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Richard Klima

Education

Ph.D., Applied Mathematics, August 1997
North Carolina State University, Raleigh, NC
Advisor: Dr. Ernest Stitzinger
Dissertation: *Involutory Commutants of the Seventh Order with Applications to Algebraic Cryptography*

M.S., Applied Mathematics, May 1994
Minor: Statistics
North Carolina State University, Raleigh, NC
Advisor: Dr. Ernest Stitzinger
Thesis: *Discrete Logarithms in Finite Fields with Applications to Algebraic Cryptography*

B.S., Mathematics, May 1992
Minor: Business

Experience

Director, Common Reading Program: August 2023 –
Director, First Year Seminar Program: July 2019 –
University College, Appalachian State University, Boone, NC
For First Year Seminar, I serve in a department chair-like role, managing the recruitment and training of faculty to teach the First Year Seminar course, the instruction of approximately 200 sections of this course per academic year taught by eleven full-time lecturers and many part-time instructors, and assessment. For Common Reading, I serve in a managerial role, chairing the committee that chooses the common reading book, organizing and advertising events including campus and online visits by the book author and welcome week faculty-student exchange sessions, recruiting and training volunteers for these sessions, consolidating supplemental resources for the book, making the book available to students and instructors, training instructors, and managing assessment.

Professor: August 2012 –
Graduate Faculty: August 2002 –
Assistant Chair: July 2010 – June 2019
Associate Professor: August 2008 – August 2012
Graduate Director: June 2005 – June 2009
Assistant Professor: August 2002 – August 2008
Department of Mathematical Sciences, Appalachian State University, Boone, NC
Courses I have taught include Abstract Algebra II, Analytical Models, Applications of Modern Algebra, Brief Introduction to Mathematics, Calculus I, Calculus II, Coding Theory, Cryptology, Empirical Models, Game Theory, Introduction to Mathematics, Linear Algebra, Modern Algebra, Number Theory, and Voting Theory. I have also directed a master's thesis, three master's products of learning, twelve master's directed research projects, twelve graduate teaching apprenticeships, eight senior honors theses for departmental honors students, twelve senior capstone projects, thirteen independent studies, an internship, and a study abroad program.

Faculty: August 2009 –
STEM Academic Mentor: July 2016 – June 2019
Honors College, Appalachian State University, Boone, NC

Courses I have taught include Math and Fairness in Democratic Elections, and Communicating in Secret. I have also directed nine senior honors theses for university honors students.

Visiting Assistant Professor: August 2000 – June 2002
Department of Mathematics, State University of New York, Oswego, NY
Courses I taught included Abstract Algebra, Applications of Abstract Algebra, Discrete Mathematics, Foundations of Mathematics, Linear Algebra, and Probability and Logical Thought.

Cryptologic Mathematician: June 1999 – August 2000
National Security Agency, Fort Meade, MD

Visiting Instructor: August 1997 – May 1999
Department of Mathematics, North Carolina State University, Raleigh, NC
Courses I taught included Applications of Abstract Algebra, and Calculus I.

High School Teacher: February 1992 – June 1992
Raleigh, NC

Publications

Books:

- *Cryptology: Classical and Modern, Second Edition*, with Dr. Neil Sigmon of Radford University, CRC Press, 2019
- *The Mathematics of Voting and Elections: A Hands-On Approach, Second Edition*, with Dr. Jonathan Hodge of St. Edward's University, AMS (American Mathematical Society), 2018
- *Applied Abstract Algebra with Maple and MATLAB, Third Edition*, with Drs. Neil Sigmon of Radford University and Ernest Stitzinger of North Carolina State University, CRC Press, 2016
- *Cryptology: Classical and Modern, with Maplets*, with Dr. Neil Sigmon of Radford University, CRC Press, 2012
- *Applications of Abstract Algebra with Maple and MATLAB, Second Edition*, with Drs. Neil Sigmon of Radford University and Ernest Stitzinger of North Carolina State University, CRC Press, 2007
- *Математика Выборов ("Election Mathematics")*, with Dr. Jonathan Hodge of St. Edward's University, Moscow Center for Continuous Mathematical Education, 2007
- *The Mathematics of Voting and Elections: A Hands-On Approach*, with Dr. Jonathan Hodge of St. Edward's University, AMS, 2005
- *Applications of Abstract Algebra with Maple*, with Drs. Neil Sigmon of Chowan College and Ernest Stitzinger of North Carolina State University, CRC Press, 2000

Instructor's Manuals:

- *Cryptology: Classical and Modern, Second Edition*, with Dr. Neil Sigmon of Radford University, CRC Press, 2019
- *Applied Abstract Algebra with Maple and MATLAB, Third Edition*, with Dr. Neil Sigmon of Radford University, CRC Press, 2016
- *Cryptology: Classical and Modern, with Maplets*, with Dr. Neil Sigmon of Radford

University, CRC Press, 2012

- *The Mathematics of Voting and Elections: A Hands-On Approach*, with Dr. Jonathan Hodge of St. Edward's University, AMS, 2009

Refereed Papers:

- *Cryptanalysis of the Enigma Machine: The Bombe and Beyond*, with graduate student Adam Downs of Virginia Polytechnic Institute and State University and Dr. Neil Sigmon of Radford University, *The Electronic Journal of Mathematics and Technology*, June 2025
- *Cracking the Enigma Code: Beyond the Bombe*, with graduate student Adam Downs of Virginia Polytechnic Institute and State University and Dr. Neil Sigmon of Radford University, *Proceedings of the 29th ATCM (Asian Technology Conference in Mathematics)*, January 2025
- *Analysis of Progressive Casino Game Betting Systems*, with graduate student Cole Payne of Appalachian State University and Dr. Neil Sigmon of Radford University, *Proceedings of the 28th ATCM*, January 2024
- *Shift and Vigenère Ciphers with Maplets*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 27th ATCM*, January 2023
- *The Polish Cryptanalysis of Enigma*, with Dr. Neil Sigmon of Radford University, *The Research Journal of Mathematics and Technology*, December 2022; *The Electronic Journal of Mathematics and Technology*, February 2022
- *Creating QR Codes Using Maplets*, with undergraduate student Adam Downs and Dr. Neil Sigmon of Radford University, *The Electronic Journal of Mathematics and Technology*, October 2022
- *The Mathematics of QR Codes*, with undergraduate student Adam Downs and Dr. Neil Sigmon of Radford University, *Proceedings of the 26th ATCM*, January 2022
- *Recognizing the Polish Efforts in Breaking Enigma*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 25th ATCM*, January 2021
- *The Navajo Code Talkers of World War II*, with Dr. Neil Sigmon of Radford University, Virginia Mathematics Teacher, November 2018
- *The Turing Bombe and its Role in Breaking the Enigma*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 22nd ATCM*, January 2018
- *Mathematics and Fairness in Democratic Elections, The UMAP (Undergraduate Mathematics and Its Applications) Journal/Interdisciplinary Lively Application Projects Modules: Tools for Teaching*, April 2010
- *Reed-Solomon Codes: A Tutorial and Java Toolbox*, with undergraduate student Augustus Miraglia of Appalachian State University, *The UMAP Journal*, April 2008
- *Elliptic Curve Cryptography with Java*, with Dr. Neil Sigmon of Radford University, *Mathematics and Computer Education*, March 2005
- *Amortization: An Application of Calculus*, with Dr. Robert Donnelly of the University of North Carolina at Chapel Hill, *The College Mathematics Journal*, October 1999
- *Applying the Diffie–Hellman Key Exchange to RSA, The UMAP Journal*, April 1999
- *Elliptic Curve Cryptography with Maple*, with Drs. Neil Sigmon of Chowan College and Ernest Stitzinger of North Carolina State University, *MapleTech*, June 1998

Contributed Papers:

- *Enigma: An Analysis and Maplet Simulator*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 26th ICTCM (International Conference on Technology in Collegiate Mathematics)*, March 2015
- *Using Maplets in Teaching Cryptology*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 25th ICTCM*, March 2014
- *Using Graphs to Break Vigenère Ciphers*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 24th ICTCM*, March 2013
- *A Java Simulator for Voting Methods, Proceedings of the 20th ICTCM*, March 2009
- *Elementary Coding Theory Including Hamming and Reed-Solomon Codes with Maple and MATLAB*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 18th ICTCM*, February 2007
- *Some Elementary Cryptography Including RSA on the TI-92+ and Voyage 200*, with Dr. Neil Sigmon of Radford University, *Proceedings of the 17th ICTCM*, March 2006
- *Focused, Compressed Video Tutorials*, with Drs. William Bauldry and Brian Felkel of Appalachian State University, *Proceedings of the 16th ICTCM*, October 2004

Other:

- *Abstract Algebra*, an online course with Dr. Vicky Klima of Appalachian State University, LEARN NC, University of North Carolina at Chapel Hill, August 2008
- *(Title Classified)*, National Security Agency, August 2000
- *Maple Supplements for Calculus I*, with Dr. Joseph Marlin and John Matthews of North Carolina State University, Department of Mathematics, North Carolina State University, August 1997
- *Involutory Commutants of the Seventh Order with Applications to Algebraic Cryptography*, a dissertation under the direction of Dr. Ernest Stitzinger of North Carolina State University, Graduate School, North Carolina State University, April 1997
- *Examining Randomness in Certain Sequences*, with Dr. Mark Sellers of the National Security Agency, Center for Research in Scientific Computation, North Carolina State University, July 1996
- *Discrete Logarithms in Finite Fields with Applications to Algebraic Cryptography*, a master's project under the direction of Dr. Ernest Stitzinger of North Carolina State University, Department of Mathematics, North Carolina State University, May 1994

Presentations

Invited Academic:

- *Cracking the Enigma Code: Beyond the Bombe*, with graduate student Adam Downs of Virginia Polytechnic Institute and State University and Dr. Neil Sigmon of Radford University, ATCM, December 2024
- *Analysis of Progressive Casino Game Betting Systems*, with graduate student Cole Payne of Appalachian State University and Dr. Neil Sigmon of Radford University, ATCM, December 2023
- *Arrow's Actual Impossibility Theorem*, AMS Joint Mathematics Meeting, January 2023; MAA (Mathematical Association of America) Southeastern Section Meeting, March 2020

- *Shift and Vigenère Ciphers with Maplets*, with Dr. Neil Sigmon of Radford University, ATCM, December 2022
- *The Mathematics of QR Codes*, with undergraduate student Adam Downs and Dr. Neil Sigmon of Radford University, ATCM, December 2021
- *Recognizing the Polish Efforts in Breaking Enigma*, with Dr. Neil Sigmon of Radford University, ATCM, December 2020
- *Explaining the Impossible: Kenneth Arrow's Nobel Prize Winning Theorem on Elections*, MSEC Science Seminar Series, Appalachian State University, October 2018; Catawba Valley Community College, March 2012; Radford University, September 2008; CSAM Scholarship Seminar Series, Morehead State University, April 2008; Wake Forest University, March 2008; University of North Carolina at Asheville, February 2008; CSEMS Scholarship Seminar Series, Appalachian State University, October 2007; Murray State University, October 2007
- *The Turing Bombe and its Role in Breaking the Enigma*, with Dr. Neil Sigmon of Radford University, ATCM, December 2017
- *Math?*, Mu Alpha Theta Honor Society, Ashe County High School, November 2016; NCCTM Regional Math Contest, April 2016
- *Donald Trump, Jesse Ventura, and Other Electoral Inconveniences*, Central Carolina Community College, March 2016
- *Deciphering the Navajo Code: The Real Story of the Windtalkers*, Catawba Valley Community College, April 2013
- *A Mathematician's Views on Minesweeper, Partying, and Card Shuffling*, Beyond the Syllabus Lecture Series, Appalachian Honors Association, Appalachian State University, November 2009; Misfit Lecture Series, Watauga Residential College, Appalachian State University, January 2005
- *Ralph Nader, Jesse Ventura, and Other Electoral Inconveniences*, Murray State University, October 2007
- *And the Winner Is … The Borda Count Method*, Wilkes Central High School, November 2005
- *Nader, Ventura, and Other Electoral Inconveniences*, Discrete Mathematics Workshop Series for High School Teachers, Appalachian State University, July 2005
- *A Moore-Style Course on the Mathematics of Voting and Elections*, with Dr. Jonathan Hodge of St. Edward's University, Legacy of R. L. Moore Conference, May 2005
- *A Mathematician's Views on Minesweeper, Card Shuffling, and Psychic Ability*, Murray State University, November 2004
- *Loan Amortization: A Cool Application of Calculus*, High Point University, October 2003
- *Voting and Apportionment: The Paradoxes of Democracy*, Discrete Mathematics Workshop Series for High School Teachers, Appalachian State University, January 2003
- *Recent Advances in the Cryptanalysis of the Two-Message Problem*, Murray State University, November 2002
- *(Title Classified)*, National Security Agency, July 2000

- *Discrete Logarithms in Finite Fields with Applications to Algebraic Cryptography*, Lynchburg, VA, February 1995

Invited Media:

- *The Edge*, WXYB, Tampa, FL, September 2005
- *The Edge*, WXYB, Tampa, FL, July 2005

Refereed:

- *Integrating Reed-Solomon Codes into QR Codes*, with undergraduate student Adam Downs and Dr. Neil Sigmon of Radford University, AMS Joint Mathematics Meeting, April 2022
- *Arrow's Actual Impossibility Theorem*, AMS Central-Western Section Meeting, March 2019
- *The Logic Behind the Turing Bombe's Role in Breaking the Enigma*, with Dr. Neil Sigmon of Radford University, AMS/MAA Joint Mathematics Meeting, January 2019
- *Teaching Cryptology to Students in Non-Technical Disciplines*, with Dr. Neil Sigmon of Radford University, AMS/MAA Joint Mathematics Meeting, January 2017
- *Enigma: A Combinatorial Analysis and Maplet Simulator*, with Dr. Neil Sigmon of Radford University, AMS/MAA Joint Mathematics Meeting, January 2017; MAA Southeastern Section Meeting, March 2015; ICTCM, March 2014
- *Increasing Student Interest in Mathematics Using Cryptography*, with Dr. Neil Sigmon of Radford University, AMS/MAA Joint Mathematics Meeting, January 2016
- *A New Method for Musical Encryption*, with undergraduate student Olivia Vanarthos of Appalachian State University, MAA Southeastern Section Meeting, March 2015
- *Using Maplets in Teaching Cryptology*, a computer minicourse with Dr. Neil Sigmon of Radford University, ICTCM, March 2013
- *Estimating Success When Combining RSA and the Diffie-Hellman Key Exchange*, with Dr. Neil Sigmon of Radford University, AMS/MAA Joint Mathematics Meeting, January 2013
- *Using Graphs to Break Vigenère Ciphers*, with Dr. Neil Sigmon of Radford University, AMS/MAA Joint Mathematics Meeting, January 2013; ICTCM, March 2012
- *Simulating a Verbal Translation of the Navajo Code; a Completed Version*, with Dr. Neil Sigmon of Radford University, AMS/MAA Joint Mathematics Meeting, January 2011
- *A Maplet for Encoding, Decoding, and Correcting Errors in Golay Codes*, AMS/MAA Joint Mathematics Meeting, January 2009
- *A Java Simulator for Voting Methods*, AMS/MAA Joint Mathematics Meeting, January 2008; ICTCM, March 2008
- *Constructing Maplets, Demonstrated Through Cryptography Including AES and RSA*, a computer minicourse with Drs. William Bauldry of Appalachian State University and Neil Sigmon of Radford University, ICTCM, February 2007
- *Using Maplets and Java to Teach Reed-Solomon Codes*, with Dr. Neil Sigmon of

Radford University, AMS/MAA Joint Mathematics Meeting, January 2007

- *Cryptography in the Classroom: Pedagogic Secrets Decrypted*, a panel session with Drs. William Bauldry of Appalachian State University, Edmund Lamagna of the University of Rhode Island, and Douglas Meade of the University of South Carolina, ICTCM, March 2006
- *Elementary Coding Theory Including Hamming and Reed-Solomon Codes with Maple and MATLAB*, a computer minicourse with Dr. Neil Sigmon of Radford University, ICTCM, March 2006
- *Topics and Applications of Discrete Mathematics*, with Dr. Mark Ginn of Appalachian State University, NCCTM (North Carolina Council of Teachers of Mathematics) Conference, October 2005
- *Some Sports-Related Election Methods and Ranking Procedures*, AMS/MAA Joint Mathematics Meeting, January 2005
- *Some Elementary Cryptography Including RSA on the TI-92+ and Voyage 200*, a calculator workshop with Dr. Neil Sigmon of Radford University, ICTCM, October 2004
- *Using the World Wide Web to Disseminate Focused, Compressed Video Tutorials*, with Dr. Brian Felkel of Appalachian State University, AMS/MAA Joint Mathematics Meeting, January 2004
- *Focused, Compressed Video Tutorials*, a computer minicourse with Drs. Brian Felkel and William Bauldry of Appalachian State University, ICTCM, November 2003
- *Elliptic Curve Cryptography with Java*, with undergraduate student Diana Alexander of the State University of New York at Oswego, AMS/MAA Joint Mathematics Meeting, January 2002
- *Involutory Commutants of the Seventh Order with Applications to Algebraic Cryptography*, MAA Southeastern Section Meeting, March 1997

Recognitions

Grants:

- $1500 (funded), Office of International Education and Development, Appalachian State University, 2023
- $1300 (funded), Office of International Education and Development, Appalachian State University, 2022
- $180,000 (funded), Burroughs Wellcome Fund Student STEM Enrichment Program *Securing the Future Through Cryptology and Cybersecurity*, 2021
- $3000 (funded), Office of Institutional Research, Assessment, and Planning, Appalachian State University, 2020
- $3000 (funded), Office of Institutional Research, Assessment, and Planning, Appalachian State University, 2019
- $180,000 (not funded), Burroughs Wellcome Fund Student STEM Enrichment Program *Securing the Future Through Cryptology and Cybersecurity*, 2019
- $1000 (funded), General Education Program, Appalachian State University, 2008
- $1700 (funded), General Education Program, Appalachian State University, 2007
- $7750 (funded), Educational Advancement Foundation, 2004

Awards:

- Invited affiliate member, Institute for Mathematics and Democracy, Wellesley College, 2021
- Most Helpful Faculty & Staff, Office of Student Success, Appalachian State University, 2019–2020, 2018–2019, 2017–2018, 2015–2016
- Invited participant, Intercultural Teaching and Learning Fellows Program, Appalachian State University, 2019
- Selected participant, Academic Leadership Development Program, Appalachian State University, 2017–2018
- Faculty Member of Distinction, Appalachian Magazine, Appalachian State University, 2016
- Wayne D. Duncan Faculty Enrichment and Teaching Fellowship, General Education Program, Appalachian State University, 2007
- Invited participant (funded), Legacy of R. L. Moore Conference, Educational Advancement Foundation, 2005
- Invited participant (funded), Legacy of R. L. Moore Conference, Educational Advancement Foundation, 2004
- Selected participant, Industrial Mathematics Modeling Workshop for Graduate Students, Center for Research in Scientific Computation, North Carolina State University, 1996
- Selected participant, Preparing the Professoriate Program, North Carolina State University, 1995–1996
- Outstanding Graduate Teaching Assistant, North Carolina State University, 1993–1994

Nominations:

- Academy of Outstanding Teachers, College of Arts and Sciences, Appalachian State University, 2009
- William C. Strickland Outstanding Young Faculty Award, College of Arts and Sciences, Appalachian State University, 2007
- William H. Plemmons Leadership Medallion, Appalachian State University, 2006
- William C. Strickland Outstanding Young Faculty Award, College of Arts and Sciences, Appalachian State University, 2005

Service – University, Colleges

Council and Task Force Membership:

- Council of Chairs, Appalachian State University, since 2021, 2010–2019
- University College Academic Support Sub-Council, Appalachian State University, since 2019
- University College Council, Appalachian State University, since 2019
- General Education Council, Appalachian State University, since 2019, 2008–2010
- General Education Revision Task Force, Appalachian State University, 2021–2022
- General Education Listening Task Force, Appalachian State University, 2020–2021

- Arts and Sciences Council, Appalachian State University, 2010–2019
- General Education Review Task Force, Appalachian State University, 2010–2011

Committees Chaired:

- Common Reading Committee, Appalachian State University, since 2023
- First Year Seminar Faculty Coordinating Committee, Appalachian State University, since 2019
- First Year Seminar Faculty Review Committee, Appalachian State University, since 2019
- First Year Seminar Program Revision Committee, Appalachian State University, 2022–2023
- Harvey R. Durham Outstanding Freshman Advocate Award Selection Committee, Appalachian State University, 2019–2022
- Quantitative Literacy Faculty Coordinating Committee, Appalachian State University, 2008–2010

Committee Membership:

- University College Appointment, Promotion, and Tenure Committee, since 2023
- General Education Office Manager Search Committee, Appalachian State University, 2023–2024
- Wayne D. Duncan Faculty Enrichment and Teaching Fellowship Selection Committee, Appalachian State University, 2022–2024
- General Education Non-Tenure-Track Faculty Award for Excellence in Teaching Selection Committee, 2022–2024
- University College Student Advising Award Selection Committee, Appalachian State University, 2022–2024
- Rennie W. Brantz Award for Outstanding Teaching in First Year Seminar Selection Committee, Appalachian State University, 2019–2024
- Harvey R. Durham Outstanding Freshman Advocate Award Selection Committee, Appalachian State University, 2023
- University College Department Personnel Committee, 2019–2023
- Assistant Director/Career Coach for Major and Career Exploration Search Committee, Appalachian State University, 2022
- First Semester Suspension Appeals Committee, Appalachian State University, 2022
- General Education Student Mentoring Award Selection Committee, Appalachian State University, 2019–2022
- Global Health and Safety Committee, Appalachian State University, 2021
- Honors College Faculty Review Committee, Appalachian State University, 2016–2019
- Chancellor's Scholarship Committee, Appalachian State University, 2016–2019
- Director of General Education Search Committee, Appalachian State University, 2018
- Fulbright Scholarship Review Committee, Appalachian State University, 2016–

2018

- Dean of the Honors College Search Committee, Appalachian State University, 2016–2017
- Honors College Academic Program Approving Committee, Appalachian State University, 2011–2014
- SACS Compliance on Federal Mandates Committee, Appalachian State University, 2010–2012
- Quantitative Literacy Faculty Coordinating Committee, Appalachian State University, 2010–2012
- Director of General Education Search Committee, Appalachian State University, 2010
- General Education Awards Committee, Appalachian State University, 2008
- College of Arts and Sciences Thesis Award Committee, Appalachian State University, 2008

Reviewer and Editor:

- Second reader, senior honors thesis (history), Appalachian State University, 2024
- Second reader, senior honors thesis (chemistry), Appalachian State University, 2019
- Second reader, senior honors thesis (computer science), Appalachian State University, 2019
- Second reader, senior honors thesis (computer science), Appalachian State University, 2019
- Reviewer, student poster session, NCHC (National Collegiate Honors Council) annual meeting, 2019
- Judge, student poster session, NCHC annual meeting, 2018
- Reviewer, student poster session, NCHC annual meeting, 2018
- Judge, student poster session, NCHC annual meeting, 2017
- Second reader, senior honors thesis (computer science), Appalachian State University, 2012
- Second reader, senior honors thesis (english), Appalachian State University, 2012

Other:

- Moderator, Faculty/Student Exchange & Common Reading Orientation Session, Appalachian State University, 2024, 2023, 2022, 2012, 2011, 2006
- Participant, Black Life in America, Across the Disciplines Podcast Series, Appalachian & the Community Together, Appalachian State University, 2020
- Faculty Representative, Harry S Truman Scholarship, Appalachian State University, 2016–2019
- Traveled with students from my HON 2515 class to tour the U.S. National Cryptologic Museum in Fort Meade, MD, 2019
- Consultant, Writing in the Discipline, Writing Across the Curriculum Program, Appalachian State University, 2017–2018
- Moderator, Celebration of Student Research and Creative Endeavors Session,

Appalachian State University, 2015

- Traveled with students from my HON 2515 class to the Bernard Lecture at Davidson College, 2012
- Member, *Learning Matters: Inquiry, Integration, and Active Learning* Panel Discussion, New Faculty Orientation, Appalachian State University, 2009

Service – Academic Department

Committees Chaired:

- Strategic Planning Committee, 2021–2022
- Promotion and Tenure Documents Integration Committee, 2020–2021
- Curriculum Committee, 2010–2019
- MAT 1010 Review Committee, 2006
- MAT 1010 Review Committee, 2004–2005

Committee Membership:

- Appointment, Promotion, and Tenure Committee, since 2023
- Promotion and Tenure Committee, 2014–2023
- PCR Response Coordination Committee, 2022
- Post-Tenure Review Committee, 2020–2022
- Departmental Personnel Committee, 2019–2020, 2010–2012, 2008–2009, 2005–2007
- Curriculum Committee, 2019–2020
- Writing in the Discipline Assessment Committee, 2016–2019
- Chair Advisory Committee, 2010–2019
- Academic Support Associate Search Committee, 2019
- Administrative Specialist Search Committee, 2019
- Tenure-track Faculty Search Committee, 2018–2019
- Distinguished Professor of Mathematics Education Position Review Committee, 2016
- Distinguished Professor of Mathematics Education Post-Tenure Review Committee, 2016
- BA/BS Mathematics Programs Assessment Committee, 2012–2013
- Calculus I and II Textbook Committee, 2013
- One-Hour Quantitative Literacy Course Committee, 2013
- MA Mathematics, Secondary Education Program Assessment Committee, 2007–2012
- Technology Support Personnel Search Committee, 2010
- Graduate Teaching Assistant Supervision Committee, 2007
- MAT 1010 Review Committee, 2007
- Steering Subcommittee on Modern Algebra, 2006
- Steering Subcommittee on Logic and Proof, 2006

- Steering Subcommittee on Linear Algebra and Differential Equations, 2005
- Steering Subcommittee on General Curriculum, 2003

Other:

- Supervisor, graduate teaching apprentices, 2023, 2014, 2013, 2009, 2008, 2007 (2), 2006 (2), 2003 (3)
- Member, master's thesis committee, 2022
- Traveled with students from my MAT 3510 and MAT 5500 classes to tour the U.S. National Cryptologic Museum in Fort Meade, MD, 2018
- Member, *Careers in Mathematics* Panel Discussion, Association of Women in Mathematics, Appalachian State University, 2016
- Traveled with students from my MAT 3510, MAT 4010, and MAT 5530 classes to tour the U.S. National Cryptologic Museum in Fort Meade, MD, 2015
- Traveled with students from my MAT 4010 and MAT 5530 classes to tour the U.S. National Cryptologic Museum in Fort Meade, MD, 2012
- Supervisor, graduate teaching assistants, 2012, 2011, 2009 (2), 2008 (2), 2007 (2), 2006 (6), 2005 (2)
- Traveled with students from my MAT 3510 and MAT 5220 classes to tour the U.S. National Cryptologic Museum in Fort Meade, MD, 2011
- Colloquium *Cryptology with Maplets: How I Spent My OCSA Writing About John F. Kennedy, Nicolas Cage, and Mick Jagger*, 2010
- Faculty Sponsor, ASU Math Club, with Dr. Vicky Klima of Appalachian State University, 2003–2010
- Graduate seminars (three) on case studies in mathematics teaching, 2009
- Graduate seminar on constructing vitas and personal statements, 2008
- Graduate seminar on writing tests, 2008
- Organizer/proctor, William Lowell Putnam Contest exam, 2005–2008
- Colloquium *Explaining the Impossible: Kenneth Arrow's Nobel Prize Winning Theorem on Elections*, 2007
- Graduate seminar on constructing syllabi, 2007, 2006
- Traveled with students from my MAT 3510 class to tour the U.S. National Cryptologic Museum in Fort Meade, MD, 2007
- Graduate seminar on constructing vitas and personal statements, 2007
- Graduate seminar on writing tests, 2006
- Traveled with students from my MAT 3510 class to tour the U.S. Capitol Building in Washington, DC, 2005
- Colloquium *Some Elementary Cryptography Including RSA on the TI-92+ and Voyage 200*, 2004
- Colloquium *Mathematics Through Games*, 2003
- Traveled with students from my MAT 3510 class to tour the U.S. National Cryptologic Museum in Fort Meade, MD, 2003
- Colloquium *Amortization: An Application of Calculus*, 2003

Service – Academic Discipline

Reviewer and Editor:

- Associate Editor, *The Electronic Journal of Mathematics and Technology*, since 2013
- Reviewer, *The Mathematics of Voting: An Introduction* (course materials), Journal of Inquiry-Based Learning in Mathematics, 2024
- Judge, student poster session, NCHC annual meeting, 2017
- Judge, North Carolina Region 7 Science and Engineering Fair, Appalachian State University, 2016
- Judge, North Carolina Region 7 Science and Engineering Fair, Appalachian State University, 2014
- Reviewer, promotion credentials, Coastal Carolina University Department of Mathematics and Statistics, 2014
- Reviewer, *MA 232: Abstract Algebra II* (course), Saylor Foundation, 2013
- Reviewer, *CS 409: Cryptography* (course), Saylor Foundation, 2012
- Reviewer, *Abstract Algebra* (book), Addison Wesley, 2003

Referee of Academic Paper:

- ATCM, 2024
- ATCM, 2024
- *Cryptologia*, 2024
- *The Electronic Journal of Mathematics & Technology*, 2024
- ATCM, 2023
- ATCM, 2023
- ATCM, 2023
- ATCM, 2022
- ATCM, 2022
- *The American Mathematical Monthly*, 2022
- ATCM, 2021
- ATCM, 2021
- ATCM, 2021
- ATCM, 2020
- *The UMAP Journal*, 2019
- *The Electronic Journal of Mathematics & Technology*, 2018
- *Cryptologia*, 2018
- *The IMA Journal of Applied Mathematics*, 2018
- *Cryptologia*, 2017
- *The IMA Journal of Applied Mathematics*, 2017
- *The Electronic Journal of Mathematics & Technology*, 2016

- *Involve*, 2015
- *The Rose-Hulman Undergraduate Mathematics Journal*, 2013
- *The Electronic Journal of Mathematics & Technology*, 2012
- *The EURO Journal on Decision Processes*, 2012
- *Involve*, 2011
- *The UMAP Journal*, 2010
- *The UMAP Journal*, 2010
- *The Centroid*, 2003

Other:

- Led a series of five workshops on cryptography for students from West Wilkes High School as part of the student STEM enrichment program *Securing the Future*, 2024, 2023, 2022
- Traveled with students from West Wilkes High School as part of the student STEM enrichment program *Securing the Future* to tour sites related to cryptography in the United States and Europe, 2024, 2023, 2022
- Participant, *Math and Democracy* Panel Discussion, Meredith College, 2021
- Organizer, MAA Invited Paper Session, with Dr. Eric Marland of Appalachian State University, AMS/MAA Joint Mathematics Meeting, 2019
- Consultant, Partners for Mathematics Learning Project, Meredith College, 2008