

Steven E. Major

CONTACT INFORMATION	100 SAS Campus Dr Room R5311 Cary, NC 27513-8617	<i>Phone:</i> (919) 531-1467 <i>E-mail:</i> semajor@ncsu.edu <i>Alternate E-mail:</i> steven.major@sas.com
RESEARCH INTERESTS	Environmental economics, micro econometrics, market and non-market risk	
EDUCATION	North Carolina State University , Raleigh, North Carolina	
	Ph.D. Candidate, Economics (expected graduation date: December 2012)	
	<ul style="list-style-type: none">• Dissertation Topic: "A Generalized Expected Utility Model of Labor Market Risk"• Advisor: Laura Taylor	
	M.S., Applied Mathematics, May 2011	
	<ul style="list-style-type: none">• Thesis Topic: "Application of Random Matrix Theory to Portfolio Selection"• Advisor: Jack Silverstein	
	B.S. Applied Mathematics, May 2006	
	<ul style="list-style-type: none">• Honor's Thesis Topic: "Predicting Resonant and Attenuant Population Cycles in Periodically Forced Environments"• Advisor: John Franke	
HONORS AND AWARDS	North Carolina State University: Honors in Mathematics, Phi Beta Kappa, 2006	
ACADEMIC EXPERIENCE	North Carolina State University , Raleigh, NC	
	<i>Graduate Student</i>	2006 - present
	Includes current Ph.D. research, Ph.D. and Masters level coursework and research projects.	
	<i>Teaching Assistant</i>	2006 - 2008
	Conducted Calculus I and Calculus III problem sessions, graded exams, and held office hours.	
PUBLICATIONS	Erdman, D., Major, S, and Rioux, J. 2010. Evaluation of Parameter Risk via First Order Approximation of Distortion Risk Measures. <i>Journal of Operational Risk</i> vol 5(1):29-46.	
	Erdman, D., Major, S, and Rioux, J. 2010. "Approximating the Effects of Parameter Uncertainty on Value at Risk Estimates", 44th Annual Actuarial Research Conference, 2009 www.soa.org/library/proceedings/arch/2011/arch-2011-iss1-rioux.pdf	
PROFESSIONAL EXPERIENCE	SAS Institute , Cary, NC	
	<i>Graduate Student</i>	2008 - present
	<ul style="list-style-type: none">• Developed an interface between the SAS Risk Management product and third party asset pricing libraries (written in C) from FEA and Fincad.• Developed and implemented a method for measuring the sensitivity of VaR estimates to parameter uncertainty for SAS's operational risk product.• Implemented empirical density estimation and simulation for operational risk data.• Responsible for general software support and development.	
COMPUTER SKILLS	<ul style="list-style-type: none">• Statistical Packages: R, SAS, and Matlab• Languages: C, Matlab, SAS, with some experience with BASIC and Perl.	

- Algorithms Implemented: Panjer's recursion, Kaplan-Meyer empirical density estimation, fast Fourier transform, EM-algorithm for estimating mixture of lognormal distributions, Monte-Carlo asset pricing and risk assessment, GMM.
- Other skills: \LaTeX , Microsoft Windows database, spreadsheet, and presentation software.
- Operating Systems: Unix/Linux, Windows.