

Curriculum Vita

Michael Rogers

Department of Physics

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Professional Experience:

Aug-03-Present: Assistant Professor of Physics. Ithaca College. Ithaca, NY 14850

Jul-03-Present: Assistant Professor: Affiliate Appointment: Department of Crop and Soil Science, Oregon State University, Corvallis, OR 97330

Education:

Jun-03: Ph.D. in Physics, Oregon State University, Corvallis, OR.

Jun-01: M.A. Interdisciplinary Studies with a focus in Archaeology, Oregon State University, Corvallis, OR.

Jun-99: M.S. in Physics, Oregon State University, Corvallis, OR.

May-94: B.S. in Physics (major), Mathematics (major), Applied Computers (minor), and Anthropology (minor), SUNY at Geneseo, NY.

Professional Societies and Memberships:

American Geophysical Union

American Museum of Natural History

American Physical Society

Archaeological Institute of America

American Association of Physics Teachers

Council for Undergraduate Research

Sigma Pi Sigma Physics Honor Society

Sigma Xi Scientific Research Society

Society for American Archaeology

Society of Physics Students

New York State Section of the American Physical Society

New York State Archaeology Association, Finger Lakes Chapter

Complete List of Honors and Awards:

- Nov-07: Society of Physics Students Ithaca College Chapter recognized as an outstanding chapter by the National Office for the 2006-2007 school year
- Apr-07: Department Merit Pay Raise for Excellence in Teaching
- Feb-06: Society of Physics Students Ithaca College Chapter recognized as an outstanding chapter by the National Office for the 2005-2006 school year
- May-06: School of H&S Merit Recognition for Outstanding Department
- May-06: School of H&S Merit Recognition for Outstanding Ground: Center for Natural Science Sustainability Group.
- May-06: Ithaca College Excellence in Teaching Award
- Feb-06: Society of Physics Students Ithaca College Chapter recognized as an outstanding chapter by the National Office for the 2004-2005 school year
- Apr-05: Induction as a full member of Sigma Xi Scientific Research Society. Ithaca College, NY
- Mar-05: Inducted into Ithaca College's Oracle Society as a faculty member.
- Aug-03—May-04: Department Merit Pay Raise for Excellence in Teaching
- Jul-00—Jun-03: US National Science Foundation, GK-12 Teaching Fellowship
- Aug-01: Oregon State University's nomination for WAGS/UMI Distinguished Masters Thesis.
- May-01: Inducted in as an associate member of Sigma Xi Scientific Research Society. Oregon State University, Corvallis, OR.
- Apr-01: First Place Oral Presentation (Liberal Arts/Home Economics/Education Category), and Sigma Xi Engineering Poster Award. 2001 Graduate Student Conference. Oregon State University, Corvallis, OR.
- Apr-00: Best Oral Presentation and Best Poster Presentation. Liberal Arts/Home Economics/Education Category. 2000 Graduate Student Conference. Oregon State University, Corvallis, OR.

Apr-00: Bioethics Conference Scholarship, "Life Beginnings, Life Endings: Ethical Issues". Program for Ethics, Science, and the Environment. Oregon State University, Corvallis.

Sep-98—Sep-99: US Department of Education GAANN Fellowship

Apr-99: First Place Oral Presentation. Social Sciences Category. 1999 Graduate Student Conference. Oregon State University, Corvallis, OR.

1996: New York State Conspicuous Service Award: US Army

1988— United States National Defense Service Medal,

1991: United States Army Good Conduct Medal,
United States Army Commendation Medal,
United States Army Achievement Medal (awarded twice),
Letter of Commendation, US Federal Bureau of Investigations,
Letter of Commendation, US Army Fort Drum Security Division

Apr 1994: Philip K. Alley Physics Department Service Award, SUNY @ Geneseo, Geneseo, NY

Apr 1993: Inducted into Sigma Pi Sigma (the National Physics Honor Society)

Courses Taught While at Ithaca College:

PHYS101L: Introduction to Physics Lab Fall-03

PHYS114: Introduction to Experimental Physics (each physics faculty member runs a two-week-long section) Fall-06, Fall-07

PHYS117: Principles of Physics I: Mechanics w/ Lab Fall-05, Fall-06, Fall-07

PHYS117: Principles of Physics I: Mechanics w/ Rec. Fall-03, Fall-04

PHYS120: Freshman Laboratory Spring-04, 05, 06, 07, 08

PHYS231: "Physics?" in Cartoons and Movies (H&S Intermediate Honors Seminar) Spring-05, Spring-06, Spring-08

PHYS320: Thermodynamics Spring-04, 06, 07, 08

IISP-30000: H&S Honors Junior Seminar (taught a two-week-long section) Fall-07

Scholarship While at Ithaca College:

Scholarship of Discovery

Book Chapters:

Barry J. Allred, Michael Rogers, M. Reza Ehsani, and Jeffrey J. Daniels. "Additional Geophysical Methods with Probable Significant Future Use in Agriculture: Magnetometry, Self-Potential, and Seismic" in Handbook of Agricultural Geophysics. Ed. Barry Allred, Jeffrey J. Daniels, and Mohammad Reza Ehsani. CRC Press. June 2008. 147-152.

Peer-Reviewed Publications in Top Level Journals:

Rogers, M., G. DeBeck V, N. Batruch, G. Shear, D. Romero. In preparation. Identifying And Reducing Positional Errors In Cesium Magnetometer Surveys. *Archaeological Prospection*

Rogers, M., K. Faehndrich, B. Roth, G. Shear. Under Review. Cesium Magnetometer Surveys at a Pithouse Site near Silver City, New Mexico. *Archaeological Prospection*

Rogers, M. B., J. E. Baham, M. I. Dragila. 2006. Soil Iron Content Effects on the Ability of Magnetometer Surveying to Locate Buried Agricultural Drainage Pipes. *Applied Engineering in Agriculture* 22 (5) : 701-704.

Rogers, M. B., J. R. Cassidy, M. I. Dragila. 2005. Ground-based Magnetic Surveys as a New Technique to Locate Subsurface Drainage Pipes: A Case Study. *Applied Engineering in Agriculture* 21 (3) : 421-426.

Non Peer-Reviewed Technical Papers / Project Reports:

M. Rogers. In preparation. Cesium Magnetometer and Ground-Penetrating Radar Studies at the Burnt Hill Mound Complex, Finger Lakes National Forest, NY. Report for the National Forest Service and Seneca Nation

M. Rogers. 2006. Cesium Magnetometer and Ground-Penetrating Radar Studies at Fort Hardy Park, Schuylerville, New York. Report for Dr. Scott Stull (Hartgen Archaeological Associates, Inc.), Albany, NY

M. Rogers. 2006. Cesium Magnetometer Studies at the Betts Historic Farmstead Site, Troy, NY. Report for Chris Hazel (HAZex CRM firm), Ithaca, New York

M. Rogers. 2005. Establishing a Longitudinal Wildlife Census Quadrangle in Sterling Forest State Park, NY. Report for John Confer (Ithaca College Biology Department) and Sterling Forest State Park. New York.

Scholarship of Teaching and Learning

Peer-Reviewed Publications in Top Level Journals:

Rogers, M., M. Stephens, in preparation, Impact of An Inquiry-Based After School Physics And Roller Coasters Program On Middle School Student Understanding Of Newtonian Mechanics, *ScienceScope*.

Rogers, M. 2007. An Inquiry-based course using "Physics?" in Cartoons and Movies. *The Physics Teacher*, American Association of Physics Teachers. 45 (1) : 38-41.

Non Peer-Reviewed Curriculum Materials:

Rogers, M., M. Stephens, D. Hilger. 2005. *Physics and Roller Coasters: Content Workbook* 3rd Edition.

Rogers, M., M. Stephens, D. Hilger. 2005. *Physics and Roller Coasters: Teacher's Guide* 3rd Edition.

Stephens, M., M. Rogers, D. Hilger. 2005. *Physics and Roller Coasters: Activities Workbook* 3rd Edition.

Hilger, D., M. Rogers, M. Stephens. 2005. *Physics and Roller Coasters: Problems Workbook* 3rd Edition.

Scholarship Prior to Ithaca College:

Scholarship of Discovery

Dissertation and Thesis:

Rogers, M. 2003. Effect of iron redistribution in soils on cesium magnetometer surveys at the Oregon State University research dairy. PhD diss. Corvallis, OR: Oregon State University, Department of Physics.

Rogers, M. 2001. Detection of burials at the Confederated Tribes of Siletz Indians historic period cemetery, Oregon: A comparison of ground-based remote sensing methods. MA thesis Corvallis, OR: Oregon State University, Department of Anthropology.

Non Peer-Reviewed Technical Papers / Project Reports:

Rogers, M. 2002. Ultra High Resolution Cesium Magnetometer Feasibility Study at the Bridge Maintenance Shop Site (Site # 35CS64) near Bridge, Oregon. Submitted to Stephan R. Samuels, BLM District Archaeologist Bureau of Land Management Coos Bay District North Bend, OR.

Rogers, M. 2002. Ultra High Resolution Cesium Magnetometer Feasibility Study at the Klondike Gold Rush City of Dyea, Alaska. Submitted to Dr. David Brauner, Department of Anthropology, Oregon State University, Corvallis, OR.

Rogers, M. 2001. Cesium Magnetometer Survey of the Corvallis Historic Water Front, Oregon State University's 2001 Archaeological Field School Site, Corvallis, Oregon, USA. Submitted to Dr. Barbara Roth, Department of Anthropology, Oregon State University, Corvallis, OR.

Rogers, M. 1999. Ground-Penetrating Radar Survey of the Toledo Turntable Site: Toledo, Oregon. Submitted to The Yaquina Pacific Railroad Historical Society, Toledo, OR.

Research Students Supervised

* Numbers indicate the number of semesters and summers (10-week) students conducted research in my lab.

Student	Grad Year	Project Title	Sem/ Sum*	Comments
Christopher Hastings	2011	Archaeological Geophysical surveys of an Iron Age Hill Top Fort in Azerbaijan and a Bronze Age Village Site in Cyprus	0 / 1	Physics Ford Research Fund 2008
Kevin Hurley	2011	Archaeological Geophysical surveys of an Iron Age Hill Top Fort in Azerbaijan and a Bronze Age Village Site in Cyprus	0 / 1	Physics Ford Research Fund 2008
Eilis Monohan		Comparing the ability of resistivity, conductivity, magnetometry, and ground-penetrating radar to image subsurface features.	1 / 1	Cornell Archaeology Graduate Student
Jeff Leon		Comparing the ability of resistivity, conductivity, magnetometry, and ground-penetrating radar to image	1 / 1	Cornell Archaeology Graduate Student

		subsurface features.		
Ann Velazquez	2011	Compost Thermal Heating: Exploring the use of energy by heating from a compost pile to warm greenhouse soil beds and to generate electricity.	2 / 0	
John Bassage	2010	Designing and Building a cart to carry a ground-penetrating radar antenna and control unit. Building a scanner to scan cylinders.	3 / 1	Physics Ford Research Fund 2007
Rebecca Grollman	2010	1.Comparing learning gains in an active-learning general education astronomy class to a traditional section of the same class. 2. Examining post-acquisition processing techniques for archaeological geophysics.	2 / 1	NSF student 2008
Jordan Hyatt	2010	Measuring temperature fluctuations in the science building due to sliding doors using a thermister array	2 / 0	
Charlie Simkin	2010	Archaeological Geophysical surveys of an Iron Age Hill Top Fort in Azerbaijan and a Bronze Age Village Site in Cyprus	0 / 1	Physics Ford Research Fund 2008
Rhea Hanrahan	2009	1. Developing new experiments for Introduction to Physics I and II and examining student learning. 2.Gathering and examining the baseline magnetic data for magnetic studies of the Center for Natural Sciences Alternative Landscape plot.	6 / 2	NSF student 2007. Physics Ford Research Fund 2006
Colin Howard	2009	Compost Thermal Heating: Exploring the use of energy by heating from a compost pile to warm greenhouse soil beds and to generate electricity.	3 / 1	Dana Intern Summer 2007
Blaine Laughlin	2009	Measuring temperature fluctuations in the Center for Natural Sciences due to sliding doors using a thermister array	3 / 0	
Justin Sousa	2009	Designing an adjustable, constant speed motor for use in remote sensing error reduction studies.	1 / 0	
Kyle Stone	2009	Creation and calibration of a non-magnetic switch for triggering magnetic data collection using the wheel of a non-magnetic cart.	1 / 1	Physics Ford Research Fund 2006
David Baker	2008	Creation and calibration of a non-magnetic rotating platform to enhance studies to understand the role that magnetic properties of rocks have on magnetic surveys.	1 / 0	
Nik Batruch	2008	Creation and calibration of a non-magnetic switch for triggering magnetic data collection using the wheel of a non-magnetic cart.	5 / 2	Dana Intern Summer 2007 & 2006
George DeBeck V	2008	Creation and calibration of a non-magnetic rotating platform to enhance studies to understand the role that magnetic properties of rocks have on magnetic surveys.	2 / 1	Physics Ford Research Fund 2007
Maria Gonzalez	2008	Creation and calibration of a non-magnetic rotating platform to enhance studies to understand the role that magnetic	1 / 0	

		properties of rocks have on magnetic surveys.		
James Grandner	2008	Comparing learning gains in an active-learning algebra-based introductory physics class to a traditional section of the same class.	2 / 2	MAT in Physics 2008. NSF student 2007
Penyo Michev	2008	Investigations of a method to adjust ground-penetrating radar signals to account for the pitch and roll of the radar antenna.	1 / 0	
Darius Romero	2008	Creating active learning classroom instruments for general education astronomy	0 / 2	MAT in Physics 2008. NSF student 2007
Lia Stelljes	2008	Creation and calibration of a non-magnetic rotating platform to enhance studies to understand the role that magnetic properties of rocks have on magnetic surveys.	1 / 0	
Kris Georgiev	2007	Investigations of a method to adjust ground-penetrating radar signals to account for the pitch and roll of the radar antenna. Cesium Magnetometer Studies of the Corey Village Site, Aurora, NY (2005)	1 / 1	Dana Intern Summer 2005
Reuben Gergen	2007	Exploring Connections Between Gravity and Electricity & Magnetism	4 / 0	
Sanya Levi	2007	Investigating black holes and reconciling modern theories.	1 / 0	
Kevin Faehndrich	2006	Cesium Magnetometer Studies of the Gila Encantada Pit House Village Site, NM (2004). Cesium Magnetometer Studies of the Corey Village Site, Aurora, NY (2005)	5 / 2	Physics Ford Research Fund 2004 and 2005
Christina Hollister	2006	Creating a sustainable renovation plan for the creation of the new physics classroom during summer 2006.	1 / 0	
Greg Shear	2006	Cesium Magnetometer Studies of the Gila Encantada Pit House Village Site, NM	1 / 1	Dana Intern Summer 2004
Michael Stark	2006	Investigations of a method to adjust ground-penetrating radar signals to account for the pitch and roll of the radar antenna.	3 / 0	Spring 2006 Ithaca Fund Research Award for \$550
Dan Varney	2006	Developing machine shop skills, constructing an aluminum, non-ferrous laser alignment tool, and conducting experiments to determine this tool's ability to reduce parallax error during magnetic surveys.	1 / 0	

Funded Grants & Proposals:

External:

			TOTAL:	\$338,071
Jun 2007-	May 2008:	National Science Foundation Grant Number DUE-0722572. Acquisition of Geophysics Survey Instruments for Archaeological Geophysics		\$188,071

Research and Training

Jan 2007- Dec 2009:	National Science Foundation Grant Number DUE-0536246. Creating a Performance-Based Physics Program for Introductory Physics and Astronomy Classes Using the SCALE-UP Model of Teaching Physics	\$150,000
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External Research Contracts and Research Collaborations:

	TOTAL:	\$33,977
Summer 2008:	Archaeological Geophysical surveys at an iron age hill top fort, Azerbaijan. Travel, Room, and Board funded by Lauren Ristvet, University of Pennsylvania Anthropology department	\$14,000
Summer 2008:	Archaeological Geophysical surveys at a bronze age village site, Cyprus. Travel, Room, and Board funded by Sturt Manning, Cornell Classics Department	\$5,000
Summer 2007:	Equipment training and deployment fee in support of Tiffany Tchakirides's (Graduate Student, Department of Geology, Cornell University) research in Honduras.	\$875
Summer 2006:	Magnetometer and ground-penetrating radar surveys in support of Schuylerville, New York's National Park Service Battlefield protection program grant to locate the remains of Ft. Hardy. Funded by Hartgen Archaeological Associates, Inc.	\$5028
Summer 2006:	Magnetometer and ground-penetrating radar surveys in support of the family search for the precise location of the three burials in the Weaver family plot north of Watkins Glen, NY	\$100
Fall 2005:	Magnetometer surveys in support of Cultural Resource Management archaeological surveys at the Bett's Historic Farmstead site near Troy, NY	\$2,874
Spring 2004:	John Confer's Sterling Forest Golden-winged Warbler Project: Support for equipment, travel, 3 student salaries, and faculty salary to establish a longitudinal wildlife census survey grid.	\$4,607
Summer 2004:	Travel Reimbursement from University of Nevada-Las Vegas archaeological field school for magnetic investigation of the Gila Encantada Pithouse Village Site near Silver City, NM.	\$1,493

Internal:

	TOTAL:	\$96,721
Fall 2008:	Center for Faculty Research and Development Release Time: Assessing teaching innovations to enhance student learning in general education astronomy and introductory algebra-based physics	\$3,350
Summer 2008:	Physics Department Ford Research Fund matching grant	\$1,000
Spring 2008:	2008 Physics Ford Research Fund: Christopher Hastings	\$3,350

Spring 2008:	2008 Physics Ford Research Fund: Kevin Hurley	\$3,350
Spring 2008:	2008 Physics Ford Research Fund: Charlie Simkin	\$3,350
Spring 2008:	2008 Summer Faculty Salary Grant: Archaeological Geophysical Surveys at an Iron Age Hill Top Fort in Azerbaijan and a Bronze Age Village Site in Cyprus.	\$3,350
Spring 2008:	Grants for Creative, Collaborative, and Community Service and/or Service Learning Projects: Archaeological Geophysical Surveys at an Iron Age Hill Top Fort in Azerbaijan and a Bronze Age Village Site in Cyprus.	\$750
Spring 2008:	Humanities and Sciences Educational Initiative Grant: Travel funds for undergraduate student researcher to travel with me to conduct archaeological geophysical surveys in Cyprus summer 2008.	\$1000
Fall 2007:	Humanities and Sciences Education Grant: Equipment for Applied Geophysics research/course to purchase a range of archaeological instruments to include Munsell soil charts, trowels, and measuring instruments.	\$800
Fall 2007:	Center for Faculty Research and Development Release Time: Manuscript preparation of summer research conducted 2005 and 2006 at the Corey Cayuga Village Site and at the Burnt Hills Mound Complex	\$3,350
Spring 2007:	2007 Physics Ford Research Fund: John Bassage	\$3,350
Spring 2007:	2007 Physics Ford Research Fund: George DeBeck V	\$3,350
Spring 2007:	2007 Dana Internship: Colin Howard	\$5,000
Spring 2007:	2007 Dana Internship: Nik Batruch	\$5,000
Summer 2007:	Physics Department Ford Research Fund matching grant	\$1,000
Fall 2006:	Center for Faculty Research and Development Release Time: Manuscript preparation of summer research conducted 2005 and 2006 at the Corey Cayuga Village Site and at the Burnt Hills Mound Complex	\$3,350
Fall 2006:	Small Grants for Faculty Research / Scholarship: Page Charges for: <i>Soil Iron Content Effects on the Ability of Magnetometer Surveying to Locate Buried Agricultural Drainage Pipes.</i>	\$250
Summer 2006:	Grants for Creative, Collaborative, and Community Service and/or Service Learning Projects: Cesium Magnetometer and Topographic Survey Studies at the Burnt Hill Mound Complex in the Finger Lakes National Forest, New York.	\$750
Summer 2006:	Physics Department Ford Research Fund matching grant	\$1,000
Spring 2006:	Summer Faculty Salary Grant: Cesium Magnetometer and Topographic Survey Studies at the Burnt Hill Mound Complex in the Finger Lakes National Forest, New York.	\$3,350
Spring 2006:	Ithaca Fund: Proposal submitted by my research students Michael Stark and Kevin Faehndrich titled " Acquiring a clinometer to support studies to correct for the pitch and roll of a ground-penetrating radar antenna.	\$531

Spring 2006:	Sustainability Mini-Grant	\$1,000
Spring 2006:	2006 Dana Internship: Nik Batruch	\$5,000
Spring 2006:	2006 Physics Ford Research Fund: Kyle Stone	\$3,350
Fall 2005:	Center for Faculty Research and Development Release Time: Coordination and support of faculty efforts to move introductory physics courses into the SCALE-UP model of teaching physics	\$3,500
Fall 2005:	Physics Department Ford Research Fund matching grant to the Ithaca Fund for acquisition of extension cables.	\$475
Fall 2005:	Ithaca Fund: Acquisition of magnetometer control extension cables to further error reduction studies using a non-magnetic survey cart designed and built by Ithaca College student researchers summer 2005.	\$475
Summer 2005:	Grants for Creative, Collaborative, and Community Service and/or Service Learning Projects: Cesium Magnetometer Studies to Locate a War of 1812 Shipbuilding Site Near Sackets Harbor, NY	\$750
Summer 2005:	Physics Department Ford Research Fund matching grant	\$1,000
Spring 2005:	Applying Science to Sustainability summer 2005 mini-grant: Incorporating sustainability in PHYS32000 Thermodynamics	\$1,000
Spring 2005:	2005 Dana Internship: Kristiyan Georgiev	\$4,375
Spring 2005:	2005 Physics Ford Research Fund: Kevin Faehndrich	\$3,350
Spring 2005:	Ithaca Fund: Interdisciplinary Magnetic Surveys at the Corey Site, Aurora, NY	\$900
Fall 2004:	Center for Faculty Research and Development Release Time: Curriculum development in support of the Physics Department's adaptation and implementation of the SCALE-UP approach to teaching introductory physics.	\$3,500
Summer 2004:	Physics Department Ford Research Fund matching grant	\$1,000
Spring 2004:	2004 Dana Internship: Greg Shear	\$4,375
Spring 2004:	2004 Physics Ford Research Fund: Kevin Faehndrich	\$3,350
Spring 2004:	Grants for Creative, Collaborative, and Community Service and/or Service Learning Projects: Cesium Magnetometer Studies at the Gila Encantada Pit House Village Site, Southwestern New Mexico	\$750
Spring 2004:	2004 Summer Faculty Salary Grant	\$3,350
Spring 2004:	Ithaca Fund. Installing personal response receivers in Textor 102 in support of PHYS10100 and PHYS10200	\$990
Fall 2003:	Center for Faculty Research and Development Release Time: Developing a collaborative research design to conduct remote sensing surveys at the Corey and Wells Barn sites with Jack Rossen, IC Anthropology.	\$3,500
Fall 2003:	H&S Honors Program Faculty Release Time for Development of Honors Seminar	\$3,500

Other Significant Funding:

	TOTAL:	\$655,000
Summer 2006:	Ithaca College capital equipment allocation for procurement of a ground-penetrating radar instrument.	\$30,000
Summer 2006:	Ithaca College capital funding to renovate Center for Natural Sciences to create a performance-based physics laboratory.	\$425,000
Spring 2006:	School of Humanities & Sciences capital funding to purchase computers and experimental equipment in support of the creation of a performance-based physics laboratory	\$100,000
Spring 2005:	School of Humanities & Sciences capital funding to purchase computers and experimental equipment in support of the creation of a performance-based physics laboratory	\$100,000

Complete list of Invited Talks (based on my Scholarship of Discovery and Scholarship of Teaching reputations):

"Energy and Entropy: A Paradigms in Physics Approach to Thermodynamics", M. Rogers (Ithaca College) and A. Wasserman (Oregon State University), American Association of Physics Teachers Winter Meeting. Baltimore, MD. 22-Jan-2008

"Near Surface Archaeological Geophysics: A Review of Methods", M. Rogers (Ithaca College), *Geology Department Seminar Series, Cornell University*. Ithaca, NY. 19-Sep-2007

"Efforts of IC's Teacher Education / Physics Education program", M. Rogers (Ithaca College), *The Role of Colleges and Universities in Preparing Future Physics Teachers*". LEPP Facility, Cornell University. Ithaca, NY. 19-Jun-2006

"Teaching Critical and Analytical Thinking", M. Rogers and R. Plante, (Ithaca College), *Ithaca College Summer Teaching Institute: "Implementing the Ithaca College Mission"*. Ithaca, NY. 23-May-2006

"eClassroom Innovations at IC", M. Rogers and W. Crisp, (Ithaca College), *Education Technology Day at Ithaca College*. Ithaca, NY. 16-Mar-2006

"Applying Physics to Archaeology using Ground-based Remote Sensing Instruments", M. Rogers, (Ithaca College), *Dickinson College Physics Department Colloquium*. Carlisle, PA. 06-Mar-2006

"Implementing SCALE-UP at Ithaca College", M. Rogers, (Ithaca College), *Visualizing the Future of Physics Education: A Wiley Publishing Faculty Network Workshop*. Ithaca. NY. 29-Oct-2005

"How to See Beneath the Soil" M. Rogers (Ithaca College), *1,000 Island Chapter of the New York State Archaeological Association*. 14-Jul-05.

"Seeing Beneath the Soil" M. Rogers (Ithaca College), *Ithaca College Physics Department Physics Café*. 09-Nov-04.

"Applying Physics to Environmental and Soils Studies" M. Rogers (Ithaca College), *University of New York at Geneseo Physics Department Colloquium*, Geneseo, NY, 26-Feb-04.

"Enhancing Science and Mathematics in Oregon Grades K-12", M. Rogers, and D. Hilger, *2001 Oregon Collaboration for the Excellence of Physics Teachers (OCEPT) Showcase*, Willamette University, Salem, OR, 06-Jun-01.

"Archaeological Geophysical Surveys of Burial Mounds in Ireland: A Physicist's Perspective", M. Rogers, *American Association of Physics Teachers Oregon Section Spring Meeting*, Rock Creek, OR, 11-Mar-00.

Contributed Presentations and Workshops While at Ithaca College:

(undergraduate Ithaca College student presenters in bold)

"Testing The Scale-up Approach To Introductory Astronomy", Julia M. Kregenow (Cornell University and Ithaca College), L. Keller, M. Rogers, D. Romero (Ithaca College), 212th meeting of the American Astronomical Society. St. Louis. MO. 02-Jun-08

"Finding Fort Hardy: Remote Sensing, Subsurface Testing, and Documentary Research Combine to Identify the Boundaries of a French and Indian War Fort", Stull, S. (Hartgen Archaeological Associates, Inc.), M. Rogers (Ithaca College), Council for Northeast Historical Archaeology 2007 Annual Conference. Buffalo. NY. 27-Oct-07

"Creating a SCALE-UP classroom at Ithaca College", Rogers, M., L. Keller (Ithaca College), New Faculty Workshop Reunion, Association of American Physics Teachers Workshop. College Park. MD. 25-Jun-07

"Incorporating Sustainability in Thermodynamics", Rogers, M., (Ithaca College), Finger Lakes Project as part of the Ithaca College May Faculty Institute. Ithaca, NY 24-May-07

"Modification of Laboratory Experiments for use in a New Performance-Based Physics Classroom", **Hanrahan R.**, M. Rogers, L. Keller, M. Sullivan, Society of Physics Students Zone 2 Meeting. University of Rochester, Rochester. NY. 21-Apr-2007

"Infusing Sustainability into Higher Education", Rogers, M., J. Hamilton (Ithaca College), Pre-conference workshop at the annual meeting of the American Conference of Academic Deans in conjunction with the Association of American Colleges and Universities. New Orleans. LO. 17-Jan-07

"Innovative Use of SCALE-UP for Teaching General Education Astronomy", Keller, L., M. Rogers (Ithaca College), American Association of Physics Teachers and Astronomical Society Join Meeting, Seattle, Washington. 08-Jan-07

"Fort Hardy and the Field of Grounded Arms", Stull, S. (Hartgen Archaeological Associates, Inc.), M. Rogers, Society for Historic Archaeology Annual Meeting, Williamsburg, VA. 13-Jan-07

"Comparison of Archaeological and Magnetic Methods for Identification of Subsurface Housing Structures", **K. Faehndrich** and M. Rogers (Ithaca College) a poster presentation presented at the *Sigma Xi Northeast Symposium*. Cornell University. Ithaca, NY. 26-Apr-2006.

"Physics?" in Cartoons and Movies", M. Rogers (Ithaca College), *Ithaca College Physics Department Seminar Series*. Ithaca. NY. 14-Sep-2005

"The 2004 Nobel Prize in Physics: ...for the discovery of asymptotic freedom in the theory of the strong interaction", M. Rogers (Ithaca College), *Ithaca College Physics Department Seminar Series*. Ithaca. NY. 24-Feb-2005

"Reduction of Parallax Error in Cesium Magnetometer Surveys Using Laser Alignment", **G. Shear**, M. Rogers, **K. Faehndrich** (Ithaca College), *New York State section of the American Physical Society's biannual symposium*. Brooklyn. NY. 15-Oct-2004

"Cesium Magnetometer Surveys at a 1,000-Year-Old Pithouse Village Site in Southwestern, New Mexico", **K. Faehndrich**, M. Rogers, **G. Shear** (Ithaca College), *New York State section of the American Physical Society's biannual symposium*. Brooklyn. NY. 15-Oct-2004

"Who Wants to be a Millionaire? Forget polling the audience, how about polling your students", M. Rogers (Ithaca College), *Ithaca College Campus-wide Faculty Development Colloquium Series*, Ithaca, NY, 13-Nov-03.

Student Presentations at the Ithaca College Physics Department Seminar Series:

(undergraduate Ithaca College student presenters in bold)

"Developing Astronomy Activities for SCALE-UP Astronomy at Ithaca College", **D. Romero**, M. Rogers, L. Keller (Ithaca College). 18-Mar-2008

"The Compost Thermal Heating Project", **C. Howard**, M. Rogers, M. Darling, (Ithaca College). 11-Dec-2007

"Identification and Reduction of Positional Errors in Cesium Magnetometer Surveys", **G. DeBeck V**, M. Rogers, (Ithaca College). 11-Dec-2007

"Comparing student learning in an algebra-based introductory physics course using traditional lecture and Studio Physics", **R. Hanrahan, J. Grandner**, M. Rogers, L. Keller, M. Sullivan, (Ithaca College). 27-Nov-2007

"Identification and Reduction of Positional Errors in Cesium Magnetometer Surveys using fiber optic switches and a motorized track system", **N. Batruch**, M. Rogers, (Ithaca College). 18-Apr-2007

"Creating a Performance-based Physics Teaching Laboratory", **R. Hanrahan**, M. Rogers, L. Keller, M. Sullivan (Ithaca College). 29-Nov-2006

"A Summary of Summer 2005 Ground-based Remote Sensing Surveys at Three Contrasting Sites", **K. Faehndrich**, M. Rogers, **K. Georgiev** (Ithaca College). 19-Oct-2005

"Identification and Reduction of Positional Errors in Cesium Magnetometer Surveys: An Ithaca College Dana Internship Summer Research Experience", **K. Georgiev**, M. Rogers, **K. Faehndrich** (Ithaca College). 19-Oct-2005

"Reduction of Parallax Error in Cesium Magnetometer Surveys Using Laser Alignment", **G. Shear**, M. Rogers, **K. Faehndrich** (Ithaca College). 02-Nov-2004

"Cesium Magnetometer Surveys at a 1,000-Year-Old Pithouse Village Site in Southwestern, New Mexico", **K. Faehndrich**, M. Rogers, **G. Shear** (Ithaca College). 02-Nov-2004

Student Presentations at the Ithaca College J.J. Whalen Academic Symposium:

(undergraduate Ithaca College student presenters in bold)

"Comparing Student Performance on Homework, Exams, a Pre-Test, and a Post-Test in an Introductory Physics Course" (Funded in part by NSF DUE CCLI #0536246), **J. Grandner**, M. Rogers, L. Keller, M. Sullivan (Ithaca College), 08-Apr-2008

“Examining Student Perceptions of a Course Taught in Two Very Different Types of Classrooms” (Funded in part by NSF DUE CCLI #0536246), **R. Hanrahan**, M. Rogers, L. Keller, M. Sullivan (Ithaca College), 08-Apr-2008

“Developing Active-Learning Materials for General Education Astronomy” (Funded in part by NSF DUE CCLI #0536246 and the Ithaca College Department of Physics), **D. Romero**, M. Rogers, L. Keller (Ithaca College), 08-Apr-2008

“Compost Thermal Heating: Drawing Energy From a Compost Pile” (Funded by Ithaca College Dana Internship), **C. Howard**, M. Rogers (Ithaca College), 08-Apr-2008

“Identifying and Reducing Positional Errors in Magnetometer Surveys” (Funded by Ithaca College Department of Physics), **G. DeBeck V, N. Batruch**, M. Rogers (Ithaca College), 08-Apr-2008

"Acquisition of New Equipment and Modification of Laboratory Experiments for us in the New Performance-based Physics Teaching Laboratory ", **R. Hanrahan**, M. Rogers (Ithaca College), 03-Apr-2007

"Construction of a Test Facility to Identify the Source of a Positional Error Encountered During Magnetometer Surveys", **N. Batruch**, M. Rogers (Ithaca College), 03-Apr-2007

"Comparison of Archaeological and Magnetic Methods for Identification of Subsurface Pre-historic Native American House Features", **K. Faehndrich**, M. Rogers (Ithaca College), 03-Apr-2006

"Identifying and Reducing Positional Errors Encountered During Ground-based Magnetic Surveys", **K. Georgiev**, M. Rogers (Ithaca College), 03-Apr-2006

"Cesium Magnetometer Surveys at a 1,000-Year-Old Pithouse Village Site in Southwestern, New Mexico", **K. Faehndrich**, M. Rogers, **G. Shear** (Ithaca College), 06-Apr-2005

Contributed Presentations prior to Ithaca College:

"Ground-Based Magnetic Remote Sensing Technique for Locating Sub-Surface Features and Tracking Solute Movement Through the Vadose Zone", M. Rogers, M. Dragila, J. Baham (Oregon State University), *American Geophysical Union Meeting*, San Francisco, CA, 09-Dec-02.

"Energy before Kinematics: An Approach to Middle School Physics", M. Rogers (Oregon State University), *American Association of Physics Teachers Summer Meeting*, Boise, ID, 07-Aug-02.

"Applying Physics to Modern Problems: Cesium Magnetometer Surveys to Understand Iron Movement in Soils and Agricultural Contamination Issues", M. Rogers (Department of Physics, Oregon State University), M. Dragila and J. Cassidy (Department of Crop & Soil Science, Oregon State University), *The 2002 Oregon State University Graduate Student Association Conference*, Corvallis, OR, 10-Apr-02.

"Oregon State University's GK-12 Fellowships: Enhancing Science and Mathematics in Oregon Grades K-12", M. Rogers, *American Association of Physics Teachers Oregon Section Fall Meeting*, Eugene, OR, 20-Oct-01.

"Enhancing Science and Mathematics in Oregon Grades K-12 or (Why Being a GK-12 Fellow Beats Being a Physics Department TA)", M. Rogers, D. Hilger, and J. Loats *Oregon State University Physics Department Colloquium*, Corvallis, OR, 21-May-01.

"Color Composite Imaging: A New Archaeological Geophysical Analysis Tool", M. Rogers (Oregon State University), *2001 Oregon State University Graduate Student Association Conference*, Corvallis, OR, 09-Apr-01.

"High-Resolution Cesium Magnetometer Surveys Used as a Tool to Help Solve Water Quality Problems at the Oregon State University Research Dairy", M. Rogers (Department of Physics, Oregon State University), M. Dragila and J. Cassidy (Department of Crop & Soil Science, Oregon State University), *2001 Oregon State University Graduate Student Association Conference*, Corvallis, OR, 09-Apr-01.

"Connecting Nuclear Magnetic Resonance to Middle School Algebra: A Challenge of a GK12 Fellow", D. Hilger, M. Rogers (Oregon State University), C. Nelson (Highland View Middle School), *2001 Oregon State University Graduate Student Association Conference*, Corvallis, OR, 09-Apr-01.

"High-Resolution Cesium Magnetometer Surveys Used as a Tool to Help Solve Water Quality Problems", M. Rogers (Department of Physics, Oregon State University), M. Dragila and J. Cassidy (Department of Crop & Soil Science, Oregon State University), *American Physical Society Meeting*, Seattle, WA, Mar-01.

"Using Puzzles to Make Science Fun for Middle School Students: The Adventures of a GK-12 Fellow", M. Rogers, D. Hilger (Oregon State University), J. Houston, C. Nelson, M. Stephens (Highland View Middle School), *Oregon Academy of Sciences Meeting*, Portland, OR, 24-Feb-01.

"Connecting Nuclear Magnetic Resonance to Middle School Algebra: A Challenge of a GK12 Fellow", D. Hilger, M. Rogers (Oregon State University), C. Nelson (Highland View Middle School), *Oregon Academy of Sciences Meeting*, Portland, OR, 24-Feb-01.

"Physics & Archaeology: Spanning Disciplines During an Archaeological Geophysical Survey of an 8th Century Bridge that Crossed the River Shannon near Clonmacnoise Monastery, Ireland", M. Rogers (Oregon State University), Kevin Barton, Colin Brown, Deirdre O'Hara (National University of Ireland-Galway), *American Physical Society-Northwest Section Meeting*, Eugene, OR, May-00.

"How the Heck Do You Teach an Astronomy Laboratory with Only 75 Clear Days per Year?", D. Hilger, M. Rogers, D. Cebula, D. Gaskell, D. Griffiths, A. Wasserman (Oregon State University), *American Physical Society-Northwest Section Meeting*, Eugene, OR, May-00.

"Archaeological Geophysics in Ireland: A Review of the Surveys at Clonmacnoise Monastery, Rathcroghan, and the Hill of Tara ", M. Rogers, *Oregon State University Physics Department Colloquium*, Corvallis, OR, 15-May-00.

"Preliminary Ground-Penetrating Radar Survey at the Terry Canyon Village Site: A Late Pithouse Period (A.D. 550—A.D. 1000) Village Near Mimbres, New Mexico", M. Rogers, B. Roth, A. Keeton (Oregon State University), *2000 Oregon State University Graduate Student Association Conference*, Corvallis, OR, 05-Apr-00.

"Archaeological Geophysical Investigations of an 8th Century Bridge that Spanned the River Shannon near Clonmacnoise Monastery, Ireland", M. Rogers (Oregon State University), Kevin Barton, Colin Brown, Deirdre O'Hara (National University of Ireland-Galway), *2000 Oregon State University Graduate Student Association Conference*, Corvallis, OR, 05-Apr-00.

"Ground-Based Remote Sensing Methods as Aids in Locating Human Burials at the Confederated Tribes of Siletz Indians Historic Period Cemetery", M. Rogers, *2000 Oregon Academy of Science Annual Meeting*, Newberg, OR, 26-Feb-00.

"Where the heck is the Toledo turntable pit; can ground-penetrating radar find it?", M. Rogers, *1999 Oregon State University Graduate Student Association Conference*, Corvallis, OR, 07-Apr-99

"Multimedia tools for physics teaching", M. Rogers, *1994 Undergraduate Research Symposium in the Natural Sciences*, State University of New York at Geneseo, Geneseo, NY.

"Neutron activation studies of Iridium in meteoric and stratified rock near an extinction layer", M. Rogers, J. Pagent, D. Meisel, S. Padalino, J. Over. *1993 Undergraduate Research Symposium in the Natural Sciences*, State University of New York at Geneseo, Geneseo, NY.

Service While at Ithaca College:

Professional Level Service

- Mar-07—Present: Vice-President, Finger Lakes Chapter of the New York State Archaeological Association
- Mar-05—Present: Executive Committee Member, New York State Section of the American Physical Society

College Level Service

- May-07—Present: Faculty Trustee on the Ithaca College Board of Trustees
- 2005-2007: Worked with Terry Ruger, Will Crisp, and Susanne Morgan on obtaining faculty and staff input on selecting a student polling device to be the fully supported, standard device at Ithaca College.
- Aug-04—Present: Academic Justice, Office of Judicial Affairs

School Level Service

- Aug-04—Present: Center for Natural Sciences Sustainability Group Core Committee member
- Aug-04—Present: Environmental Studies & Sciences Program Steering Committee
- Aug-04—May-06: H&S 50th Anniversary Planning Committee
- Aug-04—Present: H&S Faculty Senate (Treasurer May 2008-Present. Executive Committee member Fall 2006-Present)

Department Level Service

- Aug-04—Present: Society of Physics Students Club and National Chapter Advisor
- Aug-03—Present: Physics Department Faculty Search Committee
- Aug-03—May-06: Sigma Pi Sigma Physics Honor Society Advisor
- Aug-03—Present: Physics Department Five-Year Planning and Assessment Committee
- Aug-03—Present: Physics Department Web Profile Manager
- Aug-03—Present: Physics Department K-12 Pre-Service Teacher Training Advisor

Professional Development Activities while at Ithaca College:

- Jun-07: Participant in American Association of Physics Teachers New Faculty Workshop Reunion.
- Oct-05: Co-organized a physics-teaching workshop with Wiley publishing. *Visualizing the Future of Physics Education: A Wiley Publishing Faculty Network Workshop*. October 29th, 2005. Ithaca College, Ithaca, NY. This workshop was attended by ~25 physics faculty with individuals coming from as far away as Louisiana.
- Sep-04: Organizer and Participant in Student Centered Activities for Large Enrollment Undergraduate Physics (SCALE-UP) Implementer's workshop run by Dr. Bob Beichner, North Carolina State University.
- Nov-03: Participant in American Association of Physics Teachers New Faculty Workshop.
- Jun-03: Participant in Oregon State University's Paradigms in Physics, Energy and Entropy Summer Faculty Workshop.

Outreach Activities:

- 2005-Present: Working with Society of Physics Students Ithaca College chapter offices to obtain funding to create "physics circus" outreach kits, establish connections with local schools, and train students to give our physics circus at local schools.

- July-05: Guest Lecturer on “Physics?” in Cartoons and Movies at the Cornell Center for Nanoscale Institute for Physics Teachers.
- May-05: Consultant, Physics and Roller Coasters, Westland Middle School, Corvallis, OR. In collaboration with Matt Stephens.
- May-04: Consultant, Physics and Roller Coasters, Westland Middle School, Corvallis, OR. In collaboration with Matt Stephens.