

# The University of British Columbia

## Curriculum Vitae for Faculty Members

Date: April 20<sup>th</sup>, 2012 Initials: MMB

### General Comments/Narrative

*I joined Department of Curriculum and Pedagogy at the UBC Faculty of Education in January, 2010. Since then I have been developing a research program that focuses on (a) using educational technologies in science education at K-12 level and (b) on using educational technologies to create online communities to support professional development of science teachers across the province.*

### 1-4. BASIC INFORMATION

<b>Surname</b>	Milner-Bolotin	<b>First Name</b>	Marina
<b>Middle Name(s)</b>			
<b>Department/School</b>	Department of Curriculum and Pedagogy (EDCP)		
<b>Faculty</b>	Faculty of Education		
<b>Present Rank</b>	Assistant Professor	<b>Since</b>	January 1, 2010

### 5. POST-SECONDARY EDUCATION

#### a) Degrees

Institution	Degree	Subject Area	Dates	
			Start	End
The University of TX at Austin	Ph.D.	Science and Mathematics Education	June, 1998	July, 2001
The University of TX at Austin	M.A.	Science and Mathematics Education	June, 1998	May, 1999
Kharkov National University, Ukraine	M.Sc.	Theoretical Physics	Sept, 1986	June, 1991

#### b) Title of Ph.D. Dissertation and Name of Supervisor:

The Effectiveness of the Topic Choice in Project-Based Instruction on Undergraduate Physical Science Students' Interest, Ownership, and Motivation

**Supervisors:** Professors Marilla D. Svinicki and Austin Gleeson: The University of Texas at Austin

#### c) Continuing Education, Training

University or Institution	Rank or Title	Dates	
		Start	End
Toastmasters International	Finished the Advanced Communication Bronze level (February, 2012)	Apr, 2010	
Ryerson	University Teaching Development Program,	Sept, 2007	May, 2009

University or Institution	Rank or Title	Dates	
		Start	End
University, Toronto, Canada	Ryerson University		
University of British Columbia	Faculty Certificate Program	Sept, 2006	May, 2007
National Science Foundation, USA	NSF Chautauqua Short Courses for College and University Science Teachers	May, 1999	June, 2003
Weizmann Institute of Science, Israel	Professional development courses for mathematics and physics teachers and for graduate science education students. Science Teaching Department.	Sept, 1993	May, 1997
Bar-Ilan University, Israel	Teaching Certificate in Physics and Mathematics Education (graduated with honors)	Sept, 1992	May, 1994

**d) Continuing Medical Education (N/A)**

**e) Professional Qualifications**

Teaching Certification, Bar-Ilan University, Israel, 1994

**f) Language Competencies**

English, Hebrew, Russian and Ukrainian: (Read – Write - Speak - Understand)

**6. EMPLOYMENT RECORD**

---

**a) Work prior to coming to UBC**

University, Hospital or Organization	Department	Rank or Title	Dates	
			Start	End
Ryerson University	Physics	Assistant Professor	July, 2007	Dec, 2009
Vancouver Homeschooling Community	Science Teaching	Science and Mathematics teacher for gifted students	Sept, 2004	June, 2006
University of British Columbia	Skylight Centre for Science Teaching and Learning	Lecturer, Research Associate	Sept, 2004	Aug, 2007
School Plus, NJ	Mathematics and Science	Teacher	Sept, 2002	Dec, 2003
Rutgers University	Physics and Astronomy	Lecturer, Associate Director, Math & Science Learning Center	Sept, 2001	Jul, 2004
University of TX at Austin	Physics and Astronomy	Teaching Assistant	June, 1998	June, 2001
Israeli Ministry of Education	Israeli Middle and Secondary Schools	Science and Mathematics Teacher	Aug, 1993	Aug, 1997
Weizmann Institute of Science	Science Teaching	Research Assistant, mathematics and science teacher	July, 1993	July, 1997

University, Hospital or Organization	Department	Rank or Title	Dates	
			Start	End
Weizmann Institute of Science	Youth Activities Section	Lecturer, Israeli Mathematics Middle School Olympiad Coordinator	Sept, 1992	Mar, 1998

**b) Present**

University, Hospital or Organization	Department	Rank or Title	Dates	
			Start	End
University of British Columbia	Curriculum and Pedagogy	Assistant Professor	Jan, 2010	

**c) Date of granting of tenure at UBC: to be determined.**

**7. LEAVES OF ABSENCE (N/A)**

---

**8. TEACHING**

---

**a) Areas of special interest and accomplishments:**

My major area of interest is using educational technology to improve science learning at K-12 and college levels and to improve science teacher professional development through modern educational technologies. I have received a number of teaching awards over the years. However, my major teaching accomplishments are revitalizing undergraduate physics labs at UBC (TLEF grants 2004-2007) and at Ryerson University (HP Grant 2007), and initiating extensive implementation of modern educational technologies in both institutions: clickers, Smart Boards, tablet computers, etc. I am also very happy I can help the Faculty of Education at UBC to make a difference at the largest refugee camp in the world – the Dadaab Refugee Camp in Kenya (for almost 450,000 Somali refugees). I am involved in developing a science teaching program to educate their teachers. I received a number of teaching awards for my work. However, I consider my most important teaching accomplishment is turning many hundreds of students to science. Over the years, I have taught more than 5,000 elementary-college students in Ukraine, Israel, USA, and Canada. I keep in touch with many of them and I know that I was able to make a positive impact on their lives. I am also proud of being able to interact constructively with my colleagues. I know that many of these collaborations produced positive results.

**b) Courses Taught at UBC**

Year-Session	Course Number or Description	Hours/week	Class Size	Hours Taught			
				Lecture	Tutorial	Lab	Other
2011/2012W	SCED 349 (Science Methods Course for Elementary Teachers (Problem-Based Learning cohort))	2	32	X	X	X	

Year-Session	Course Number or Description	Hours/week	Class Size	Hours Taught			
				Lecture	Tutorial	Lab	Other
2011/2012W	EDUC 319 (Practicum for Secondary Teachers)	4	4				X
2011/Summer 2	EDCP 585: Special Topic "Learning and Teaching of Mathematics and Science Through Technology"	3	11	X			X
2010/2011W	EDUC 319 (Practicum for Secondary Teachers)	6	6				X
2010/2011W	EDUC 329 (Long Secondary School Practicum)	6	6				X
2010/2011W	SCED 349 (Science Methods Course for Elementary Teachers (PBL cohort))	2	31	X	X	X	
2009/2010W	EETEC 533 (Educational Technology for Science and Mathematics Teachers) – online course	3	19				X
2006/2007W	PHYS 100 (Introductory Physics I)	3	200	X	X	X	X
2006/2007W	PHYS 102 (Introductory Physics II: Electricity and Magnetism)	3	200	X	X	X	X
2005/2006W	PHYS 100 (Introductory Physics I)	3	200	X	X	X	X
2005/2006W	PHYS 102 (Introductory Physics II: Electricity and Magnetism)	3	200	X	X	X	X
2004/2005W	PHYS 100 (Introductory Physics I)	3	250	X	X	X	X
2004/2005W	PHYS 102 (Introductory Physics II: Electricity and Magnetism)	3	200	X	X	X	X

**c) Students Supervised and/or Co-supervised at the Department of Curriculum and Pedagogy (EDCP)**

Student Name	Program Type	Program Detail	Principal Supervisor	Year Start	Year Finish	Co-Supervisors	Current Position/Awards
Christopher Tomas Jacoby	M.Ed.	EDCP	MMB	Sept, 2011			In progress
Darryl Dietrich	M.Ed.	EDCP	MMB	Sept, 2011			In progress
Mustafa Ibrahim Ahmed	B.Sc.	Directed study (COGS 402), EDCP	MMB	Sept, 2010	Aug, 2011		Completed

Student Name	Program Type	Program Detail	Principal Supervisor	Year Start	Year Finish	Co-Super-visors	Current Position/Awards
Elizabeth Love	Ph.D.	Science Education, EDCP		Sept, 2011		Dr. S. Nashon	In progress
Romy Friedman	M.A.	Science Education, EDCP	MMB	Sept, 2010		Dr. S. Nashon	In progress
Ashley Welsh	Ph.D.	Science Education, EDCP	MMB	Sept, 2012		Dr. S. Nashon	In progress
Jason Chow	M.Ed.	Science Education, EDCP	Dr. S. Nashon	Sept, 2010	Aug, 2011	MMB	Completed
Lucy How	M.Ed.	EDCP	MMB	Sept, 2010		Dr. S. Nashon	Completed
Ashley Welsh	M.A.	Science Education, EDCP	MMB	June, 2010	Oct, 2010	Dr. C. Nicol	Completed
Catherine Anna Louise Dick	M.Ed.	Mathematics Education, EDCP	Dr. Anne Anderson	Sept, 2008	June, 2010	Committee Member	Completed

**d) Continuing Education Activities**

**e) Visiting Lecturer (indicate university/organization and dates): N/A**

**f) Other:**

**Course Development**

Title	Organization Where First Taught	Date First Taught	Dates		Co-developers
			Start	End	
EDUC XXX: Physics Methods Course EDUC XXX: Physical Science Methods Course	The courses have been developed to be taught at the Dadaab Refugee Camp in Kenya				These courses have been developed in collaboration with Moi University and have been approved by the Faculty of Education.
EDCP 585: Special Topics - Mathematics and Science Teaching through Technologies	UBC, Faculty of Education	July, 2011	July, 2011		
PCS300: Modern Physics Course for 2nd year physics students	Ryerson University	Sep, 2008	Sept, 2008	Dec, 2009	
PCS107: Nature in Context – Physics for Architects	Ryerson University	Sep, 2007	Sept, 2007	Dec, 2009	

### **Graduate and Undergraduate Research Assistants (RA) Supervised**

Employee	Type	Institution	Role	Dates		Co-supervisors
				Start	End	
Robert Kehoe	RA	UBC	Primary Supervisor	May, 2006	Aug, 2006	
Joss Ives	RA	UBC	Primary Supervisor	May, 2006	Sep, 2007	
Rachel Moll	RA	UBC	Primary Supervisor	Sept, 2006	May, 2007	
Sergey Zhdanovich	RA	UBC	Primary Supervisor	May, 2006	Sept, 2006	
Avery Raess	RA	Ryerson University	Primary Supervisor	Sept, 2009	Mar, 2010	Dr. T. Antimirova
Patrick Kennedy	RA	Ryerson University	Primary Supervisor	Sept, 2008	May, 2009	Dr. T. Antimirova
Anna Petrov	RA	Ryerson University	Primary Supervisor	Sept, 2008	May, 2010	Dr. T. Antimirova
Mahtab Eskandari	RA	UBC	Primary Supervisor	Sept, 2010	March, 2011	
Kshamta Bhupendra Hunter	RA	UBC	Primary Supervisor	Sept, 2010	June, 2011	Dr. S. Nashon
Guopeng Fu	RA	UBC	Primary Supervisor	Sept, 2011	May, 2012	
Elizabeth R. Love	RA	UBC	Primary supervisor	Sept, 2011	May, 2012	Dr. S. Nashon

---

## **9. SCHOLARLY AND PROFESSIONAL ACTIVITIES**

### **a) Areas of special interest and accomplishments:**

My major areas of interest are investigating (a) how educational technologies can be used to improve science learning at K-12 and college levels, as well as pre-service and in-service teacher professional development; (b) the impact of science outreach activities on students' and teachers' science knowledge and their interest in science; (c) how educators can devise pedagogies that will affect science students' views of the nature of science. I have been able to add to our understanding of how educational technology can reshape how our students learn science; I also was able to develop, implement and evaluate research-based interventions aimed at helping students develop positive views of the nature of science and scientific method. I am also very proud of the science outreach activities I initiated. Many of them became larger than I could have ever anticipated and continue to flourish even when I am not around (for example, Christmas Science Shows at the UBC Department of Physics & Astronomy ...), or Family Science Days at the Faculty of Education at UBC. I am also proud of my involvement with local science/physics teaching community.

---

**b) Research or equivalent grants (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC)) – Marina Milner-Bolotin (MMB)**

Granting Agency	Subject-Project Title	COMP	\$ Per Year	Years		Principal Investigator	Co-Investigators
				Start	End		
UBC, Faculty of Education	2012-2013 John H. M. and Doris D. Andrews Research and Development Award	C	3700	June 2012	June 2013	MMB	
SSHRC Insight Grant	From More Gadgets to Better Teaching: Improving Science Education through Effective Use of Educational Technologies	C	145,564	Applied for		MMB	
MITACS	Interactive Online Science and Mathematics Database for Elementary and Secondary Teachers	C	Undergr. student from India comes to do research with me in Canada (fully paid)	May 2012	June 2012	MMB	
Teaching and Learning Enhancement Fund, UBC	Turning Teacher Candidates to Inquiry: Improving Preparation of Future K-12 Teachers in Mathematics and Science through Active Technology Engagement	C	39,353	20012	2012	MMB	Cynthia Nicol
Evident Point Inc.	Exploring Teacher Use of ActiveTextbook software	C	600	2011	2011	MMB	
Hampton Fund Research Grant in the Humanities and Social Sciences	Investigating the "Best Technology-Based Science Instructional Practices" in Canadian and Korean Secondary Teacher Education Programs	C	10,000	2011	2012	MMB	Dr. S Nashon
SSHRC	Student Diversity and Conceptual Learning in Introductory Physics	C	115,367	2011	2014	MMB	Drs.T. Antimirova, A. Noack
HSS Seed Grant: Faculty of Education	Elementary Teachers as Designers of Technology-Enhanced Science Instruction	C	6,841	2010	2011	MMB	Dr.S. Nashon

Granting Agency	Subject-Project Title	COMP	\$ Per Year	Years		Principal Investigator	Co-Investigators
				Start	End		
SSHRC	Personal epistemologies as barriers to learning by Science and Engineering undergraduate students	C	139,654	2010	2013	Dr. Calvin Kalman	Drs. B. Shore; T. Antimirova M. Aulls, MMB
UBC, Centre for Teaching, Learning and Technology	Teaching Scholars Program: Investigation of Successful Strategies of Adoption of Educational Technologies by University Faculty	C	6,500	2010		MMB	
SSHRC	Students' Backgrounds and Attitudes towards Science as Predictors of Conceptual Learning	C	6,973	2008	2010	MMB	Drs.T. Antimirova, A. Noack
	HP Mobile Lab for Science and Engineering Students	C	88,000	2008	2010	MMB	Dr.T. Antimirova
UBC Teaching and Growth Centre (TAG)	Assessing Effectiveness of Peer Response System and Interactive Lecture Experiments in First Year Large Introductory Physics Course (Physics 100)	C	17,000	2006	2007	MMB	
Teaching and Learning Enhancement Fund UBC (TLEF)	Improving Student Laboratory Experiences for First Year Large Introductory Physics Courses	C	51,547	2006	2007	MMB	
Skylight Centre for Science Teaching and Learning UBC	New Generation of Science Demonstrations for Improving Undergraduate Teaching in Large Science Courses	C	18,000	2005	2007	MMB	
Shell Canada	Creating online resource of conceptual environmental science questions	C	5,000	2005	2006	MMB	
Skylight Centre for Science Teaching and Learning	Physics Resource Centre – Building Success in the First Year Physics Courses	C	10,000	2005	2006	MMB	
	Creating Online Resources for Large Undergraduate Science Course	C	36,886	2005	2007	Dr. I. Cavers	Drs. J. Nakonechny MMB
Teaching and Learning Enhancement Fund UBC	Enhancing Student Laboratory Experiences for First Year Large Introductory Physics Courses	C	42,447	2005	2006	MMB	Drs. F. Bates, A. Kotlicki, G. Rieger



---

**c) Research or equivalent contracts (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC))**

**d) Presentations**

**(i) Invited**

<b>Title</b>	<b>Conference or Event</b>	<b>Location</b>	<b>Organization</b>	<b>Key-note?</b>	<b>Date</b>	<b>Role</b>	<b>Copresenters</b>
The American Association for the Advancement of Curriculum Studies	Annual Meeting American Educational Research Association (AERA)	Vancouver, BC	AERA		April 14, 2012	Presenter of a poster	Daniel Jangho Cha and Kshamta Bhupendra Hunter
Teachers' Playground: Enhancing Science Learning through Effective Technology Implementation	Invited talk at the Ruppin Academic Centre	Netaniya, Israel	Ruppin Academic Centre		March 15, 2012	Presenter	
Beyond the Paradigm: Implications of Kuhn's "Structure" on educational research and teacher education	Invited talk at the Department of Science Education	Faculty of Mathematics and Natural Sciences, Science Teaching Department	The Hebrew University of Jerusalem, Israel	Invited colloquium	March 14, 2012	Presenter	
Panel: Physics teaching tips	A Physics Teaching Exchange Warming Up to Physics: Connecting New & Seasoned Physics Teachers	UBC, Vancouver, BC	BC Association of Physics Teachers		Feb, 11, 2012	Panel facilitator and a panelist	
Panel: Report on IUPAP International Conference on Women in Physics	AAPT National Meeting	Ontario, California	American Association of Physics Teachers (AAPT)		Feb. 8, 2012	Panelist	

Title	Conference or Event	Location	Organization	Key-note?	Date	Role	Copresenters
Physics Teachers' Preparation in Canada: Challenges & Successes	AAPT National Meeting	Ontario, California	American Association of Physics Teachers (AAPT)		Feb, 7, 2012	Presenter	
Video-Based Motion Analysis for Classroom and Homework	Catalyst 2011, BCScTA Biannual Conference	Richmond, BC	BC Science Teachers Association (BCScTA)		Oct, 2011	Presenter	
Professional Development Workshop: Applying Physics Education Research to Promote Women in Physics	IV International Conference on Women in Physics	Stellenbosch, South Africa	International Union of Pure and Applied Physics		Apr, 2011	Panelist	Drs. J. H. Yoon, B.K. Hartline
Panel: State of Women in Physics	Winter 2011 AAPT Meeting	Jacksonville, FL	American Association of Physics Teachers (AAPT)		Jan, 2011	Presenter	
What Students' Use of Computer Modeling Can Tell Us About How Students Learn Science and How We Should Teach It	PWIAS Nanobio-physics Exploratory Workshop	Vancouver, BC	Peter Wall Institute for Advanced Studies (PWIAS) UBC		Oct, 2010	Presenter	
Introduction to Interactive Pedagogies: Creating & Using Successful Conceptual Questions	Canadian Association of Physicists Congress (CAP) 2010	Toronto, ON	CAP		June, 2010	Presenter	
Confessions of a Struggling Physics Teacher: When one has more questions than answers.	CAP Congress 2010	Toronto	Canadian Association of Physicists (CAP)	Yes	Jun, 2010	Presenter	
Educational Funding in Canada: Where, when and how	Teaching Scholars Series	University of British Columbia, Vancouver	UBC Teaching and Growth Centre (TAG)		May, 2010	Presenter	

<b>Title</b>	<b>Conference or Event</b>	<b>Location</b>	<b>Organization</b>	<b>Key-note?</b>	<b>Date</b>	<b>Role</b>	<b>Copresenters</b>
Teachers' Playground: Enhancing Teacher Professional Development through the Use of Technology	Professional Development Workshop for Israeli Science Teachers	Rehovot, Israel	Weizmann Institute of Science		Mar, 2010	Presenter	
Clickers, Tablets and Sensors in Physics Teaching	Professional Development Workshop for Israeli Science Teachers	Rehovot, Israel	Weizmann Institute of Science, Israel		Mar, 2010	Presenter	
Using Clickers to Engage Students in University Classrooms	Online webinar produced by the University of Northern Colorado	USA	University of Northern Colorado		Aug, 2009	Presenter	
Helen Sawyer Hogg: A Woman, an Astronomer, and a Great Communicator of Science	AAPT Summer 2009 Meeting	Ann Arbor, Michigan	AAPT		July, 2009	Presenter	
HP Grants for Tablet Technologies in Science Teaching: From Dream to Innovation	CAP 2009 Congress	Moncton, NB	CAP		June, 2009	Presenter	Dr. T. Antimirova
Clickers Beyond the First Year: Interactive Workshop	CAP 2009 Congress	Moncton, NB	CAP		June, 2009	Presenter	Dr. T. Antimirova
Clickers beyond the First Year: Interactive Teaching in Upper Level Physics Courses	7th Annual Canadian e-Learning Conference	Vancouver, BC, Canada	UBC		June, 2009	Presenter	
Physics for Architects: Design, Implementation and Evaluation of Innovative Physics Curricula	CAP 2008 Congress	Quebec City, QB	CAP		June, 2008	Presenter	

Title	Conference or Event	Location	Organization	Key-note?	Date	Role	Copresenters
Changing Roles of Science Educators: Science Education for Non-Science Majors and General Public	33 <sup>rd</sup> McGraw Hill Ryerson Teaching, Learning and Technology Conference	Vancouver, BC, Canada	Society of Teaching and Learning in Higher Education		May, 2008	Presenter	
Canadian Science Education Landscape: Trends, Challenges and Successes	Sloan Foundation Online Educational Workshops	United States	Moving the Laboratory Online: Situating the Online Laboratory Learning Experience for Future Success		May, 2008	Presenter	
Making Your Classes Click: Effective Use of Classroom Response System in Undergraduate Science	Invited Colloquium	Buffalo, NY	State University of NY		Apr, 2008	Presenter	

(ii) Other

Title	Conference or Event	Location	Organization	Key-note?	Date	Role	Copresenters
Active Learning by Innovation in Teaching	Twelfth International Symposium Frontiers of Fundamental Physics 2011	Udine, Italy	University of Udine		Nov 21-23, 2011	Collaborator (presented by D. Izadi)	Dina Izadi
A science adventure of a girl who wanted to be a physicist	4 International Women in Physics Conf.	Stellenbosch, South Africa	Intern. Union of Pure & Applied Physics		Apr, 2011	Presenter	
Report on the 2011 International Conference for Women in Physics,	CAP 2011 Congress	St. John's, Newfoundland	CAP		June, 2011	Presenter	
Teach me science tricks: do not tell me how it works!	CAP 2011 Congress	St. John's, Newfoundland	CAP		June, 2011	Presenter	
Hands-On Science on a Shoe-String Budget: 10 Science Activities with a 1-Dollar Bag of Magic Water Pearls	Catalyst 2011, BCScTA Biannual Conference	Richmond, BC	BC Science Teachers Association (BCScTA)		Oct, 2011	Presenter	

Facilitating engagement of pre-service elem. teachers with technology: Design and evaluation of effective multiple-choice science questions	EDULEARN 2011: International Conference on Technology, Education & Development	Madrid, Spain	International Assoc. for Technology, Education & Development		Nov, 2011	Presenter	Dr. J. Cha K. Hunter
Do Elementary School Teachers Need Physics? Lessons from the field	AAPT Winter 2011 Meeting	Jacksonville, FL	American Association of Physics Teachers (AAPT)		Jan, 2011	Presenter	
Reflections on Teaching an Online Advanced Graduate Course in Educ. Technology: Challenges and Successes	Ubiquitous Learning International Conference 2010	Vancouver, BC, Canada			Dec, 2010	Presenter	
Using YouTube & Facebook in Teaching Large Intro Physics Courses for Architecture Students	CAP 2010 Congress	Toronto, ON, Canada	CAP		June, 2010	Presenter	
Interactive Physics Teaching with Technology	CAP 2010 Congress	Toronto, ON, Canada	CAP		June, 2010	Chair	
Reflections of a Novice Online Instructor on Effective Technology Use in Online Graduate Courses	Investigating Our Practices	Vancouver, BC, Canada	UBC Faculty of Education		May, 2010	Presenter	
HP grants for Tablet Technologies in Science Teaching: From dream to innovation	International Conference on Technology, Education & Developm. - INTED 2010	Valencia, Spain	International Assoc. for Technology, Education & Development		Mar, 2010	Presenter	
Teachers' Playground: Enhancing Teacher Professional Development through the Use of Technology	International Conference on Technology, Education and Development - INTED 2010	Valencia, Spain	International Association for Technology, Education and Development		Mar, 2010	Presenter	

Enhancing Student Learning: Using Tablet PCs in Electricity and Magnetism	AAPT 2010 Winter meeting	Washington, DC			Feb, 2010	Presenter	
Enhancing Student Learning: Using Tablet PCs in Modern Physics	AAPT 2010 Winter meeting	Washington, DC			Feb, 2010	Presenter	
HP Mobile Science Lab: Enhancing Student Learning by Using Tablet PCs for Physics Teaching	GIREP-EPEC 2009 Intern. Conference: Physics Community & Cooperation	Leicester, United Kingdom	GIREP_EPEC		Aug, 2009	Collaborator	Dr. T. Antimirova
The Effect of Classroom Diversity on Conceptual Learning in Physics	Physics Education Research Conf. 2009	Ann Arbor, Michigan	AAPT		July, 2009	Presenter	Drs. T. Antimirova A. Noack
Technology as a Lens for Examining Instructor's Pedagogical Content Knowledge	Physics Education Research Conference 2009	Ann Arbor, Michigan	AAPT		July, 2009	Presenter	Drs. T. Antimirova R. Andriati T. Berezovsky
Ryerson Outreach to HS Community in Greater Toronto Area	AAPT Summer Meeting 2009	Ann Arbor, Michigan	AAPT		July, 2009	Presenter	Dr. T. Antimirova
Comparison of Two Active Learning Teaching Methods: Conceptual Conflict Collabor. Group & Peer Instruction	CAP 2009 Congress	Moncton, NB	CAP		June, 2009	Presenter	Drs. C. Kalman, T. Antimirova
Introduction to Video-Based Motion Analysis	CAP 2009 Congress	Moncton, NB	CAP		June, 2009	Presenter	Dr. T. Antimirova
Closing the Gender Gap in First Year Introductory Science Courses: What Instructors Should Know and What It Means for Women in Science	Faculty Conference: Shaping our Future: Teaching Excellence in a Changing Climate	Toronto, ON	Ryerson University		May, 2009	Presenter	Drs. A. Noack T. Antimirova

Professor Collaboration in Design, Implem. & Evaluation of Two Large Introductory Project-Based Physics Courses	Shaping our Future: Teaching Excellence in a Changing Climate	Toronto, ON	Ryerson University		May, 2009	Presenter	Dr. J. Carvalho
HP Mobile Science Lab: Tablet PCs for Science Teaching	Shaping our Future: Teaching Excellence in a Changing Climate	Toronto, ON	Ryerson University		May, 2009	Presenter	Dr. T. Antimirova
Teaching Studio-Based 2nd-Year Modern Physics Course with Technology	AAPT Winter 2009 Meeting	Chicago, IL	AAPT		Feb, 2009	Presenter	
Let the Dialog Begin: Undergraduates - Teachers - University Faculty	AAPT Winter 2009 Meeting	Chicago, IL	AAPT		Feb, 2009	Presenter	Dr. T. Antimirova
Comparison of Conceptual Conflict Collaborative Group Intervention with Modified Peer Instruction	AAPT Winter 2009 Meeting	Chicago, IL	AAPT		Feb, 2009	Presenter	Drs. C. Kalman, T. Antimirova
Using Video Analysis Tool of LoggerPro to Create Interactive Physics Lectures	Annual Conference 2008	Toronto, ON	Ontario Association of Physics Teachers		May, 2008	Presenter	Dr. T. Antimirova
Physics for Architects: Design, Implementation and Evaluation of Experienced-Based Physics Curricula	Building Community, Creating Learning Space	Toronto, ON	Ryerson University		May, 2008	Presenter	



**(e) Other Presentations:**

Role	Activity Dates		Conference or Event	Organization	Event Dates	
	Start	End			Start	End
Organizer and co-presenter	January 1, 2012	February 11, 2012	A Physics Teaching Exchange - Warming Up to Physics: Connecting New & Seasoned Physics Teachers (PD Event for BC Physics teachers)	UBC Faculty of Education and BC Association of Physics Teachers	February 11, 2012	February 11, 2012
Organizer and presenter	Aug, 2011	Oct, 2011	Science and Mathematics Fair	UBC Faculty of Education	Nov 5, 2011	Nov 5, 2012
Organizer and presenter	Aug, 2009	Oct, 2010	Family Science Day	UBC Faculty of Education	Oct 30, 2010	Oct 30, 2010
New Faculty Workshop Co-Organizer at CAP 2010 Conference	June, 2010	June, 2010	CAP Congress 2010	CAP	Jun 10, 2010	Jun 10, 2010
Member of the Organizing Committee	Mar, 2010	May, 2010	BC APT 2010 Annual Conference	BC Assoc. of Physics Teach. (BCAPT) Executive Board	May 8, 2010	May 8, 2010
Organizer of Physics Education Research Conference 2009	July, 2009	July, 2009	Physics Education Research Conference 2009	Physics Education Research Topical Group of AAPT		
Ontario Assoc. of Phys. Teachers (OAPT)	May, 2008	May, 2008	OAPT Annual Conference	Ryerson University and OAPT		
Organizer of three annual Faraday Science Events	Sep, 2004	Aug, 2007	Faraday Christmas Science Show (300+ attendees)	Department of Physics and Astronomy, UBC		

Since 2004, I have conducted more than 15 “Scientists and Innovators in the Schools” visits to British Columbia elementary and secondary schools. Each visit included a presentation to the students and teachers, a demonstration show and a question and answer period.

**(f) Other Events**

**(g) Conference Participation (Organizer, Keynote Speaker, etc.)**

**(i) Administration/Organization**

**(ii) Participation**

Conference or Other Event	Date
American Educational Research Association Annual Meeting, Vancouver, BC, Canada	April 13-18, 2012
The American Association for the Advancement of Curriculum Studies Annual Meeting, UBC, Vancouver, BC, Canada	April 10-13, 2012

Conference or Other Event	Date
American Association for the Advancement of Science Annual Meeting, Vancouver, BC	February 16-20, 2012
A Physics Teaching Exchange - Warming Up to Physics: Connecting New & Seasoned Physics Teachers (PD Event for BC Physics teachers)	Feb 11, 2012
Physics Education Symposium (Ontario, California) – in conjunction with AAPT	Feb, 2012
AAPT National Winter Meeting 2012 (Ontario, California)	Feb, 2012
National Science Teachers' Association Regional Meeting (Seattle, Washington)	Dec, 2011
International Conference on Educational Technology, INTED 2011 (Madrid, Spain)	Nov, 2011
Catalyst, BC Science Teachers Association Biannual Meeting (Richmond, BC)	Oct, 2011
AAPT National Summer Meeting 2011 (Omaha, NB)	July, 2011
CAP Congress 2011 (St. John's, NF)	June, 2011
BC Association of Physics Teachers Annual Meeting (Kelowna, BC)	May, 2011
4 <sup>th</sup> International Conference on Women in Physics (Stellenbosch, South Africa)	April, 2011
BCAPT Professional Development Workshop for Physics Teachers (UBC) (organizer)	Feb, 2011
AAPT National Winter Meeting 2011 (Jacksonville, FL)	Feb, 2011
BCAPT Professional Development Workshop: A High-energy Pro-D Opportunity at TRIUMF (Organizer)	Oct, 2010
Objectivity in Science, UBC Conference	June, 2010
TAG Institute 2010: Instructor Capacity Building for working in Diverse Classrooms: UBC's engagement with Aboriginal Issues (UBC)	May, 2010
TAG Institute 2010: Blogging with WordPress	May, 2010
CAP 2010 Congress (Toronto, ON)	Jun, 2010
TAG Institute: Tablet PCs: More or less (UBC TAG)	May, 2010
TAG Institute: Multiple Choice Questions Writing (UBC TAG)	May, 2010
TAG Institute: Research on Teaching and Learning (UBC TAG)	May, 2010
Educational Technologies Roundtable (UBC OLT and TAG)	May, 2010
Investigating Our Practices Conference (UBC Faculty of Education)	May, 2010
UBC OLT special Focus group on emerging educational technologies (UBC)	May, 2010
Teaching Scholars Program (3 day workshop) (UBC)	Apr, 2010
Wimba Workshop by the Office of Learning Technologies (OLT, UBC)	Apr, 2010
Professional Development workshop for Israeli Science Teachers	Mar, 2010
International Conference for Technology, Education and Development, Valencia, Spain	Mar, 2010
Hewlett Packard Innovations in Education Worldwide Summit, San-Francisco, CA	Feb, 2010
Symposium on Physics Education, Washington DC	Feb, 2010
Physics Teachers' Education Coalition Annual Conference, Washington DC	Feb, 2010
AAPT Winter Meeting (Washington, DC)	Feb, 2010
WebCT-Vista Boot camp Workshop (UBC OLT and TAG)	Feb, 2010
HP Innovations in Education Worldwide Summit (San Francisco, CA)	Feb, 2010
CeLC 2009	Jun, 2009
AAPT Winter Meeting, (Baltimore, MD)	Jan, 2009
AAPT Summer Meeting, (Ann Arbor, MI)	July, 2009
CAP Congress (Moncton, NB)	June, 2009
Ryerson University, Faculty Teaching and Learning Conference (Toronto, ON)	May, 2009

Conference or Other Event	Date
Ryerson University Teaching Development Program 2007-2009 (Toronto, ON)	May, 2009
33rd McGraw Hill Ryerson Teaching, Learning and Technology Conference (SFU and McGraw Hill (Vancouver, BC)	May, 2008
AAPT Summer Meeting (Edmonton, AB)	July, 2008
AAPT Winter Meeting, (Baltimore, MD)	Jan, 2008
Ryerson University, Faculty Teaching and Learning Conference (Toronto, ON)	May, 2008
CAP Congress, (University of Laval, Quebec City, QC)	June, 2008
AAPT Winter Meeting (Chicago, IL)	Jan, 2008
Ryerson McGraw Hill Teaching and Learning Conference, Ryerson University, Canada	Nov, 2007
Faculty Certificate Program, (TAG UBC)	2006-2007
International Society for the History and Philosophy of Science, International Conference (Calgary, AB)	July, 2007
AAPT Winter Meeting (Seattle, WA)	Jan, 2007
AAPT Summer Meeting (Greensboro, NC)	July, 2007
AAPT Winter Meeting 2006 (Anchorage, Alaska)	Jan, 2006
AAPT Summer Meeting 2006 (Syracuse, NY)	July, 2006
CAP Congress (Brock University, St. Catherine's, ON)	June, 2006
National Science Teachers Association Annual Meeting, Anaheim, CA	Apr, 2006
CAP Congress (UBC, Vancouver, BC)	June, 2005
AAPT Winter Meeting 2003 (Austin, TX)	Jan, 2003
AAPT Meeting (Philadelphia, PA)	Jan, 2002
AAPT Summer Meeting 2001 (Rochester, NY)	July, 2001

---

## 10.1 Service to the University

---

### **a) Memberships on committees**

Type	Committee Name	Role	Dates	
			Start	End
Faculty	Social Media Group	Member	Nov, 2011	
Faculty	Faculty of Education Congress	Member	May, 2011	
Faculty	Faculty of Education "Dadaab Refugee Camp" Project Committee	Member	Sept, 2011	
Department	Department of Curriculum and Pedagogy Outreach Committee	Chair	Sept, 2011	
Department	Department of Curriculum and Pedagogy Seminar Committee	Member	Sept, 2011	August 2012
Department	Department of Curriculum and Pedagogy Graduate Advisory Committee	Member	Sept, 2011	August 2012
Department	Department of Curriculum and Pedagogy DSPC	Member	Sept, 2011	May 2012

Type	Committee Name	Role	Dates	
			Start	End
	(Promotion and Tenure) Committee			
Faculty	Celebrate Learning: Faculty of Education Science Open House	Chair	July, 2010	Oct, 2010
Faculty	Walkabout Committee	Member	Nov, 2010	May, 2011
Department	Department of Physics and Astronomy Science Outreach Committee	Member	Sept, 2004	Aug, 2007

**b) Other Service:**

**10.2 Service to the Hospital (N/A)**

---

**11. Service to the Community**

---

**a) Memberships on scholarly societies and other organizations**

Organization	Dates	
	Start	End
American Association for the Advancement of Science (AAAS)	Jan, 2012	Current
American Educational Research Association (AERA)	Jan, 2010	Current
Canadian Society for the Studies in Education (CSSE)	2011	Current
Canadian Association for Teacher Education (CATE)	2010	Current
National Association of Research in Science Teaching (NARST)	Jan, 2010	Current
American Physical Society	Jan, 2008	Dec, 2010
American Association for Computers in Education (AACE)	Aug, 2007	Jan, 2009
Society of Teaching and Learning in Higher Education (STLHE)	Sept, 2006	2009
Scientists and Innovators in the Schools (SIS)	Mar, 2005	Current
National Science Teachers Association (NSTA)	Jan, 2005	Current
Canadian Association of Physicists (CAP)	Sept, 2004	Current
International Society for Scholarship of Teaching and Learning (ISSOTL)	2004	2009
American Association of Physics Teachers (AAPT)	Aug, 1999	Current
BC Association of Physics Teachers (BCAPT)	Sept, 2004	Current
ON Association of Physics Teachers (OAPT)	Sept, 2007	Current

**b) Memberships on other societies**

Organization	Dates	
	Start	End
Toastmasters International	Apr, 2010	Current

**c) Memberships on scholarly committees**

Organization	Committee Name	Role	Dates	
			Start	End
BC Section of the American Association of Physics Teachers	Executive Board	President	Jun, 2011	May, 2012
BC Section of the American Association of Physics Teachers	Executive Board	Vice President	Jun, 2010	May, 2011
American Association of Physics Teachers	Executive Board	Chair Section Representatives, Chair of the Audit Committee, Member of the Awards and the Governance Structure Committees	Feb, 2011	Feb, 2013
American Association of Physics Teachers	Executive Board	Vice-Chair Section Representatives, Chair of the Audit Committee, Member of the Awards Committees and the Committee of Governance Structure	Feb, 2009	Feb, 2011
Science Rendezvous Toronto	Science Rendezvous Toronto	Member	Sept, 2008	May, 2009
Physics Education Research Group of AAPT	Physics Education Research Conference 2009 Organizing Committee Member	Member	July, 2008	Nov, 2009
American Association of Physics Teachers	Nominating Committee	Member	Nov, 2007	Nov, 2008
Canadian Association of Physicists	CAP Outreach and Publications Committee	Member	2007	
Canadian Association of Physicists	Division of Physics Education	Member	June, 2006	
American Association of Physics Teachers		Member of the Nominating Committee	2007-2008	
American Association of Physics Teachers	AAPT Women in Physics Committee	Member-Friend	Jan, 2005	

**Offices Held**

Organization	Office Name	Dates	
		Start	End
British Columbia Association of Physics Teachers	Section Representatives, Member of the Executive Board	Dec, 2009	Jan, 2013
BC Association of Physics Teachers	Web Master of the BCAPT	Jan, 2010	Jan, 2013
British Columbia Association of Physics Teachers	Vice-President	May, 2010	May, 2011
Ontario Association of Physics Teachers (ON APT)	Section Representatives, Member of the Executive Board	Oct, 2007	Dec, 2009
British Columbia Association of Physics Teachers	Section Representatives, Member of the Executive Board	Dec, 2004	Aug, 2007

Organization	Office Name	Dates	
		Start	End
British Columbia Association of Physics Teachers	Section Representatives, Member of the Executive Board	Jan, 2010	Jan, 2013
Canadian Association of Physicists	Member of the CAP Publications Committee	Aug, 2008	Jan, 2010
American Association of Physics Teachers	Vice-Chair of the Section Representatives, Member of the Executive Board	Jan, 2009	Jan, 2013

**d) Memberships on other committees (N/A)**

**e) Editorships**

Journal	Position	Dates	
		Start	End
Ubiquitous Learning Journal	Associate Editor	Aug, 2011	Dec, 2011
Canadian Journal of Action Research	Member of the Review Board	Jan, 2011	Current
Canadian Journal of Physics	Associate Editor (Physics Education Section)	Sept, 2009	Current
Physics in Canada	Member of the Physics Education Section Editorial Review Board	Jan, 2009	Current
Ontario Association of Physics Teachers Physics Grade 11 Contest Board	Ontario Physics Grade 11 Contest Editorial Board member	Jan, 2008	Dec, 2009
Science Education Review	Member of the Editorial Review Board	Jan, 2008	Current
The Physics Teacher	Member of the Review Board	Jan, 2004	Current

**f) Reviewer/Referee**

**(i) Journal Reviewing/Refereeing**

Journal	Press	# Reviewed or Refereed	Dates	
			Start	End
Canadian Journal of Learning and Technology		1	2012	
National Association of Research in Science Teaching Annual Conference Proceedings	NARST	5	Sep, 2010	Oct, 2010
Ubiquitous Learning Journal	CGP Publisher	3	Jan, 2010	Sep, 2010
Science Education Review		5	2008	
Physics Education Research Conference Proceedings	American Institute of Physics (AIP)	3	2008	2010
Canadian Journal of Physics	National Research Council Press	7	Jul, 2007	
The Physics Teacher	AIP	8	2003	
Physics in Canada	NRC	8	2006	

(ii) Conference Reviewing/Refereeing

Conference	Organization	# Reviewed or Refereed	Dates	
			Start	End
Canadian Society of Studies in Education Annual Conference	CSSE	4	Sep, 2011	
Ubiquitous Learning Conference	Ubiquitous Learning Conference	4	Jun, 2010	Aug, 2010
American Education Research Annual Conference	American Educational Research Association	4	Jun, 2010	Jul, 2010
Canadian Journal of Action Research		3	2011	
Physics Education Research Conference Reviewer	American Association of Physics teachers	12	2005	

(iii) Grant Application Assessment

Grant Description	Dept./Unit	Organization	# Assessed	Dates	
				Start	End
SSHRC	Committee 17	SSHRC	1	Nov, 2010	Jan, 2011
	CRYSTAL Grant Administration		1	Apr, 2007	Aug, 2008

(iv) Promotion/Tenure Assessment

In 2011-2012 Academic year I reviewed two reappointment files of the UBC faculty members at the UBC Department of Curriculum and Pedagogy (EDCP, Faculty of Education).

(v) Organizational Review (N/A)

**g) External examiner**

Student	Role	Institution	Dept./Div.	Date

**g) Advisory**

(i) Consulting/Advising

Description of Activity	Dept./Unit	Organization	Dates	
			Start	End
Organization of the inaugural New Faculty Workshop at CAP 2010 Congress in Toronto, ON	CAP Division of Physics Education	Canadian Association of Physicists (CAP)	Jan, 2010	June, 2010
Consulted a software company on the design of a software for teaching (Active Textbook)	<a href="http://www.evidentpoint.com/">http://www.evidentpoint.com/</a>	Evident Point, Ltd.	June, 2011	September, 2011

(ii) Expert Witness

**h) Interviews**

(i) Broadcast

Topic	Interviewer	Program	Network	First Broadcast
Status of Women in Science, Engineering and in Business in Canada	Alexandra Gerson	Radio Vera: Russian Radio of Vancouver (96.1 FM)	<a href="http://vancouverovka.com/index.cfm?a=radio_vera">http://vancouverovka.com/index.cfm?a=radio_vera</a>	Aug 25, 2010

(ii) Textual

Topic	Interviewer	Forum	Publication Date
Science Outreach to elementary schools	NSTA Staff member	NSTA Reports	Nov, 2011
Physics Education "Excellence in Undergraduate of Physics Teaching Medal"	Robert Thompson	CAP	June 11, 2010
Implementation of innovative educational technologies in physics teaching.	Kelle Campbell	Vernier Technologies	Feb 10, 2010

**i) Other**

Role	Organization	Duties	Dates	
			Start	End
Member of the Organizing Committee	EDCP (UBC) and PNE	A co-organizer of the BC Brightest Minds Outreach Science event	September, 2011	May, 2012
Member of the Organizing Committee	EDCP and Department of Physics and Astronomy	A co-organizer of the 34 <sup>th</sup> Physics Olympics	September, 2011	April, 2012
Judge of the School Science Fair	Point Grey Mini School	Judge a local science fair event	January, 2012	February, 2012
Member of the Organizing Committee	BC Association of Physics Teachers	A co-organizer of the BCAPT Professional Development Day for Physics Teachers at UBC on February 11, 2012	Aug, 2012	Feb, 2012
Presenter	UBC	Organized and presented at the Open House Science education event for Pender Harbour Secondary School (9 grade 10-12 students and their science teacher)	Nov. 30, 2011	Nov 30, 2011
Presenter	Scientists and Innovators in the Schools	Visited 4 elementary schools in greater Vancouver area: presented science outreach lessons, science demonstrations,	Sept, 2011	



Role	Organization	Duties	Dates	
			Start	End
		interactive science hands-on activities.		
Member of the Organizing Committee	BC Association of Physics Teachers (BCAPT)	A co-organizer of the BCAPT Professional Development Day for Physics Teachers at UBC on February 5, 2011	Aug, 2011	Feb, 2011
Member of the Organizing Committee	BC Association of Physics Teachers	A co-organizer of the BCAPT Professional Development Day for Physics Teachers at TRIUMF.	May, 2010	Oct, 2010
Presenter: Spirit Day Seaforth Elementary School	Seaforth Elementary School Burnaby	Presented 3 lectures to elementary school students (grades K-1; 4-5 and 6-7). Topics: Women in science, science education.	Apr, 2010	Apr, 2010
Judge: Vancouver Regional Science Fair		Judged the Regional Vancouver Science Fair: April 8, 2010 at UBC	Apr, 2010	Apr, 2010
Scientists and Innovators in the Schools	Scientists and Innovators in the Schools	Have been visiting local schools as a scientist guest with hands on presentations. Have conducted more than 15 science outreach presentations that affected almost 1400 students.	2005	
BC Science Fair Judge	BC Science Fair Foundation	Have been a local, provincial and national science fair judge since 2004.	2004	

## 12. Awards and Distinctions

### a) Awards for Teaching

Name	Type	Presenter	Amount	Dates	
				Start	End
Canadian Association of Physicists Excellence in Undergraduate Physics Teaching Medal	Teaching Award	CAP		June, 2010	
Ryerson Faculty of Engineering Architecture and Science Excellence in Teaching Award	Teaching Award	Ryerson University	2500	Oct, 2009	
UBC Faculty of Science Excellence in Science Teaching Award	Teaching Award		2000	Sep, 2005	

### b) Awards for Scholarship

Name	Type	Presenter	Amount	Dates	
				Start	End
NSTA Vernier Technology Award	Academic Prize	National Science Teachers Association	3000	2006	

**c) Awards for Service**

Name	Type	Presenter	Amount	Dates	
				Start	End
UBC Faculty of Science Service Award	Service Award	UBC, Faculty of Science	3000	2005	

**d) Other Awards**

Name	Type	Presenter	Amount	Dates	
				Start	End
International Teaching Assistant Excellence Award	Award	University of Texas, Austin		2000	2001

**13. Other Relevant Information (one page maximum)**

---

# University of British Columbia

## Publications Record

Date: January 17, 2012

Initial: MMB

FIRST NAME: Marina

SURNAME: Milner-Bolotin

MIDDLE  
NAME(S):

### 01. Refereed Publications

#### (a) Journals

- Milner-Bolotin, M. (2012). Water Pearls Optics Challenges for Everybody. *The Physics Teacher*, **50**(1), 144-145.
- Milner-Bolotin, M., & Nashon, S. (2012). The essence of student visual-spatial literacy and higher order thinking skills in undergraduate biology. *Protoplasma*, **249**(1), 25-30.
- Milner-Bolotin, M. (2012). Increasing Interactivity and Authenticity of Chemistry Instruction through Data Acquisition Systems and Other Technologies. *Journal of Chemical Education*, **89** (4), 477-481.
- Milner-Bolotin, M. (2012). Growing Water Pearls: Exciting Physical Science Activities on a Shoestring Budget. *The Science Teacher* (In press).
- Milner-Bolotin, M. (2011). Science Outreach to Elementary Schools: What the Physics Community Can Do to Make a Difference. *Physics in Canada*, **67**(3 (July-Sept.)), 174-176.
- Milner-Bolotin, M., Antimirova, T., & Noack, A. (2011). Attitudes about science and conceptual physics learning in university introductory physics courses. *Physical Review Special Topics - Physics Education Research*, **7**, 020107-020109.
- Milner-Bolotin, M., T. Antimirova and A. Petrov (2010). Clickers beyond the First Year: Interactive Teaching in Upper Level Physics Courses. *Journal of College Science Teaching*, **40** (2), 18 - 22.
- Kalman, C., M. Milner-Bolotin and T. Antimirova (2010). Comparison of the effectiveness of collaborative groups and peer instruction in a large introductory physics course for science majors. *Canadian Journal of Physics*, **88** (1), 1 - 8.
- Kalman, Calvin, Tetyana Antimirova and Marina Milner-Bolotin (2010). Comparison of the effectiveness of collaborative groups and peer instruction in a large introductory physics course for science majors. *Canadian Journal of Physics*, **88** (6), 1 - 8.
- Milner-Bolotin, Marina (2010). Exploring Scaling: From Concept to Applications. *Science Education Review*, **8** (3), 70 - 77.
- Noack, A., T. Antimirova and M. Milner-Bolotin (2010). Student Diversity and the Persistence of Gender Effects on Conceptual Physics Learning. *Canadian Journal of Physics*. **87** (12), 1269 - 1274.
- Schuster, D., A. Undreu, B. Adams, D. Brookes and M. Milner-Bolotin (2009). Motion-Matching: A Challenge Game to Generate Motion Concepts. *The Physics Teacher*, **47** (7), 381 - 384.
- Lasry, N., T. Antimirova and M. Milner-Bolotin (2009). Physics Education Across Paradigms. *Physics Education Research Conference 2009 Proceedings*. 1179 (2009): xi - xiv.
- Noack, A., T. Antimirova and M. Milner-Bolotin (2009). The Effect of Classroom Diversity on

Conceptual Learning in Physics. *Physics Education Research Conference 2009 Proceedings*, 1179.

- Milner-Bolotin, M. The Evolution of Teaching and the Role of Teaching-Only Faculty in Physics Departments (2009). *Physics in Canada*, **65** (April – May), 57.
- Milner-Bolotin (2008), M. Open Letter to Dr. Suzanne Fortier, President Natural Sciences and Engineering Research Council of Canada: Can We Afford Not to Fund Science Education in Canada? *Physics in Canada*, **64** (1), 5.
- Milner-Bolotin, M. and R. Moll (2008), Physics Exam Problems Reconsidered: Using Logger Pro Technology to Evaluate Student Understanding of Physics. *The Physics Teacher*, **46** (8), 494 - 500.
- Antimirova, T., P. Goldman, N. Lasry, M. Milner-Bolotin and Robert Thompson. (2008), Recent Developments in Physics Education in Canada. *Physics in Canada*, **65** (1), 19 - 22.
- Moll, R. and M. Milner-Bolotin. (2008), The Effect of Interactive Lecture Experiments on Student Academic Achievement and Attitudes towards Physics, *Canadian Journal of Physics*, **87** (8), 917 - 924.
- Milner-Bolotin, M. (2007), Building Bridges between the Scientists and the Teachers to Bring the Joy of Science to British Columbia Students, *The Science Scope*, **30** (9), 58 - 59.
- Milner-Bolotin, M., A. Kotlicki and G. Rieger (2007), Can Students Learn from Lecture Demonstrations: The Role and Place of Interactive Lecture Experiments in Large Introductory Science Courses? *Journal of College Science Teaching*, **36** (4), 45 - 49.
- Milner-Bolotin, M. and T. Antimirova. (2007), Physics Education in Canada: Recent developments, *Journal of College Science Teaching*, **VI** (1), 28 - 29.
- Milner-Bolotin, M. (2007), Reflections on the University of British Columbia Faculty Certificate Program, *International Journal for the Scholarship of Teaching and Learning*, **1** (2), 6 - 7.
- Milner-Bolotin, M. (2007), Teachers as Actors: The Implications of Acting on Physics Teaching. *The Physics Teacher*, **45** (October), 58 - 60.
- Milner-Bolotin, M. (2004), Tips for Using a Peer Response System in the Large Introductory Physics Classroom, *The Physics Teacher*, **42** (8), 47 - 48.
- Milner-Bolotin, M. (2010), Audience Response System: Response to Readers' Questions. *Science Education Review*, **9** (2), 51 - 52.
- Milner-Bolotin, M. and Robert Thompson, (2010), Interview with Marina Milner-Bolotin. *Physics in Canada*, **66** (3), 207 - 212.

**(b) Conference Proceedings**

- Kalman, C. S., Milner-Bolotin, M., Antimirova, T., Aulls, M., Charles, E. S., Huang, X., et al. (2012). *Understanding the Nature of Science and Nonscientific Modes of Thinking in Gateway Science Courses*. Paper presented at the National Association for Research in Science Teaching Annual Conference, Indianapolis, IN, March 25-28, 2012.
- Milner-Bolotin, M. (2012, April, 2012). *Investigating Science Questioning Practices of Elementary Pre-Service Teachers: Design of Elementary Science Questions Evaluation Rubric*. Paper presented at the American Educational Research Association Annual Meeting, Vancouver, BC.
- Milner-Bolotin, M., Cha, J., & Hunter, K. (2011, November 14-16, 2011). *Facilitating engagement of pre-service elementary teachers with technology: Design and evaluation of effective multiple-choice science questions* Paper presented at the International Conference on Educational Technology, Madrid, Spain.

(c) Other

**02. Non Refereed Publications**

(a) Journals

Milner-Bolotin, M., Predoi-Cross, A., Austin, R., Dasgupta, A., Ghose, S., Steinitz, M., et al. (2011). Report on Canadian Team's Participation in the 4th International Conference for Women in Physics. *Physics in Canada*, **67** (3 (July-Sept.)), IWIP2-IWIP5.

Antimirova, T. and M. Milner-Bolotin, (2009). A Brief Introduction to Video Analysis. *Physics in Canada*, **65** (April – May), 74.

Milner-Bolotin, M. (2008), 10 Things Physics Teachers Can Do to Help Their Students Succeed at University Physics. *Newsletter of the Ontario Association of Physics Teachers*, February (2008), 2 - 3.

Milner-Bolotin, M. (2008), An Ultimate Elevator Ride. *Newsletter of the Ontario Association of Physics Teachers*, November (2008), 1 - 2.

Antimirova, T., J. Atherton, D. Doucette, J. Ball, M. Milner-Bolotin and G. Wagoner, (2008). Creating a Dialog between High School-University Teachers and University Undergraduate Students. *Newsletter of the International Consortium on Physics Education (ICPE)*. September (2008): 4.

Antimirova, T., M. Milner-Bolotin and P. Goldman (2008). Physics Education on the Move in Canada. *Newsletter of the International Consortium on Physics Education (ICPE)*. **55** (April), 2 - 4.

Milner-Bolotin, M. (2006), Course Profile: Showcasing the variety of ways that members of the UBC teaching community are helping to enhance student learning. Tips for Using Peer Response System (clickers) in Large Introductory Science Classes. *Tapestry*, **13**, 7 - 8.

Milner-Bolotin, M. (2006), Demonstration of a variable tension in a pendulum's string. *Newsletter of the Ontario Association of Physics Teachers*. Fall (2006): 1.

Phelps, D. and M. Milner-Bolotin (2005). Improving on "Predict, Observe, Explain": A Model-Based View of Science Education. *Momentum*, **6** (2), 28 - 29.

(b) Conference Proceedings

(c) Other

Milner-Bolotin, M. (2011). *Book Review: Teacher Education Matters: A Study of Middle School Mathematics Teacher Preparation in Six Countries*. Teachers College Press.

**03. Books**

(a) Authored

(b) Edited

(c) Chapters

Milner-Bolotin, M. (2010), Trends in Science Education Today: The Canadian Science Education Landscape. *Moving Labs Online*. Ed. S. Albon and D. Cancilla. Sloan Foundation, 2010.

**04. Patents**

**05. Special Copyrights**

**06. Artistic Works, Performances, Designs**

**07. Other Works**

**Abstracts**

**Videos**

**Presentations**

**Radio & TV Programs**

**08. Work Submitted (including publisher and date of submission)**

**09. Work In Progress (including degree of completion):**

Working on the following research projects:

Milner-Bolotin, M., Nashon, S., & Cha, J. (2011). Investigating the “Best Technology-Based Science Instructional Practices” in Canadian and Korean Secondary Teacher Education Programs (Vol. 25,000). The University of British Columbia, Vancouver: Hampton Fund, UBC (40% complete).

Introductory Physics Textbook, co-author. Expected date of publication 2013. (85% complete).

Investigating the Role and Place of the History and Philosophy of Science in teacher education. (10% complete)...