Samuel J. Ivy, Ph.D   Curriculum Vita

CONTACT
INFORMATION
University of Mary Hardin-Baylor   EMAIL: sivy@umhb.edu
Department of Mathematics   TEL: (254) 295-4861
900 College Street
Belton, TX 76513

EDUCATION
North Carolina State University, Raleigh, NC

Ph.D., Mathematics, Spring 2015, Advisor: Aloysius G. Helminck, Ph.D

M.S., Mathematics, December 2011

Morehouse College, Atlanta, GA

B.S., Mathematics (Economics Minor), May 2009

CERTIFICATION
Diversity and Inclusion Certificate
Cornell Univeristy
February 2022

PROFESSIONAL
EXPERIENCE
Assistant Professor   August 2019-Present
Department of Mathematics
University of Mary Hardin-Baylor

Director   July 2018-2019
Center for Leadership & Diversity in STEM (CLD STEM)
United State Military Academy

Visiting Assistant Professor   July 2015-2018
Department of Mathematical Sciences
United State Military Academy

RESEARCH
INTERESTS
Representation Theory, Lie Theory, Symbolic Computation, Inquiry-Based Learning for
Math courses, Pedagogical efforts in STEM outreach

PAPERS

1. L. Sheetz, S. Ivy, D. Conn & J. Motupalli. *Developing a Model for Increasing Leadership and Diversity in STEM through Mobile STEM Workshops, Collaboration and Community Involvement*, 2019 IEEE Integrated STEM Education Conference (ISEC) Journal.

2. S. Ivy. *My Project NExT Experience*, National Association of Mathematicians Newsletter, XLVII (3), pg. 4, 2016.

3. S. Ivy. *Classifying the Fine Structures of Involutions Acting on Root Systems*, North Carolina State University, (In Preparation).

4. Peterson, G. E., E. T. Campbell, A. M. Hawkins, J. Balbas, S. Ivy, E. Merkurjev, T. Hall, P. Rodriguez, E. D. Gustafson. *Relative Performance of Lambert Solvers 1: Zero-Revolution Methods*, AAS 10-199, AAS/AIAA Space Flight Mechanics Meeting Conference Proceedings, 2010.

Assistantships & Fellowships

- Texas NExT Fellowship   January 2020− Present
  Department of Mathematics, UMHB
- Project NExT Fellowship   July 2016− Present
  Department of Mathematical Sciences, USMA
- Ford Dissertation Fellow   June 2014−June 2015
  Mathematics Department, NCSU
- Preparing the Professoriate Fellowship Awardee   Spring 2014
  Mathematics Department, NCSU
- Phillips Exeter Academy Dissertation Year Fellowship Awardee   Spring 2014
  Phillips Exeter Academy
- STEM Teaching Assistantship   Aug 2009
  Mathematics Department, NCSU
- Bridge to Doctorate Fellow   Aug 2009−Aug 2011
  College of Sciences, NCSU

Grant & Scholarships

- UNC Campus Scholarship   Fall 2014
  Mathematics Department, NCSU
- NC State Diversity Enhancement Program Grant   Fall 2011−Spring 2013
  Mathematics Department, NCSU

Memberships & Honors

- Kappa Mu Epsilon Honor Society
- Beta Kappa Chi Scientific Honor Society
- Pi Mu Epsilon Mathematical Honor Society
- Mathematical Association of America
- National Association of Mathematicians
- Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
- 2019 Black Engineer of the Year Award (BEYA): ARMY Modern Day Technology Leader Award
- 2019 Mathematically Gifted & Black Honoree

University of Mary Hardin-Baylor

MATH 1306: College Algebra	
MATH 1330: Calculus I	Fall 2019, 2020
MATH 2320: Linear Algebra	Fall 2019,2020,2022
MATH 2330: Calculus II	Spring 2020
MATH 3320: Foundations of Higher Mathematics	Spring 2020
MATH 3330: Calculus III	Spring 2021
MATH 4310: Analysis	Spring 2022
MATH 4320: Abstract Algebra	Spring 2021

United States Military Academy

MA 153–Math Modeling & Introduction to Differential Equations	Fall 2018
MA 255–Advanced Multivariable Calculus	Spring 2018
MA 153–Math Modeling & Introduction to Differential Equations	Fall 2017
MA 387–Mathematical Analysis I	Spring 2017
MA 206–Introduction to Probability & Statistics	Fall 2016
MA 104–Single Variable Calculus	Spring 2016
MA 205–Integral Calculus & Introduction to Differential Equations	Fall 2015

North Carolina State University

MA 341–Applied Differential Equations I	Summer 2014

MA 241–Calculus II	Spring 2014
MA 103–Topics in Contemporary Mathematics	Fall 2013
MA 101–Intermediate Algebra	Summer 2012
MA 103–Topics in Contemporary Mathematics	Summer 2012
MA 241–Calculus II	Spring 2013
MA 131–Calculus for Life and Management Sciences A	Fall 2012
MA 242–Calculus III	Spring 2012
MA 141–Calculus I	Fall 2011

Service

Student Activites Director,
Executive Committee   Fall 2021-Present
Mathematical Association of America (MAA) Texas Section

Committee Member,
Bachelor of Science Committee   Fall 2020-Spring 2021
College of Humanities and Sciences, UMHB

Committee Member,
College of Humanities and Sciences Story Brand Team   Fall 2021-Present
College of Humanities and Sciences, UMHB

Committee Member,
Renew Partnerships Leadership Committee   Fall 2020-Spring 2022
University of Mary Hardin-Baylor

Founding Chapter Faculty Advisor,
National Society of Black Engineers (NSBE)   Spring 2020-Present
Mathematics Department, UMHB

Committee Member,
Diversity and Inclusion Conference Planning Committee   Fall 2018-Spring 2019
Office of Diversity, Inclusion and Equal Opportunity, USMA

Faculty Advisor,
National Society of Black Engineers (NSBE) Cadet Chapter   Fall 2018-Spring 2019
Department of Mathematical Sciences, USMA

Associate Director,
Center for Leadership & Diversity in STEM (CLD STEM)   Spring 2016- Spring 2018
Department of Mathematical Sciences, USMA

Coordinator
Minority in Mathematics Speaker Series (MIMSS)   Spring 2016- Spring 2019
Department of Mathematical Sciences, USMA

Co-Coordinator, Math Forum   Fall 2016- 2017
Department of Mathematical Sciences, USMA

Chapter Adviser
Pi Mu Epsilon Honor Society (Alpha Zeta Chapter)   Fall 2015-2017
Department of Mathematical Sciences, USMA

Graduate Tutor
NC Initiative for Maximizing Student Diversity (IMSD)   Oct 2009 – Aug 2013

Math Workshop Coordinator   Summer 2010, 2014
Summer Transition Program (STP), NCSU Minority Engineering Programs

PRESENTATIONS   Voices in Diversity Speaker Series   November 2022
& CONFERENCES   University of Mary Hardin-Baylor, Belton, TX
       STEM Exposure: Optimizing those Critical Points

Texas Undergraduate Math Conference (TUMC)   October 2022
University of Texas at Austin, Austin, TX
       Invited Address: Actions In Route and On Root Systems

Math and Stat Club Talk   April 2022
Winston-Salem State University, Winston-Salem, NC
       Characterizing Fine Structures of Involutions Acting on Root Systems

Problem Time Moderator   October 2021
National Association of Mathematician (NAM) Undergraduate MATHFest
       Moderated three problem sessions that posed as a math competition for undergraduate attendees

STEM Students of Color Alliance   February 2019
Lamar University, Beaumont, TX
       Characterizing Parabolic Subsets from Involutions

IEEE Integrated STEM Education Conference   March 2019
Princeton University, Princeton, NJ
       Developing a Model for Increasing Leadership and Diversity in STEM through Mobile STEM Workshops, Collaboration and Community Involvement. Community-based Outreach and Pre-College Initiatives Session 1

Joint Math Meetings   January 2019
Baltimore, MD
       Generalizing Parabolic Subsets from Involutorial Automorphisms. NAM Haynes-Granville-Browne Session of Presentations by Recent Doctoral Recipients

International STEM Education Association (ISEA) STEM Conference   October 2018
Branson, MO
       Programmable Circuits: Outreach Model to Bridge The Curriculum Gap with a Hands-On Interdisciplinary Workshop,

West Point Diversity & Inclusion Leadership Conference   September 2018
United States Military Academy, West Point, NY
       Panel Session #4: The Way Forward: Collaboration of Alumni, Faculty and Staff, Panel Moderator

Joint Math Meetings   January 2017
Hyatt Regency & Marriott Marquis, Atlanta, GA
       Generalizing Parabolic Subsets from Involutorial Automorphisms. AMS-NAM Joint Special Session on The Mathematics of the Atlanta University Center

SACNAS   October 2016
Long Beach Convention Center, Long Beach , CA
    Generalizing Parabolic Subsets from Involutorial Automorphisms. Session: Algebra:
    Much More Than Arithmetic!

Morehouse Mathematics Alumni Conference   March 2016
Morehouse College, Atlanta, GA
    My Journey in Mathematics

Joint Math Meetings   January 2016
Seattle Convention Center, Seattle, WA
    Classifying Fine Structures of Involutions Acting on Root Systems. MAA General
    Contributed Paper Session on Algebra, II Presentation.

2015 Conference of Ford Fellows   September 2015
National Academy of Sciences Building, Washington, DC
    Classifying Fine Structures of Involutions Acting on Root Systems.

Topology & Algebra Research Seminar   October 2015
United States Military Academy
    Symmetric Spaces: From Lie Groups to Root Systems

2014 Conference of Ford Fellows   September 2014
Arnold and Mabel Beckman Center of the National Academies of Sciences and Engineering,
Irvine, CA
    New Fellows Orientation Participant
Service, Students & Symmetirc Spaces:
A Celebration of the Work of Aloysius Helminck   June 2014
Raleigh, NC
    Research Session Chair, NC State University

Underrepresented Students in Topology & Algebra Research Symposium
(USTARS)   April 2014
Berkely, CA
    Graduate Panel Discussion, University of California, Berkeley

Morehouse Mathematics Alumni Conference   September 2013
Atlanta, GA
    Graduate Panel Discussion, Morehouse College

Hopps Symposium   September 2012
Morehouse Alumni Panel Discussion, Morehouse College, Atlanta, GA
    Title: "Negotiating Graduate School: Expected and not so Expected Paths to
    Success"

Research in Industrial Projects for Students (RIPS)   August 2009
University of California, Los Angeles
    Title: "Implementing and Comparing Lambert Solvers"

United States Military Academy   April 2009
West Point, NY
    Title: "4-Covering Maps on Elliptic Curves with Torsion Subgroup $Z_2 \times Z_8$"

Pacific Coast Mathematics Conference   March 2009
University of California, Riverside
    Title: "4-Covering Maps on Elliptic Curves with Torsion Subgroup $Z_2 \times Z_8$"

Joint Mathematics Meetings (Poster Presentation)   January 2009
Washington, D.C.
    Title: "4-Covering Maps on Elliptic Curves with Torsion Subgroup $Z_2 \times Z_8$"

Morehouse College Senior Seminar   November 2008
Atlanta, GA
    Title: "The Mysteries of a Distorted Dot Product"

NAM MATHFest Conference   November 2008
Houston, TX
    Title: "4-Covering Maps on Elliptic Curves with Torsion Subgroup $Z_2 \times Z_8$"

HBCU-UP National Research Conference (Poster Presentation)   October 2008
Atlanta, GA
    Title: "4-Covering Maps on Elliptic Curves with Torsion Subgroup $Z_2 \times Z_8$"

Miami University SUMSRI Program   July 2008
Oxford, OH
    Title: "4-Covering Maps on Elliptic Curves with Torsion Subgroup $Z_2 \times Z_8$"

Elizabeth City State University 2008 Student Research Institute CSSV   May 2008
Elizabeth City, NC
    Title: "An Investigation of Possible Effects of Global Warming on Forest Fires in
    Kentucky from 1945-2004"

Morehouse College Sixth Annual Harriett J. Walton Symposium on Undergraduate
Mathematics Research   March 2008
Atlanta, GA
    Title: "Unfair Dice"

NAM MATHFest Conference   November 2007
Atlanta, GA
    Title: "Unfair Dice"

University of Maryland Math SPIRAL Program   July 2007
College Park, MD
    Title: "Unfair Dice"