
JEFFREY D. MARX

EDUCATION

Rensselaer Polytechnic Institute, Troy, New York

Ph.D. Physics

August 1998

B.S. Physics

May 1992

EXPERIENCE

McDaniel College (formerly Western Maryland College), Westminster, Maryland

Associate Professor

August 2006 - Present

Assistant Professor

August 2000 - August 2006

University of Oregon, Eugene, Oregon

Adjunct Assistant Professor

September 1998 - August 2000

Rensselaer Polytechnic Institute, Troy, New York

Adjunct Assistant Professor

May 1998 - June 1998

Graduate Teaching and Research Assistant/Physics Instructor

January 1993 - May 1998

PEER-REVIEWED PUBLICATIONS

- J. Marx and K. Cummings, "Development of a Survey Instrument to Gauge Students' Problem-Solving Abilities", 2010 Physics Education Conference Proceedings, AIP Conference Proceedings, Vol. 1289, edited by C. Singh, M. Sabella, and S. Rebellp, p. 221 - 224 (2010)
- K. Cummings and J. Marx, "Beta-Test Data On An Assessment Of Textbook Problem Solving Ability: An Argument For Right/Wrong Grading?", 2010 Physics Education Conference Proceedings, AIP Conference Proceedings, Vol. 1289, edited by C. Singh, M. Sabella, and S. Rebellp, p. 113 - 116 (2010)
- R. Thornton, D. Kuhl, K. Cummings, and J. Marx, "Comparing the Force and Motion Conceptual Evaluation and the Force Concept Inventory", Physical Review, Special Topics: Physics Education Research, 5, 010105 (2009)
- S. Mian, J. Marx, and V. Pagonis, "Bring the *Two Cultures* Together Through *A World of Light and Color*", Forum on Public Policy Online, Summer 2008 edition (2009)
- J. Marx, "Effect of Initial Conditions and Discussion on Students' Predictions for Interactive Lecture Demonstrations", 2008 Physics Education Conference Proceedings, AIP Conference Proceedings, Vol. 1064, edited by C. Henderson, M. Sabella, and L. Hsu, p. 143 - 146 (2008)
- J. Marx and K. Cummings, "Normalized Change", Am. J. Phys., Vol. 75 (1), p. 87 - 91 (2007)
- J. Marx and K. Cummings, "What factors Really Influence Shifts in Students' Attitudes and Expectations in an Introductory Physics Course?", 2006 Physics Education Conference Proceedings, AIP Conference Proceedings, Vol. 883, edited by L. McCullough, L. Hsu, and P. Heron, p. 101 - 104 (2007)
- L. Dundes, and J. Marx, "Balancing Work and Academics in College: Why do Students Working Part-time, 10-19 hours per week, Excel?", The Journal of College Retention: Theory, Experiment, and Practice, 8(1), 107 - 120 (2006)
- J. Marx. and W. Knouse, "Helping Students Connect Coursework to the 'Real World'", 2005 Physics Education Conference Proceedings, AIP Conference Proceedings, Vol. 818, edited by P. Heron, L. McCullough, and J. Marx, p. 125 - 128 (2005)
- J. Marx, S. Mian, and V. Pagonis, "Attitudes of Undergraduate General Science Students Toward Learning Science and the Nature of Science", 2004 Physics Education Conference Proceedings, AIP Conference Proceedings, Vol. 790, edited by J. Marx, P. Heron, and S. Franklin, p. 125 - 128 (2005)

- J. Marx and R. Lindell, "Students' Impressions Concerning Optical Telescopes and Visible Astronomical Light", 2003 Physics Education Research Conference, editors J. Marx, S. Franklin, and K. Cummings, AIP Conference Proceedings, vol. 720, 69 - 72 (2004)
- K. Cummings, S. Lockwood, and J. Marx, "Attitudes Towards Problem Solving as Predictors of Student Success", 2003 Physics Education Research Conference, editors J. Marx, S. Franklin, and K. Cummings, AIP Conference Proceedings, vol. 720, 133 - 136 (2004)
- K. Cummings, J. Marx, R. Thornton, and D. Kuhl, "Evaluating Innovation in Studio Physics", Physics Education Research Supplement to Am. J. Phys. vol. 67 (7), S38 - 44 (1999)

OTHER PUBLICATIONS

Editor: <i>Physics Education Research Conference Proceedings</i>	2001-2005
J. Marx, S. Mian, and V. Pagonis, "An Activity-Centered Course Concerning Light and Optics"	Spring 2004
D. Sokoloff et. Al., "RealTime Physics Laboratory Manual: Volume 3"	July 2000
K. Cummings, J. Marx, and D. Sokoloff, "Understanding Physics: 2 nd Edition"	In production

EXTERNAL GRANTS

NSF-CCLI: <i>Focusing a General Science Course on Improving Science Literacy</i>	Budget: \$170,000	May 2010
NSF-CCLI: <i>Incorporation of Hands-on Learning Activities into an Innovative General Science Optics Course</i>	Budget: \$105,343	May 2001

INVITED ORAL PRESENTATIONS

<i>Students' Attitudes and Beliefs about Learning Science and the Nature of Science</i>	October 2004
<i>An Activities-based Course Concerning Light and Optics</i>	August 2004
<i>Assessing Students' Problem-Solving Ability</i>	January 2001
<i>Evaluating Innovation in Studio Physics</i>	August 2000
<i>Results of the Diagnostic Exam for Introductory Electricity and Magnetism</i>	February 1998
<i>Rensselaer Physics Studio and CUPL</i>	July 1997
<i>Studio Physics at Rensselaer</i>	July 1995 - August 1998

PRESENTATIONS

<i>If They Can't Do This, What Can They Do?</i>	January 2011
<i>Assessing Student's Ability to Solve Textbook-Style Problems: Update, Part I</i>	August 2010
<i>Assessing Student's Ability to Solve Textbook-Style Problems: Update, Part II</i>	August 2010
<i>Preliminary Validation Data for an Assessment of Textbook Problem-Solving Ability: An Argument for Right/Wrong Grading?</i>	August 2010
<i>Assessing Student's Ability to Solve Textbook-Style Problems</i>	August 2010
<i>Assessing Student's Ability to Solve Textbook-Style Problems: Update, Part I</i>	February 2010
<i>Assessing Student's Ability to Solve Textbook-Style Problems: Update, Part II</i>	February 2010
<i>Development of an Assessment of Textbook Problem-Solving Ability</i>	July 2009
<i>Could Solving Standard Textbook Problems Help Students Develop "Adaptive Expertise"?</i>	July 2009
<i>Assessment of Textbook Problem-Solving Ability: Part I: Overview and Rationale</i>	February 2009
<i>Assessment of Textbook Problem-Solving Ability: Part II: Examples</i>	February 2009
<i>Are Introductory Physics Students Better Prepared for Kinematics and Dynamics?</i>	August 2008

<i>Effect of Initial Conditions and Discussion on Predictions for Interactive Lecture Demonstrations</i>	August 2008
<i>Discussion of the R^2 and correlation coefficient survey</i>	August 2007
<i>Students' Attitudes and Beliefs about Problem Solving</i>	August 2007
<i>Discussion of R^2 and correlation coefficient</i>	January 2007
<i>What factors Really Influence Shifts in Students' Attitudes and Expectations in an Introductory Physics Course?</i>	August 2006
<i>Helping High School Students Connect their Coursework to the "Real World"</i>	August 2006
<i>Helping General Science Students Connect their Coursework to the "Real World"</i>	August 2005
<i>General Science Students' Attitudes Toward Learning Science and the Nature of Science</i>	August 2004
<i>An Activity-Centered Course Concerning Light and Optics</i>	April 2004
<i>Students' Impressions of Optical Telescopes and Visible Astronomical Light</i>	August 2003
<i>Is Real-Time Interview Transcription Possible with Voice-Recognition Software?</i>	August 2002
<i>ILDs in Your Classroom</i>	August 2002
<i>Teaching WHEN Momentum is Conserved</i>	August 2001
<i>An ILD for Oscillations</i>	August 2001
<i>Problem Classification Tasks</i>	January 2001
<i>The Rensselaer Studio Physics Experience</i>	August 2000
<i>Measuring Problem-Solving Skills in Introductory Physics Students</i>	August 2000
<i>Issues in Implementation and Adaptation of Existing Curricula</i>	August 1999
<i>Improved Normalized Gain</i>	January 1999
<i>A Tale of Two Tests: Comparing Force Concept Inventory Scores and Force and Motion Conceptual Evaluation Scores</i>	January 1999
<i>Creation of a Diagnostic Exam for an Undergraduate Electricity and Magnetism Class</i>	April 1997

PROFESSIONAL ACTIVITIES

Reviewer: <i>American Journal of Physics, Proceedings of the Physics Education Research Conference; Physical Review, Special Topics: Physics Education Research</i>	June 2004 - Present
Chautauqua Course: <i>Hawaiian Volcanoes from Mauna Kea to Loihi</i>	July 2002
Co-Chair: <i>Physics Education Research Conference</i>	July 2001
Workshop: <i>CLEA Astronomy Workshop</i>	June 2001
Consultant: <i>TCUP Project</i>	January 2001- June 2001
Video: <i>Interactive Learning at Rensselaer</i>	November 1997 - August 1998

AWARDS

<i>Distinguished Scholar's Award (McDaniel College)</i>	March 2011
<i>Ira Zepf Teaching Award (McDaniel College)</i>	March 2004
<i>Walter Eppenstein Teaching Award (Rensselaer)</i>	May 1995
<i>Theodore M. Hesburgh Award (Rensselaer: recognized contributor)</i>	February 1995

MEMBERSHIPS

<i>American Association of University Professors</i>	Since September 2002
<i>American Association of Physics Teachers</i>	Since January 1995