# RONALD FULP
# PROFESSOR OF MATHEMATICS

## Education:

High Point College      1954-1956

Wake Forest University, B.S., Mathematics, 1956-1958

UNC Chapel Hill, M.A., Mathematics, 1959-1961

Auburn University, Ph.D., Mathematics,1961-1962, Ph.d, 1965

## Professional Experience:

North Carolina State University, Raleigh, North Carolina, Professor of Mathematics, 1974–present

North Carolina State University, Raleigh, North Carolina, Associate Professor of Mathematics, 1969–1973

University of Houston, Houston, Texas, Associate Professor of Mathematics, 1968–1969

University of Houston, Houston, Texas, Assistant Professor of Mathematics, 1965–1968

Georgia State College, Atlanta, Georgia, Assistant Professor of Mathematics 1963–1965

Auburn University, Auburn, Alabama, Instructor, 1961–1963

UNC at Chapel Hill, Chapel Hill, North Carolina, Part-time Instructor, 1958–1961

## Research Interests:

I am interested in all aspects of gauge theory. This includes the fiber bundle formulation, the path-space formulation, and the cohomological formulations obtained via BRST theory. I am also interested in symplectic geometry, Poisson manifolds, and their applications to both Hamiltonian and Lagrangian mechanics and Hamiltonian and Lagrangian field theories. My most recent interests center around the mathematical development of supermanifolds and their applications to physics.

**Supervision of Graduate Work:**

**Supervision of Doctoral Students:**

1. James Cook–Ph.D, Mathematics,"Foundations of Supermathematics with Applications to N=1 Supersymmetric Field Theory" May 2008.

2. Jining Gao–Ph.D., Mathematics,"The Algebraic Structure of BRST Operators" May 2005.

3. Samer Al-Ashhab– Ph.D., Mathematics, "The Role of sh-Lie Algebras in Lagrangian Field Theory", May 2003.

4. Jeffery K.Lawson– Ph.D., Mathematics, "Generalized Symplectic Geometry for Classical Fields", May 1994 (with L.K.Norris)

5. Andrew V. Talmadge Jr. – Ph.D., Mathematics, "A Geometric Formulation of the Higgs Mechanism via Internal Metric Fields", May 1990

6. Louton, Thomas – Ph.D., Biomathematics, "A Mathematical Study of Noncommutative Probability Theory", May 1974

7. Shrieves, Herbert Leonard – Ph.D., Mathematics, "The Structure of Proper Semigroups", May 1976

**Supervision of Masters Students:**

1. Horton, Dean – Directed Master's Project, "Fiber Bundle Description of Electromagnetism",1980?

2. Talton, Kathy Ann – Directed Master's Project, "The Crystallographic Groups", completed Summer 1982

3. Green, Edward L. – Directed Master's Project, "Dirac's Hamiltonian Constraint",

4. Rose, John – Directed Master's Project, "It's About Time; a Study of Causality, completed May 1984

5. Cantwell, Allen – Directed Master's Project, A Mathematical Interpretation of Quantum Mechanics, May 1987

6. Perry, Chris – Directed Master's Project, The Gravitational Field of a Star, May 1991

**Professional Activities:**

1. Invited Lecture at the conference on Differential Geometry and Mathematical Physics held at Arkansas State University April 1991.

2. Invited Lecture at the conference on Differential Geometry (Mathematical Physics Session) sponsored by the AMS and held at University of California at Los Angeles July 1990.

3. I have attended a large number of Mathematics conferences and meetings over the years and presented research results at many of these but I kept no records of these.

4. Active member of the local organizing committee for the Lanczo's Conference on Mathematics and Physics held here at NCSU in December 1993. This was a large conference involving about 600 Mathematicians and Physicists.

5. Active member of the local organizing committee for a conference on Kac-Moody algebras and Mathematical Physics held here in April 1990? This was a CBMS conference sponsored by AMS.There were about 150 participants.

RESEARCH ACTIVITIES AND PUBLICATIONS ARE LISTED IN A SEPARATE FILE