

Curriculum Vitae

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1. EDUCATION

Doctor of Philosophy, Applied Mathematics, University of North Carolina at Charlotte,
August 2004

- Dissertation: *Weighted conditional expectation operators on L^p space* (UMI No. AAT 3139249) under the supervision of Dr. Alan Lambert.
- Ph.D. Qualifying Exam topics: C^* -algebras, functional analysis, the theory of H^p space.
- Ph.D. Preliminary Exam courses: Abstract Algebra I and II (MATH 8163 and MATH 8164), Real Analysis I and II (MATH 8143 and MATH 8144).
- Ph.D. interdisciplinary minor in physics; primary area of study: quantum mechanics.
- Participant in Operator Theory & Functional Analysis Seminar; contributing area: products formed by conditional expectation operators and multiplication operators on L^2 space.

Master of Arts, Mathematics, East Carolina University, July 1999

- Thesis: *A survey of the differential geometric foundations of general relativity with applications* under the supervision of Dr. Michael Spurr and Dr. David Pravica.
- Master's Comprehensive Exam courses: Abstract Algebra I and II (MATH 6011 and MATH 6012), Differential Geometry (MATH 6601) and Partial Differential Equations (MATH 6401).

Bachelor of Arts, Mathematics, East Carolina University, May 1995

- Minor: Sociology

2. TEACHING

- The following undergraduate courses were taught at the University of Montevallo:

MATH 485 Senior Seminar	MATH 484 Directed Readings
MATH 480 Topology	MATH 470 Real Analysis
MATH 440 Abstract Algebra	MATH 399 Independent Study
MATH 390 Linear Algebra	MATH 376 Complex Analysis
MATH 350 Differential Equations	MATH 336 Mathematical Statistics
MATH 330 Numerical Analysis	MATH 310 Foundations of Mathematics
MATH 295 Special Relativity	MATH 295 Quantum Theory
MATH 272 Calculus III	MATH 271 Sequences & Series
MATH 261 \LaTeX & CAS	MATH 247 Discrete Mathematics
MATH 185 Survey of Mathematics	MATH 171 Calculus II
MATH 170 Calculus I	MATH 160 Math for Teachers I
MATH 157 Introduction to Statistics	MATH 154 The Nature of Mathematics
MATH 150 Precalculus Algebra/Trig.	MATH 149 Precalculus Trigonometry
MATH 147 Finite Mathematics	MATH 144 Precalculus Algebra
MATH 131 Intermediate Algebra	

- The following graduate courses were taught at the University of Montevallo:

MATH 595 Mathematical Physics	MATH 595 Differential Geometry
MATH 353 Sequences & Series	MATH 521 Complex Analysis
MATH 510 Function Theory	MATH 505 Hist/Phil Math
MATH 502 Linear Algebra	MATH 501 Mathematics for Teachers

Note: The above courses were associated with the University of Montevallo Secondary Education in Mathematics program.

- The following undergraduate courses were taught as a visiting assistant professor of mathematics at the University of North Carolina at Charlotte:

MATH 3163 Modern Algebra	MATH 2241 Calculus III
MATH 2164 Matrices & Linear Algebra	MATH 1100 College Algebra

- The following undergraduate courses were taught as a doctoral student at the University of North Carolina at Charlotte:

MATH 3163 Modern Algebra	MATH 2171 Differential Equations
MATH 1242 Calculus II	MATH 1241 Calculus I
MATH 1120 Business Calculus	MATH 1103 Precalculus Mathematics

- The following courses were taught as a master's degree student at East Carolina University:

MATH 1085 Precalculus Mathematics	MATH 1065 College Algebra
MATH 0001 Remedial Math	

3. UNDERGRADUATE RESEARCH

The following undergraduate research projects were supervised at the University of Montevallo:

- MNS 2021 McNAIR SCHOLARS RESEARCH PROJECT (2021): Faculty advisor for Madison Lawrence for her McNair Scholars project on *On the structure of ℓ^p space*.
- MATH 495 UNDERGRADUATE RESEARCH (2016): Supervisor for Wayne Poole for his work on *Special relativity*.
- UR 400 UNDERGRADUATE RESEARCH (2014-2015): Supervisor for Brandon McMahan for his work on *Hilbert space operators*.
- UR 400 UNDERGRADUATE RESEARCH (2011): Supervisor for Lynsey Cargile for her work on *On the structure of infinite-dimensional space*.
- UR 400 UNDERGRADUATE RESEARCH (2007): Supervisor for Justin Cannady for his work on *Elementary properties of Banach space*.
- UR 400 UNDERGRADUATE RESEARCH (2006-2007): Supervisor for Krystle Ames for her work on *An investigation into the invariant subspace problem for operators on separable Hilbert spaces*.

4. HONORS, AWARDS AND GRANTS

- Recipient of the 2018 Outstanding Commitment to Teaching Award, University of Montevallo.
- Recipient of the 2013 College of Arts and Sciences Teaching Award, University of Montevallo.
- Recipient of a 2009 Summer Research Grant, University of Montevallo.
- Recipient of the 2004 College of Arts and Sciences Graduate School Excellence in Teaching Award in Mathematics and Science, University of North Carolina at Charlotte.
- Inducted into Pi Mu Epsilon National Honorary Mathematics Society, North Carolina Delta Chapter, 1997, East Carolina University.

5. PROFESSIONAL EXPERIENCE AND SERVICE

- Associate Professor of Mathematics in the Department of Biology, Chemistry and Mathematics at the University of Montevallo.
 - Member of 2017-2018 Mathematics Faculty Search Committee.

- Member of Faculty Senate, 2015-2018 term; FDAC-Senate liaison 2016-2017.
- Mathematics/science judge for the UM Undergraduate Research Day Poster Presentations, 2014-2018.
- Member of the Faculty Development Advisory Committee (FDAC). The FDAC is a University Committee charged with reviewing and recommending university research/travel grants and sabbatical requests, 2013-2019 term.
- Responsible faculty for the Mathematics Student Learning Outcomes Assessment Program. The SLO Program was a product of a university-wide “State of the Major” discussion and resulted in a series of goals/assessments use to implement programmatic changes throughout the university, 2013-present.
- Mathematics evaluator for the Learner Impact Analysis presentations (UM College of Education), 2012-2013.
- Responsible faculty for the assessment and reporting for the Information Literacy Advancing Course (MATH 185 Survey of Mathematics—Freshman Seminar) and Mastery Course (MATH 485 Senior Seminar), 2012-2018.
- Wrote the MATH 147 Finite Mathematics General Education Assessment Exam, 2012.
- Member of the team representing the University of Montevallo at the 2011 COPLAC Council on Undergraduate Research Conference, 2011.
- Member of the Black Heritage Committee, 2011-2012.
- Tenured and promoted to Associate Professor of Mathematics, 2011.
- Mathematics representative in the Teacher Education Program entrance interviews, 2005-present.
- Served on the Academic Development Committee. The ADC (now FDAC) is a university committee whose responsibilities included evaluating and recommending sabbatical proposals, evaluating and recommending grant funds for special projects and research, and the annual search for Montevallo’s Vacca Professor of Liberal Arts, 2007-2011.
- Member of 2011 Biology Faculty Search Committee.
- Member of the Director of Institutional Assessment search committee, 2007. The committee conducted a successful search for the newly created university administrative position of Director of Institutional Assessment.
- Faculty mentor in the McNair Scholars program, 2007.
- Wrote the Fall/Summer 2007 mathematics and physics course schedules.
- Kappa Mu Epsilon mathematics honor society faculty secretary, February 2006-2013.

- Member of 2005-2006 and 2006-2007 Mathematics Faculty Search Committees.
- Awarded graduate faculty status, November 2005.
- Appointed Assistant Professor of Mathematics, August 2005.
- Visiting Assistant Professor of Mathematics in the Department of Mathematics at the University of North Carolina at Charlotte, August 2004-June 2005.
- Recipient of multiple graduate teaching assistantships at the University of North Carolina at Charlotte, August 1999-June 2004, and at East Carolina University, January 1996-1999.

6. REVIEWS AND REFEREEING

- Referee for *Linear and Multilinear Algebra*, an international peer-reviewed journal published by Taylor & Francis, 2018.
- Referee for *Acta Mathematica Scientia*, an international peer-reviewed journal published by Elsevier, 2015-2016.
- Referee for *Filomat* (formerly, *Zbornik radova Filozofskog fakulteta, serija Matematika*), an international peer-reviewed journal published by the Department of Mathematics, University of Niš, Republic of Serbia, 2013.
- Referee for *The Mediterranean Journal of Mathematics*, an international peer-reviewed mathematics journal published by Springer-Birkhäuser, 2013.
- Referee for *Operators and Matrices*, an international peer-reviewed mathematics research journal published by Element, 2011.
- Referee for *Matematički Vesnik*, an international peer-reviewed mathematics research journal published by the Mathematical Society of Serbia, 2010.
- Referee for *The Pentagon*, the journal of the Kappa Mu Epsilon mathematics honor society. *The Pentagon* features articles written by undergraduate students who have engaged in undergraduate research and have (in most cases) presented their findings at regional and national conventions. Appointment term: 2010-2012.
- Reviewed *Finite Mathematics* manuscript at the request of Thomson Brooks/Cole Publishing, 2005.
- Reviewed *Precalculus 3rd Edition* by Faires and DeFranza at the request of Thomson Brooks/Cole Publishing, 2005.

7. RESEARCH

Current research interests involve the question of the existence of nontrivial invariant subspaces for bounded linear operators (and operator algebras) on separable infinite-dimensional complex Hilbert space.

- J.D. Herron, *A note on quadratic operators* (in preparation).
- J.D. Herron, *Spectral radius algebras and nonstrict contractions* (in preparation).
- J.D. Herron, *Weighted conditional expectation operators*. *Operators Matrices* **5** (1) (2011), 107-118. MR 2798799, Zbl pre05873585.
- J.D. Herron, *Spectral radius algebras of idempotents*. *Integral Equations Operator Theory* **64** (2) (2009), 193-201. MR 2516278, Zbl pre05686924.
- J.D. Herron, *Weighted conditional expectation operators on L^p space*. Ph.D. dissertation, University of North Carolina at Charlotte (2004). ISBN: 978-0496-86395-2.