

CURRICULUM VITA: MALCOLM R. ADAMS

Education:

B.A. University of Oregon, June 1978
Ph.D. Massachusetts Institute of Technology, June 1982

Academic Positions:

1982-1984 Half-time NSF Postdoctoral Fellow and Half-time Lecturer,
University of California at Berkeley
1984 - 1985 Member, Institute for Advanced Study, Princeton
1984 - 1990 Assistant Professor, University of Georgia
1990 - 1995 Associate Professor, University of Georgia
Fall 1993 Visiting Scholar, University of Kansas
1995 - 1998 Associate Department Head, University of Georgia
1995 - Professor, University of Georgia

Awards:

National Science Foundation Graduate Fellowship	1978-81
National Science Foundation Postdoctoral Fellowship	1982-84
Michael Award (UGA)	1992
Sandy Beaver Teaching Award (UGA)	2001
McCay Award (UGA)	2001
General Sandy Beaver Teaching Professorship	2005-08

Graduate Students:

Clay Mason	MA	1992
Alok Dhital	MA	1992
Sasa Kresic-Juric	Ph.D.	1995
Piotr Hebda	MA	2001
Mark Hannah	MA	2002
Hye-Won Lee	MAMS	2002
Billy Jackson	MA	2004
Tremaine Skeen	MA	2004
Samuel Obara	MA	2005
Ryan Byrd	MA	2007
Sheree Sharpe	MA	2007

Books:

- 1) Measure Theory and Probability (with V. Guillemin) Wadsworth, Monterey, CA, 1986 (reprinted with corrections by Birkhauser, 1996).
- 2) Linear Algebra: a geometric approach (with T. Shifrin) Freeman, New York (2001).

Selected Research Articles:

- 1) A Lie group structure for pseudodifferential operators, (with T. Ratiu and R. Schmid), Math. Ann. 273 (1986), 529-551.
- 2) A Lie group structure for Fourier integral operators, (with T. Ratiu and R. Schmid), Math. Ann. 276 (1986), 19-41.

- 3) The three point vortex problem: Commutative and non-commutative integrability, (with Tudor Ratiu), *Contemporary Mathematics*, vol. 81, ed. Kenneth R. Meyer and Donald G. Saari, AMS, Providence, 1988, pp. 245-257.
- 4) Isospectral Hamiltonian flows in finite and infinite dimensions, I. Generalized Moser systems and moment maps into loop algebras, (with J. Harnad and E. Previato), *Comm. Math. Phys.* 117 (1988), 451-500.
- 5) Isospectral Hamiltonian flows in finite and infinite dimensions II. Integration of flows, (with J. Harnad and J. Hurtubise), in *Comm. Math. Phys.* 134 (1990), p. 555-585.
- 6) Dual Moment Maps into Loop Algebras, (with J. Harnad and J. Hurtubise), *Lett. Math. Phys.* 20 (1990), p. 299-308.
- 7) Heisenberg algebras, Grassmannians and Isospectral Curves, (with M. Bergvelt), *The Geometry of Hamiltonian Systems*, MSRI Publication 22, ed. T. Ratiu, Springer, New York, 1991, p. 1-8.
- 8) Invariants of Gauss maps of theta divisors (with C. McCrory, T. Shifrin, R. Varley), *AMS Proc. Symp. Pure Math.* 54, part 2 (1993), pp. 1-8.
- 9) Darboux Coordinates and Liouville-Arnold Integration in Loop Algebras, (with J. Harnad and J. Hurtubise), *Comm. Math. Physics* 155 (1993), pp. 385-413.
- 10) The Krichever map, vector bundles over algebraic curves, and Heisenberg algebras (with M. Bergvelt), *Comm. Math. Physics* 154 (1993), pp. 265-305.
- 11) Conic Lagrangian Singularities (with C. McCrory, R. Varley, and T. Shifrin), *Topology and its Application* 88 (1998), 155-178.
- 12) Hamiltonians and zero-curvature equations for integrable partial differential equations (with S. Kresic-Juric) *JMP* 42, p. 213-224, (2001).
- 13) Analysis of a Certain Class of Replicator Equations (with A. Sornborger), *J. Math. Biol.* 54, p.357-384, (2007)
- 14) The Evolution of Fidelity in Sensory Systems (with A. Sornborger), submitted to *J. Theor. Biol.*

Other Activities:

- Putnam Exam Coach and Proctor since about 1990, created a 1 hour course on "Advanced Problem Solving" based on this.
- VIGRE REU leader in the Summer of 2001
- Member of PRISM Mathematics Curriculum Team 2006
- Developed class notes on "Sequences and Series" used extensively for Math 3100 at UGA
- Active in Faculty Governance at the University of Georgia