Christopher W. Kulp

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Education

2001-2004	College of William & Mary	Ph.D., Physics
1999-2001	College of William & Mary	M.S., Physics
1994-1998	McDaniel College	B. A., *Magna Cum Laude* Physics and Mathematics

Teaching Experience

2004-present	Assistant Professor of Physics and Astronomy, Eastern Kentucky University
Summer 2004	Instructor, College of William & Mary
2003-2004	Teaching Fellow, College of William & Mary
Spring 2002	Instructor, McDaniel College
2000-2001	Teaching Assistant, College of William & Mary
1998-1999	High School Teacher, Washington County, MD

Awards

2003-2004	Presidential Aide, College of William & Mary
2001	Rolf G. Winter Teaching Award, College of William & Mary -for best TA of previous year
1997	Harry Clary Jones Scholarship in Physics -for outstanding physics major at McDaniel College

Honor Societies

1998	*Phi Beta Kappa*
1995	*Sigma Pi Sigma*, Physics
1995	*Kappa Mu Epsilon*, Mathematics

Teaching Experience

1. Eastern Kentucky University

   - College Physics I, College Physics II, College Physics I Laboratory, Introductory Astronomy, Introductory Astronomy Laboratory, Classical Mechanics I, Classical Mechanics II

2. College of William and Mary

   - College Physics I, College Physics II, College Physics I and II Laboratory (Teaching Fellow), College Physics I Laboratory (TA), Introductory Astronomy Laboratory (TA)

3. McDaniel College

   - Introductory Astronomy, University Physics II Laboratory

4. Smithsburg High School

   - Conceptual Physics, Earth Science

Professional Societies

2005	Kentucky Academy of Science
2005	Kentucky Association of Physics Teachers
2003	Society for Industrial and Applied Mathematics
1995	American Physical Society

Professional Service

2006-present	College Faculty Development and Research Committee
2005-present	PHY 131 Lab Organizer
2005-2006	Ad Hoc College P&T Review Committee
2005-2006	College Technology Advancement Committee
2004-present	Department Webpage Manager
2004	Created: *Ask A Scientist* Program
2004-present	College Recruitment Committee
2004-2005	SLRC Coordinator
2004-2006	College Research Award Committee
2004-2006	Department Curriculum Committee
2002-2004	W&M Graduate Honor Council

Publications

1. C. W. Kulp, D. Schlingmann, P. Ramsey, J. Hoskins, & K. Roberts, *Tracking the Motion of a Double Pendulum Using Mathematica*, Mathematica in Education and Research, submitted January 2007.

2. C. W. Kulp, M. Machado, & D. Schlingmann, *Composition and Analysis of Music Using Mathematica*, Mathematica in Education and Research, accepted for publication in Januaray 2007.

3. C. W. Kulp, M. Biermann, K. Klingenberg, T. Howard, & P. Ramsey, *Using a Digital Camcorder to Analyze the Motion of a Freely Falling Object*, Physics Teacher, submitted September 2006.

4. C. W. Kulp & E. R. Tracy, *Control of Mulit-dimensional Integrable Hamiltonian Systems*, Phys. Rev. E **72** 036213 (2005).

5. C. W. Kulp & E. R. Tracy, *Control of Integrable Hamiltonian Systems and Degenerate Bifurcations*, Phys. Rev. E **70** 16205-1-15 (2004).

6. E. R. Tracy, X. -Z. Tang, & C. Kulp, *Takens-Bogdanov Random Walks*, Phys. Rev. E **57** 3749-56 (1998).

Undergraduate Students Advised at EKU

1. Jennifer Powell, Time Series Analysis of Bethoven's Symphonies, 2006-07

2. Ashley Aurand, Time Series Analysis of Bethoven's Symphonies, 2006-07

3. Joshua Hoskins, Modeling the Double Pendulum, 2005-06

4. Keving Roberts, Building a Double Pendulum, Fall 2005

Graduate Students Advised at EKU

1. Sarah Morris, Department of Mathematics and Statistics, Time Series Analysis of Bethoven's Symphonies, 2006-07

Consultancy

1. Reviewed two chapters of Jones and Field's *College Physics*, for Addison Wesley (Spring 2006).

2. Reviewer for the journal *Automatica*.

Invited Talks

1. *Composition and Analysis of Musics Using Mathematica*, Mathematics Colloquium, Eastern Kentucky University, November 3, 2006.

2. *Rogue Waves and Wind-Wave Interactions*, Western Kentucky University, October 17, 2005.

3. *Dissipative Controllers and Integrable Hamiltonian Systems*, University of Maryland, College Park, April 14, 2004.

Presentations and Talks

1. C. W. Kulp, M. Machado, and D. Schlingmann, *Nonlinear Time Series Analysis and Musical Compositions*, Kentucky Academy of Science Meeting, Moorehead State University, Moorehead, KY November 2006.

2. J. Hoskins, K. Roberts, and C. W. Kulp, *The Dynamics of the Double Pendulum*, UP Showcase, Eastern Kentucky University, April 2006.

3. J. Hoskins, K. Roberts, and C. W. Kulp, *The Dynamics of the Double Pendulum*, Posters At the Capitol, Frankort, KY 2006

4. C. W. Kulp, J. Hoskins, K. Roberts, and D. Schlingmann, *The Dynamics of the Double Pendulum*, Kentucky Association of Physics Teachers Spring 2006 Meeting, Lexington, KY 2006

5. C. W. Kulp and E. R. Tracy, *The Control of Multi-Dimensional Integrable Hamiltonian Systems*, Dynamics Days 2006, Bethesda, MD 2006.

6. C. W. Kulp and E. R. Tracy, *The Effect of Dissipative Controllers on the Nonlinear Schrödinger Equation*, Kentucky Academy of Sciences, Eastern Kentucky University, 2005

7. C. W. Kulp, *Rogue Waves and Wind-Wave Interactions*, Eastern Kentucky University, 2005.

8. C. W. Kulp, *Physics and the Martial Arts* (general audience, plenary talk), Graduate Student Research Symposium, College of William & Mary, Williamsburg, VA 2004.

9. C. W. Kulp and E. R. Tracy, *Control of a Special Class of Nonlinear System*, Dynamics Days 2004, Chapel Hill, NC 2004.

10. C. W. Kulp and E. R. Tracy, *Control of Nonlinear Waves*, 45th Annual Meeting of the Division of Plasma Physics of the American Physical Society, Albuquerque, NM 2003.

11. C. W. Kulp and E. R. Tracy, *Control of Integrable Hamiltonian Systems*, SIAM Conference on Applications of Dynamical Systems, Snowbird, UT 2003.

12. C. W. Kulp and E. R. Tracy, *Control of Nonlinear Systems*, Graduate Student Research Symposium, College of William & Mary, Williamsburg, VA 2003.

13. C. W. Kulp and E. R. Tracy, *Bifurcations Associated with the Control of Nonlinear Waves*, 44th Annual Meeting of the Division of Plasma Physics of the American Physical Society, Orlando, FL 2002.

14. C. W. Kulp and E. R. Tracy, *Excitation of Nonlinear Waves*, 43rd Annual Meeting of the Division of Plasma Physics of the American Physical Society, Long Beach, CA 2001.

Grants and Awards

1. *Nonlinear Time Series Analysis and Musical Compositions*, Eastern Kentucky University's College of Arts and Sciences Junior Faculty Summer Research Award, 2006, $4000.

2. *The Generation of Rogue Waves by Wind-Wave Interactions*, Eastern Kentucky University's University Research Committee, 2004, $4275.

Other Relevant Skills and Experience

- President of Unitarian Universalist Fellowship of Madison County, Fall 2006 - Spring 2007
- Computer Programming
  - *FORTRAN, C, Mathematica, Maple, Mathcad*
- System Administration
  - Experience as a systems administrator for my research group's cluster of Silicon Graphics computers.
- Instructional Laboratory Development
  - Developed traditional and computer based laboratories for use in my high school classroom
  - Developed lab for use in College Physics course
  - Reorganized College Physics Lab Sequence to include Vernier based laboratories