

## BIOGRAPHICAL SKETCH

(March 2007)

### Robert G. Muncaster

Department of Mathematics, University of Illinois at Urbana-Champaign  
273 Altgeld Hall, 1409 West Green Street, Urbana, IL 61801 (217-333-1625)

#### PROFESSIONAL TRAINING:

Received B.Sc. in Mathematics from Laurentian University in Sudbury, 1971.

Awarded Ph.D. in Mechanical Engineering in 1975 by the Johns Hopkins University in Baltimore, with thesis work directed by Professor C. A. Truesdell. Thesis topic: Constitutive Relations in the Kinetic Theory of Gases.

Post Doctoral Fellow in Theoretical Mechanics, Johns Hopkins University, 1975-1976

#### PROFESSIONAL APPOINTMENTS:

Associate Chair of Mathematics, University of Illinois at Urbana-Champaign, 2003-present

Associate Professor of Political Science, University of Illinois at Urbana-Champaign, 1993-present

Associate Professor of Mathematics, University of Illinois at Urbana-Champaign, 1984-present

Assistant Professor of Mathematics, University of Illinois at Urbana-Champaign, 1979-1984

Research Associate, Heriot-Watt University, Edinburgh, Scotland, 1976-1979

#### PUBLICATIONS:

*Fundamentals of Maxwell's Kinetic Theory of a Simple Monatomic Gas* by C. Truesdell & R. G. Muncaster. Academic Press, Pure and Applied Math. Series, No. 83 (1980), xxvii + 593 pages.

*The Theory of Pseudo-rigid Bodies* by H. Cohen & R. G. Muncaster. Vol. 33 of *Springer Tracts in Natural Philosophy*, New York, Springer-Verlag (1988), x + 183 pages.

"An Abstract Approach to Group Invariance, with Applications to Differential Equations", *Archive for Rational Mechanics and Analysis* **78**, 1-28 (1982).

"A Theory of Inter-Nation Hostility Dynamics and War" (with D. A. Zinnes), *Journal of Conflict Management and Peace Science* **6**, 19-37 (1983).

"The Dynamics of Hostile Activity and the Prediction of War" (with D. A. Zinnes), *Journal of Conflict Resolution* **28**, 187-229 (1984).

"The War Propensity of International Systems" (with D. A. Zinnes), *Synthese* **46**, 1-25 (1988).

"Structure and Hostility in International Systems" (with D. A. Zinnes), *Journal of Theoretical Politics* **2**, 31-58 (1990).

"The Friend of My Enemy is My Enemy: Modeling Triadic International Relationships" (with D. A. Zinnes and S.-C. Lee), *Synthese* **100**, 333-358 (1994).

"Prospect Theory Versus Expected Utility Theory: A Dispute Sequence Appraisal" (with D. A. Zinnes), in Nehemia Geva and Alex Mintz, eds., *Decision-making on War and Peace: The Cognitive-Rational Debate*, Boulder: Lynne Rienner Publishers, 1997, pp. 183-211.

"A Model of Dispute Sequences" (with D. A. Zinnes), in Murray Wolfson, ed., *The Political Economy of War and Peace*, Kluwer Academic Publishers, 1998, pp. 287-312.

#### SYNERGISTIC ACTIVITIES:

##### *Meetings Organized:*

"Merriam Junior Master Classes" (with D. Zinnes) Merriam Lab, Department of Political Science, University of Illinois at Urbana-Champaign. (national competition, 3 day research conference for new researchers in political science and mathematical modelling) September 1993, November 1994, October 1994, May 1995, September 1995, September 1996, October 1997, November 1998, November 1999, November 2001

“Peace Science Society (International), 28th North American Meeting” (with D. Zinnes), November 1994, Champaign.

*REU Activities:*

Ran an REU on Evolution Game Theory during the summers of 2002, 2003, 2004, 2006

**COLLABORATORS & OTHER AFFILIATIONS:**

*Collaborators:*

Dina Zinnes, Department of Political Science, University of Illinois at Urbana-Champaign

Ray Dacey, Department of Finance, University of Idaho (at Moscow)

*Graduate and Postdoctoral Advisors:*

C. Truesdell, Department of Mechanics, The Johns Hopkins University (deceased)

Robin Knopps, Department of Mathematics, Heriot-Watt University, Edinburgh, Scotland

*Thesis Students:*

R. Wojtowicz (Mathematics, Ph. D. in 2002), Department of Mathematics, University of Dallas

M. Anderson (Mathematics, Ph. D. in 2002) No appointment currently

Y.-S. Choi (Mathematics, Ph. D. 2003), Postdoctoral Appointment, Department of Mathematics, University of Ottawa

M. Crescenzi, (Co-advised with D. Zinnes, Political Science, Ph. D. in 2002), Department of Political Science, University of North Carolina

M. Grieg, (Co-advised with D. Zinnes, Political Science, Ph. D. in 2003), Department of Political Science, North Texas University