Research Scholars to develop preliminary results that will make subsequent grant proposals successful. This support includes both partial teaching workload release during the three academic years of the designation and a modest recovery (\$4000 per year) of ancillary research expenses.

2015–2016 **Project NExT Fellow.**

A professional development program of the MAA for recent Ph.D. graduates. Fellows attended panels, workshops, and talks to build skills in research, teaching, and undergraduate research. A mentoring and networking component is also included.

2008–2013 **Foundation Fellow.**

A five-year scholarship (\$ 5000 per year) program at the University of Oklahoma for Ph.D. students in addition to the regular tuition waiver and the monthly stipend.

Grants

- Mar 2022 **Senior Personnel**, *Opening Mathematical Curtains: Unveiling Graduate Students' Creativity*, NSF-IGE, \$499,841, **pending**.
- Aug 2021 **Principal Investigator**, *Fostering mathematical creativity in Calculus III using creativity-based tasks*, PEER Workshop Mini-grant, \$250, funded.
- Nov 2018 **Co-Principal Investigator**, *Mathematics Undergraduates' Attendance to MAA MathFest*, Elsevier Mathematical Sciences Sponsorship, \$5,000, not funded.
- Oct 2018 **Senior Personnel**, *Collaborative Research: Reshaping Mathematical Identity by Valuing Creativity in Calculus*, NSF-IUSE, \$299,780, **funded**.
- Nov 2017 **Principal Investigator**, *Fostering Creativity Through Research-based Task Design in Undergraduate Mathematics Courses*, Spencer Foundation, \$50,000, not funded.
- Oct 2017 **Member of UNH Leadership Team**, *2018 HHMI Inclusive Excellence Grant*, Howard Hughs Medical Institute, \$ 5,042,711, not funded.
- Jan 2017 **Co-Principal Investigator**, *I-SUCCESS: Inclusive Strategies for Undergraduate Course Coordination and Enhanced Student Success*, NSF, \$598,845, not funded.
- Nov 2016 **Co-Principal Investigator**, *Undergraduates' Attendance to MAA MathFest*, Elsevier Mathematical Sciences Sponsorship, \$5,000, not funded.

Apr 2015 **Principal Investigator**, *Early Mathematician Grant*, Simons Foundation, \$4,000, not funded.

Travel Grants

Fall 2019 **Network of IBL Communities**, *Fall 2019 NE-IBLM Conference*, ECSU, CT, \$250, funded.

Spring 2019 **Research Fund, University of New Haven**, *The International Conference on Mathematical Creativity and Giftedness–Hamburg, Germany*, \$2000, funded.

Summer 2019 **The American Institute of Mathematics**, *Continuation Proposal to Fund a Research Retreat for 6 Researchers*, funded.

Summer 2018 **The American Institute of Mathematics**, *REUF: Research Experiences for Undergraduate Faculty*, San Jose, CA, funded.

Summer 2018 **University of Georgia**, *2018 Summer School on Lie Theory–UGA*, Athens, GA, \$500, funded.

Summer 2018 **Academy of Inquiry-Based Learning**, *2018 IBL Workshop*, Washington, D.C., \$300, funded.

Spring 2018 **MSRI–Mathematical Sciences Research Institute**, *Critical Issues in Mathematics Education 2018*, Berkeley, CA, \$280, funded.

Spring 2017 **Research Fund, University of New Haven**, *2018 Joint Mathematics Meetings–San Diego, CA*, \$1050, funded.

Fall 2016 **Provost's Office, University of New Haven**, *2016 AAC&U conference: Transforming Undergraduate STEM Education–Boston, MA*, \$1700, funded.

Fall 2016 **American Mathematical Society**, *2017 Mathematical Congress of the Americas, Canada*, \$1500, not funded.

Spring 2015 **AMS Simon's Foundation**, *Two year travel support for early mathematicians*, \$4000, not funded.

Spring 2014 **American Mathematical Society**, *2014 Joint Mathematics Meetings–Baltimore, MD*, \$500, funded.

Spring 2014 **Robberson Conference Presentation & Creative Exhibition Travel Grant–Graduate College, University of Oklahoma**, *2014 Joint Mathematics Meetings–Baltimore, MD*, \$500, funded.

Spring 2012 **American Mathematical Society**, *Spring AMS Central Sectional Meeting–University of Kansas, Lawrence, KS*, \$250, funded.

Fall 2011 **American Mathematical Society**, *Fall AMS Central Sectional Meeting–University of Nebraska, Lincoln, NE*, \$250, funded.

Summer 2011 **University of Virginia**, *Southeastern Lie Theory Workshop III–UVA*, Charlottesville, VA, \$500, funded.

Summer 2010 **University of Georgia**, *VIGRE Summer School–UGA*, Athens, GA, \$500, funded.

Awards

May 2019 **Faculty Merit Award**, University of New Haven, CT, USA.

Apr 2014 **Certificate of Distinction for Outstanding Graduate Teaching Assistant**, Provost Office, University of Oklahoma, OK, USA.

Apr 2013 **Overall Outstanding Graduate Student Award**, Graduate Student Senate, University of Oklahoma, OK, USA.

Jun 2006 **Jamal Abdul-Naser Award for Academic Excellence**, Beirut Arab University, Beirut, Lebanon.

2002–2006 **Full Annual Scholarship**, Beirut Arab University, Beirut, Lebanon.

Nominations

- Apr 2022 **Excellence in Teaching Award, Full-Time Faculty**, *University of New Haven, CT, USA*, by a colleague's nomination.
- Apr 2020 **Excellence in Research or Creative Activity Award**, *University of New Haven, CT, USA*, by colleagues' nominations.
- Oct 2019 **The Bucknall Excellence in Teaching Award**, *University of New Haven, CT, USA*, self-nominated.
- Apr 2019 **Excellence in Teaching Award, Full-Time Faculty**, *University of New Haven, CT, USA*, by students' nominations.
- Apr 2018 **Excellence in Teaching Award, Full-Time Faculty-by students' nominations**, *University of New Haven, CT, USA*, by students' nominations.
- Apr 2018 **Excellence in Research or Creative Activity Award**, *University of New Haven, CT, USA*, by colleagues' nominations.
- Oct 2017 **The Bucknall Excellence in Teaching Award**, *University of New Haven, CT, USA*, self-nominated.
- Apr 2016 **Excellence in Teaching, Full-Time Faculty**, *University of New Haven, CT, USA*, by colleague's nomination.

Service

Mathematics Department-University of New Haven

- 2021–Present **Department Seminar Organizer**, I organized and facilitated a department seminar on careers in Mathematics in F21, where I invited two external speakers to share their experiences.
- 2019–Present **Department Curriculum Committee Chair**, Revise the mathematics curriculum, discuss the master's proposal, discuss and propose modifying existing programs, and propose new possible tracks such as a new BS in Actuarial Science, a new 4+1 program between Math and Data Science, etc.
- 2017–21 **Mathematics Coordinator**, Duties include: Transfer credit authorization, overrides into classes, scheduling of classes and faculty assignments, hiring part-time adjunct faculty, outreach activities, classroom observations, advising math minors, etc.
- 2018–19 **Search Committee Chair**, Two searches for full-time non tenure-track Lecturer positions.
- 2018–19 **Calculus Committee Chair**, We have implemented a common final across all Calculus I sections and we ran few recitation classes for Calculus I & II. This includes selecting and training student tutors to lead the recitations.
- 2017-18 **Search Committee Member**, Two searches for Assistant Professor and Chair positions.
- 2017 **Pi Mu Epsilon Petition Faculty Advisor**, I helped the president of the Math and Physics Club in writing a petition to have a PME chapter at the university.
- 2016–Present **Academic Advising**, I am the academic primary or secondary advisor of many math majors..
- 2015–17 **Master's Program Committee Member**, I worked on the financial analysis of the program and gave feedback on the subsequent drafts of the proposal.
- 2015–Present **Department Awards Committee Chair**, Every Spring, we select 4 students in Mathematics and Physics for their academic excellence.
- 2014–17 **Math & Physics Club Faculty Advisor**, Activities include: Field trips, game nights, presentations, etc.
- 2014–16 **Department Core-Curriculum Committee Chair**, We coordinated with the Core Curriculum Task Force regarding the mathematics courses and we submitted the necessary forms for CC 3.1 category.

2014 **Mastery Test Committee Member**, I provided a pool of questions to be used on these tests.

College & University- University of New Haven

2019–25 **Faculty Senate**, I was elected to the Faculty Senate for the CAS seat.

2021–24 **Committee Member**, I was elected to the CAS seat on the Core Curriculum Subcommittee.

2021–2023 **CTE Faculty Fellow**, I was elected as one of four faculty fellows to support the CTE's mission at the University of New Haven.

2021–Present **MSA Faculty Advisor**, I volunteered to be the faculty advisor for the Muslim Student Associated.

2021–2022 **CTE Advisory Board Member**, I am the CAS representative on the CTE Advisory Board that supports the CTE's mission at the University of New Haven.

2020–21 **Committee Member**, Academic Planning Committee, The committee supported the Covid Task Force from an academic lens.

Spring 2020 **Search Committee Member**, Assistant Professor Position in Data Science.

2019 **CAS Awards Committee Member**, I helped in the organization process and I made the program for the ceremony.

2018–2019 **Evaluator**, I evaluated 3 posters at the First Year Expo in Fall 2019; 3 posters Spring 2019; 3 posters in Fall 2018; 2 posters in Spring 2018.

2017–2018 **Reviewer**, I reviewed 15 SURF applications in Spring 2018; 18 applications in Spring 2017.

2017–19 **University Enrollment Management Advisory Committee**, We met twice to discuss the mission of the Committee.

2016–Present **Recommendation letter writer**, I have written letters of recommendations for students for graduate schools, scholarships, tutoring positions in CLR, Honors Program, REU's, internships, etc.

2016–19 **Faculty Liaison**, Liaison of the UNH women's tennis team.

2015–16 **Volunteer**, I read names of graduates during winter commencements.

2015 **CAS Awards Committee Member**, I helped in the logistics of the ceremony and I sent the emails to all students who were awarded.

Community

Spring 2021–Present **Committee Member**, *MAA Committee on Faculty and Departments*, The Committee is tasked with developing 'best practices' related to teaching, curriculum, retention, etc. Our recent work involved developing a statement for 'best practices' on DEI.

Fall 2021–Present **Project NExT Consultant**, *I am serving as an MAA Project NExT Consultant where I mentor a mathematics faculty member at another institution*, the mentoring is for faculty members in their early careers to help navigate institutional requirements in terms of teaching, research, and service.

Spring 2020 **Local Arrangements Chair**, *Spring NE-IBLM Workshop*, University of New Haven, West Haven, CT, USA.

2018–20 **Co-editor**, *Special Issue of Journal of Humanistic Mathematics*, I am co-editing with the Creativity Research Group a special issue on mathematical creativity, <https://scholarship.claremont.edu/jhm/vol110/iss2/3/>.

Jan 2019 **Co-organizer and Co-moderator**, *Joint Mathematics Meeting*, I co-organized and co-moderated the MAA contributed paper Session on Fostering Creativity in Undergraduate Mathematics, Baltimore, MD, USA.

2017–Present **Reviewer**, I have served as a reviewer for academic journals (PRIMUS), conference proceedings (ICME, RUME, PME-NA), and book chapters (Springer).

- Spring 2018 **Local Arrangements Committee Chair**, *MAA Northeastern Sectional Meeting*, University of New Haven, West Haven, CT, USA.
- Jan 2018 **Moderator**, *Joint Mathematics Meeting*, I moderated an MAA contributed paper Session on Number Theory (II), San Diego, CA, USA.
- Jan 2018 **Judge**, *Joint Mathematics Meeting*, I served as a judge in the MAA undergraduate student poster session, San Diego, CA, USA.
- Fall 2017 **Program Committee Member**, *MAA Northeastern Sectional Meeting*, We selected the plenary speakers, Sacred Heart University, Fairfield, CT, USA.
- Jan 2016 **Moderator**, *Joint Mathematics Meeting*, I moderated an MAA contributed paper Session on Algebra (II), Seattle, OR, USA.
- Fall 2016 **Local Arrangements Committee Member**, *MAA Northeastern Sectional Meeting*, Trinity College, Hartford, CT, USA.
- Aug 2016 **Co-Organizer**, *MAA MathFest*, Project NExT session on “Teaching and Assessing Proof-Writing”, Columbus, OH, USA.

Mathematics Department-University of Oklahoma

- 2012 **Graduate Committee Member**, Student Representative on the Department’s Graduate Committee.
- Spring 2012 **President**, Mathematics Graduate Students Association.
- Spring 2011–12 **Vice President**, Mathematics Graduate Students Association.
- 2011 **Organizer**, Graduate Student Seminar.
- 2010 **Organizer**, Student Algebra Seminar.

Memberships

- 2014-Present **Mathematical Association of America (MAA)**.
- 2010-Present **American Mathematical Society (AMS)**.

Computer Skills

LaTeX, Python, Mathematica, Microsoft Office, Google Suite