

THE UNIVERSITY OF BRITISH COLUMBIA

Curriculum Vitae for Faculty Members

Date: November, 2017 **Initials:** MMB

- SURNAME:** Milner-Bolotin **FIRST NAME:** Marina
MIDDLE NAME(S):
- DEPARTMENT/SCHOOL:** Curriculum & Pedagogy (EDCP)
- FACULTY:** Education
- PRESENT RANK:** Associate Professor **SINCE:** July 1, 2015
- POST-SECONDARY EDUCATION**

University or Institution	Degree	Subject Area	Dates
The University of TX at Austin ¹	Ph.D.	Science Education	1999 –2001
The University of TX at Austin ²	M.A.	Science Education	1998 –1999
Bar Ilan University, Israel	Teaching Certification	Mathematics and Science Education	1992 –1994
V.N. Karazin Kharkiv National University, Ukraine, former USSR ³	M.Sc.	Theoretical Physics	1989 –1991
V.N. Karazin Kharkiv National University, Ukraine, former USSR	B.Sc.	Physics	1986 –1989

¹ Dissertation title "*The Effects of the Topic Choice in Project-Based Instruction on Undergraduate Physical Science Students' Interest, Ownership, and Motivation*". Dissertation supervisors Prof. Marina D. Svinicki and Prof. Austin Gleeson.

² Thesis title "*Rediscovering Project-Based Instruction for Physics Teaching for Non-science Majors*". Thesis supervisors Prof. Marina D. Svinicki and Prof. Austin Gleeson.

³ Thesis title "*The Ground State of the quasi-dimensional conductor with the charge-density wave in the random field of impurities*". Thesis Supervisor, Prof. A. Rozhansky.

Special Professional Qualifications

Course title, Institution	Outcome	Subject Area	Dates
Fellowship for the Scholarship of Teaching and Learning, University of British Columbia	Certificate	Scholarship of Teaching and Learning	2010-2012
University Teaching Development Program Certificate, Ryerson University	Certificate	Mathematics and Science Education	2007 – 2009
University Faculty Teaching Certificate Program, University of British Columbia	Certificate	General teaching	2006 – 2007
NSF Chautauqua Professional Development courses for secondary science teachers (completed 5 courses)	Certificates	Mathematics and Science Education	1999 –2005
Bar Ilan University, Israel	Teaching Certification/B.Ed.	Mathematics and Science Education	1992 –1994
Weizmann Institute of Science, Professional Development courses	Certificates	Mathematics and Science Education	1993 – 1997

Language Competences

English (Read, Write, Speak, and Understand – fluent)

Russian (Read, Write, Speak, and Understand – fluent)

Hebrew (Read, Write, Speak, and Understand – fluent)

Ukrainian (Read, Write, Speak, and Understand – fluent)

German (Read, Write, Speak, Understand – beginner)

Spanish (Read, Write, Speak, Understand – beginner)

6. EMPLOYMENT RECORD

(a) *Prior to coming to UBC*

University, Company or Organization	Rank or Title	Dates
Department of Medical Physics, Ryerson University, Toronto, ON, Canada	Assistant Professor	July 1, 2007 – December 31, 2009
Department of Physics and Astronomy, The University of British Columbia, BC, Canada	Research Associate	June 1, 2004 – June 30, 2007
Mathematics and Science Teaching and Learning Center, Department of Physics and Astronomy, Rutgers University, the State University of New Jersey, USA	Research Associate, Associate Director of Math and Science Teaching and Learning Center,	July 1, 2001 – May 31, 2004
The University of TX, at Austin, TX, USA	Assistant Instructor	May 1, 1998 – May 31, 2001
Weizmann Institute of Science, Department of Science Teaching, Israel	Research Associate	Sept. 1993 – March 1998
Weizmann Institute of Science, Youth Activities Section, Israel	Lecturer and Outreach Activities Coordinator	Sept. 1993 – March 1998
Middle and Secondary schools, Israel	Math and science teacher	Sept. 1994 – August 1997

(b) *At UBC*

Rank or Title	Dates
Associate Professor	July 1, 2015 – present
Assistant Professor	January 1, 2010 – June 30, 2015

(c) *Date of granting of tenure at UBC: March 21, 2016 (backdated to July 1, 2015)*

7. LEAVES OF ABSENCE

University, Company or Organization at which Leave was taken	Type of Leave	Dates

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8. TEACHING

(a) *Areas of special interest and accomplishments (200 words)*

My area of special interest is researching physics pedagogy and how it is mediated through modern technologies. In particular, I explore how research and pedagogy inform each other. This approach to my practice enables me to bridge the results of physics education research with the teaching practice both in K-12 and post-secondary education systems. This is clearly demonstrated in my research and other scholarly publications and presentations. To this end I have secured substantial funding, such as UBC Teaching and Learning Enhancement Fund. I have also received a number of awards in recognition of my teaching achievements which I owe to this approach of blending physics education and practice. Among them are: National Science Teacher Association Vernier Technology Award (2006); UBC Faculty of Science Excellence in Science Teaching Award (2007); Ryerson Excellence in Teaching Award (2009). In 2010, I was the first woman to receive the Canadian Association of Physicists' Excellence in Undergraduate Teaching Medal. In 2014, I was nominated by my students and was awarded the UBC Faculty of Education Killam Teaching Award. I also actively mentor physics teacher-candidates during my Methods course and also post-graduation. I supervise and mentor many graduate students helping them to fulfill their potential.

(b) *Courses Taught at UBC (since 2010):*

Comment: 100 – 400 courses are undergraduate courses; 500 courses are graduate courses.

Session	Course #	Total scheduled hours	Class size	Total hours taught per course			
				Lectures	Tutorials	Labs	Other
Winter 1 2017	EDCP 357 (301) ⁴	39	9	13	13	13	
Winter 1 2017	EDCP 352 (301) ⁹	39	26	13	13	13	
Winter 1 2017	EDCP 352 (302) ⁹	39	27	13	13	13	
Winter 1 2016	EDUC 450B (311) ⁸	39	22				39
Winter 1 2016	EDCP 357 (301) ⁴	39	18	13	13	13	
Winter 2 2015	EETC 533 (65A) ¹	39	21				Online
Winter 1 2015	EDCP 357 (301) ⁴	39	12	13	13	13	
Summer 2015	EETC 533 (65A) ¹	Online	21				Online
Summer 2 2015	EDCP 585B (951) ²	39	11	26		13	
Winter 2 2014	EETC 533 (65A) ¹	Online	24				Online
Winter 2 2014	EDUC 451B (308) ³	30.0	12				30
Winter 1 2014	EDCP 357 (301) ⁴	39	8	13	13	13	
Winter 1 2014	EDCP 559 (031) ⁵	39	13	39			

Summer 2 2014	EDCP 585B (951) ²	39	6	26		13	
Winter 1 2013	EDCP 559 (031) ⁵	37.5	8	3.0			
Winter 1 2013	EDCP 357 (301) ⁴	37.5	10	13	13	13	
Summer 2013	EETC 533 (65A) ¹	Online	26				Online
Summer 2 2013	EDCP 585B (951) ²	37.5	9	26		13	
Winter 2 2012	EDUC 451B (308) ³	37.5	11	1.0		2.0	
Summer 2 2012	EDCP 585A (971) ²	37.5	11	26		13	
Winter 1 2012	EDCP 559 (031) ⁵	37.5	11	3.0			
Winter 1 2012	EDCP 357 (301) ⁴	39	13	1.5		1.5	
Summer 2 2011	EDCP 585A (971) ²	39	12	26		13	
Winter 1 2011	EDCP 349 (109) ⁶	37.5	33	1.5		1.5	
Winter 2 2011	EDUC 329 ⁷	Practicum	4				School supervision
Winter 2 2010	EDUC 329 ⁷	Practicum	6				
Winter 1 2010	EDCP 349 (109) ⁶	39	31	1.5		1.5	
Winter 2 2010	EDCP 349 (401) ⁶	39	19	1.5		1.5	
Winter 2 2009	EETC 533 (65A) ¹	Online	22				Online

Courses' titles:

¹ EETC 533: Teaching math and science through technology (online course, UBC Masters in Educational Technology Program)

² EDCP 585 A/B: Teaching mathematics and science through technology (Face-to-face course)

³ EDUC 451 B: Inquiry II course for secondary mathematics and science teacher-candidates

⁴ EDCP 357: Physics secondary methods course

⁵ EDCP 559: Research in the teaching and learning of the sciences

⁶ EDCP 349: Science elementary methods course (Project-Based cohort)

⁷ EDUC 329: Secondary school practicum course supervision

⁸ EDUC 450 B: Inquiry I course for secondary mathematics and science teacher-candidates

⁹ EDCP 352: General Science Methods course for secondary science teacher-candidates

Out of these UBC courses 8 of them were developed by me – see below.

(b1) New Course Development (2004 – present)

Course #	Course Title	University	Course level	Years taught	Credits (hours)
EDCP 352	Secondary General Science Methods Course	UBC	Undergraduate, B.Ed.	2017	3.0
Special course for STEM teachers in Chaoyang School District, Beijing, China.	Math & science teaching and learning with technology	Chaoyang School District	Professional development course for STEM teachers	May 18-30, 2015	30 hours/course x 2 courses
EDCP 559 (031)	Research in science teaching & learning	UBC	Graduate (Face-to-face)	W1 2014 W1 2013 W1 2012	3.0
EDCP 585 A/B	Math & science teaching & learning through technology	UBC	Graduate (Face-to-face)	Summer 2, 2011/2012/2013/2014/2015	3.0
ETEC 533	Math & science teaching & learning through technology	UBC	Graduate (Online)	Summer 2013 W2 2014, Summer 2015	3.0
EDCP 357	Physics Methods for secondary teachers	UBC	B.Ed.	W1 2013 W1 2012	3.0
EDCP 349 (1)	Science Methods for middle school teachers	UBC	B.Ed.	W2 2011	2.0
EDCP 349 (2)	Science Methods course for element. teachers – Problem-Based Learning cohort	UBC	B.Ed.	W1 2010 W1 2011	2.0
at Ryerson University (2007 – 2009)					
PCS 300	Modern Physics	Ryerson	B.Sc.	Fall 2008/2009	3.0
PCS 107	Physics for Architects	Ryerson	B.Sc.	Fall 2007/2008/2009	3.0

(b2) Teaching related activities prior to coming to UBC in 2010

I have been actively involved in mathematics and science education since 1986.

Year	Employer	Position	Country	Comments
2007 - 2009	Faculty of Engineering, Architecture and Science, Ryerson University, Toronto, ON	Assistant Professor	Canada	Taught large undergraduate physics courses (150+ students per course). Developed and taught a new Modern Physics course. Established a Physics Education Research Group and implemented research results into physics teaching practice.
2004 - 2007	Faculty of Science, UBC, Vancouver, BC, Canada	Research Associate	Canada	Taught large undergraduate physics courses and labs. Was a member of Skylight – a Centre for Science and Math Teaching and Learning, initiated and spearheaded a number of successful TLEF grants.
2001 - 2004	Rutgers University, the State University of NJ, Douglas Campus (former women's college)	Associate Director, Math & Science Learning Centre	USA	Developed and taught inquiry-based introductory physics courses for life-science students. Helped develop inquiry-based labs that implemented the results of physics education research into practice.
2001 - 2003	Enrichment school for gifted students, SchoolPlus, NJ	Math & science teacher for gifted students	USA	Developed and taught math and science courses for gifted students. (200 hours taught over 2 years). http://www.school-plus.com/schoolplus/index.php
1998 - 2001	The University of TX at Austin	Assistant Instructor	USA	For three years I taught a lab course for future elementary teachers. My Ph.D. study was situated in the course context.
1993 - 1998	Dept. of Science Teach, Weizmann Institute of Science, Israel	Research Associate	Israel	Helped develop physics teaching materials for secondary schools, helped conduct professional development events for teachers.
1993 - 1998	The Youth Activity Section, Weizmann Institute of Science, Israel	Lecturer	Israel	Organized and conducted enrichment math and science activities for gifted elementary and middle school students. I was also in charge of the Israeli Mathematics Olympiad for middle school students.
1992 - 1997	Middle and Secondary Schools	Math & science teacher	Israel	Taught math & physics in Israeli schools, including a school for gifted children at Tel Aviv University: Engineering Prep School.
1986 - 1991	V. N. Karazin Kharkov National University	Math & science tutor	Ukraine	While pursuing my B.Sc. and M.Sc., I worked as a math and science tutor.

(c1) Graduate Students Supervised (Completed)

Student name	Program type	Year		Supervisory role		
		Start	Finish	Supervisor	Co-supervisor	Committee member
Colin Mayer	M.A.	Sept. 2014	November, 2016	M. Milner-Bolotin		D. Adler S. Scott
Tom Salzmann	M.Ed.	September 2014	August, 2016	M. Milner-Bolotin	Doug Adler	Sandra Scott Doug Adler
Davor Egersdorfer	M.Ed.	September 2014	April, 2016	M. Milner-Bolotin		
Zaid Salem	M.Ed.	May 2014	August, 2016	M. Milner-Bolotin		
Ashley Welsh ¹	Ph.D.	September, 2012	March, 2015	M. Milner-Bolotin	S. Nashon	D. Anderson
Murugan Vineyagam	M.Ed.	September, 2014	August 31, 2015	M. Milner-Bolotin		
Rachael Bates	M.Ed.	September, 2013	October, 2015	M. Milner-Bolotin	S. Scott	D. Adler
Diane Gillis DeSequera	M.A.	July, 2011	July, 2015	S. Nashon	M. Milner-Bolotin	S. Scott
Heather Fisher	M.A.	September, 2012	August, 2014	M. Milner-Bolotin	I. Roll	S. Nashon, D. Butler
Alexandra MacDonald	M.A.	September, 2012	August, 2014	M. Milner-Bolotin	S. Nashon	J. Carolan S. Scott
Christina Mikelsons	M.Ed.	September 2011	July 2014	M. Milner-Bolotin		S. Scott
Thomas Christopher Jacoby	M.Ed.	June 2011	April 2014	M. Milner-Bolotin		P. Seixas
David Riendl	M.Ed.	May 2013	April 2014	M. Milner-Bolotin		S. Nashon
Xue Qi	M.Ed.	September 2012	April 2014	M. Milner-Bolotin		S. Scott
Clare Muirhead	M.Ed.	September 2011	July 2013	M. Milner-Bolotin	S. Scott	
Darryl Dietrich	M.Ed.	September 2011	August 2013	M. Milner-Bolotin	M. Aquash	

Evan Hall	M.Ed.	September, 2011	December, 2014	M. Milner-Bolotin	M. Aquash	
Lucy How	M.Ed.	September 2010	August 2011	M. Milner-Bolotin		
Ashley Welsh	M.A.	September 2009	August 2011	M. Milner-Bolotin	S. Nashon	J. Mayer-Smith
Romy Friedman	M.A.	September 2010	July 2012	M. Milner-Bolotin	S. Nashon	S. Scott

Comments: Ph.D. students submitted a dissertation; M.A. students – a thesis; and most of my M.Ed. students wrote a final graduating paper which I have supervised.

¹ **Dr. Ashley Welsh** has accepted a position at UBC Centre for Teaching Learning and Technology as a Faculty of Science Liaison. She has received a number of awards, including SSHRC Doctoral Fellowship, 2012-2015; UBC Killam Graduate Teaching Assistant Award, 2014; Donald and Ellen Poulter Scholarship, 2014; ISSoTL Graduate Student Poster Award, 2014; CSSE SERG Graduate Student Paper Award, 2014; STLHE Alan Blizzard Award, 2013; UBC Dean of Education Scholarship, 2012

(c2) Graduate student committee membership (Completed)

Student Name	Program Type	Year		Principal Supervisor	Co-Supervisor	Committee Member
		Start	Completed			
Rachel Ralph	Ph.D.	January 2015	April 2017	S. Petrina		M. Milner-Bolotin
Brett Cameron	M.A.	September 2010	September 2012	K. Meyer		M. Milner-Bolotin
Djamila Moore	M.A.	September 2011	July 2012	S. Nashon	S. Scott	M. Milner-Bolotin
Jason Chow	M.Ed.	September 2009	August 2011	S. Nashon		M. Milner-Bolotin
Catherine Anna Louise Dick	M.A.	September 2008	August 2010	A. Anderson		M. Milner-Bolotin

(c3) Graduate students being Supervised/Advised (In progress)

Student Name	Program Type	Year		Principal Supervisor	Co-Supervisor	Committee Member(s)
		Start	Completed			
Gerald Tembrevilla	Ph.D.	September 2016	In progress			S. Nashon P. Duff
Anka Lekhi	Ph.D.	September, 2013	In progress	M. Milner-Bolotin	S. Nashon	D. Adler

James Gauthier	Ph.D.	May 2017	In progress	M. Milner-Bolotin		D. Adler S. Nashon
Carlos Marotto	M.Ed.	Sept. 2016	In progress	M. Milner-Bolotin		
Liman Zhang	M.Ed.	September, 2017	In progress	M. Milner-Bolotin		

(c4) Graduate student committee membership (In Progress)

Student Name	Program Type	Year		Principal Supervisor	Co-Supervisor	Committee Member
		Start	Completed			

(d) Continuing Education Activities

As an active member of the Science Education community of British Columbia, Canada and internationally, I have led many professional development activities. I list selected professional development activities below:

1. Milner-Bolotin, M. (May 21, 2016). How to study mathematics and science in K-12 so you can succeed at university and beyond? An invited presentation at the Next Leader Academy, Coquitlam, BC.
2. Milner-Bolotin, M. (May 14, 2016). Effective use of *collaborative learning annotation system in teacher education*. Paper presented at the 19th UBC Investigating Our Practices Conference, Vancouver, BC.
3. Milner-Bolotin, M. (October 23, 2015). BC Science Teachers' Association Conference "[Teaching science with technology: from sensors, spreadsheets and simulations to apps](#)" (invited workshop, attended by 41 teachers).
4. Milner-Bolotin, M. (May 18-31, 2015). Teacher professional development course "Mathematics and science teaching and learning through technology" for science and mathematics teachers at Chaoyang School District in Beijing, China.
5. Milner-Bolotin, M. (May 2, 2015). Panel member "*Where do they go from here? A discussion on student transition to university STEM programs*". [Surrey Science Teachers' Association Annual Meeting](#), Simon Fraser University, Surrey, BC.
6. Milner-Bolotin, M. (May 1, 2015). *Making online graduate teacher education courses matter - from theory to successful technology-enhanced practice*. Paper presented at the 18th UBC Investigating Our Practices Conference, Vancouver, BC.
7. Milner-Bolotin, M. (May 1, 2015). *Engaging students in science learning through creative technology use*. Workshop presented at the [Surrey Science Teachers' Association Annual Meeting](#), Simon Fraser University, Surrey, BC.
8. Milner-Bolotin, M. (March 7, 2015). *Professional development workshop: Physics teaching and learning with technology*. Presented at the 37th UBC Physics Olympics, UBC, Department of Physics and Astronomy.
9. Milner-Bolotin, M. (February 20, 2015). Helped to organize and facilitate a special workshop for BC physics teachers as part of BC Professional Development event – a collaboration of BCAPT and Perimeter Institute for Theoretical Physics.

10. Milner-Bolotin, M. (January 13, 2015). Member of the panel during the WOW event (Welcome Orientation for Women in Science – for secondary female students who intend to study science at UBC), Michael Smith Labs, UBC. (<http://bcapt.sites.olt.ubc.ca/2015/02/20/2425/>)
11. Milner-Bolotin, M. (March 8, 2014). *Professional development workshop: Teaching physics with interactive simulations and data collection technology*. Presented at the 36th UBC Physics Olympics, UBC, Department of Physics and Astronomy.
12. Milner-Bolotin, M. (May 2, 2014). *Teaching conceptual science with technology*. Workshop presented at the [Surrey Science Teachers' Association Annual Meeting](#), Panorama Ridge Secondary School, Surrey, BC.
13. Milner-Bolotin, M. (July 25, 2014). *Career and Family Issues for Women in Science: Panel member (special professional development event for young women scientists and science educators)*. Women in Physics in Canada, Simon Fraser University, Burnaby, Canada.
14. Milner-Bolotin, M. (October 27, 2012). *A physics teaching exchange "Warming up to physics: Connecting new & seasoned physics teachers"*. Workshop presented at the BC Association of Physics Teachers Professional Development Day, The University of British Columbia.
15. Milner-Bolotin, M. (May 7, 2011). *Brief Introduction to [Video-Based Motion Analysis: Physics Teachers' Perspective](#)*. Interactive workshop presented at the Annual Meeting of the BC Association of Physics Teachers, Kelowna, BC.
16. Milner-Bolotin, M. (October 22, 2011). *Hands-on science on a shoe-string budget: 10 science activities with a one dollar bag of magic water pearls*. Workshop presented at the [Catalyst 2011: BC Science Teachers Association Bi-Annual Conference](#), Richmond, BC.
17. Milner-Bolotin, M. (October 21, 2011). *Exploring the refraction of light*. Workshop presented at the [Catalyst 2011: BC Science Teachers Association Bi-Annual Conference](#), Richmond, BC.
18. Milner-Bolotin, M. (June 11, 2010). Inaugural professional development workshop for new physics faculty members at Canadian universities. Workshop presented at the Annual Congress of the Canadian Association of Physicists, Toronto, ON, Canada.
19. Milner-Bolotin, M. (March 20, 2010). *Clickers, tablets and sensors in physics teaching*. Weizmann Institute of Science Workshop for Physics Teachers, Davidson Institute for Science Education, Rehovot, Israel.
20. As a member of [BC Scientists and Innovators in the Schools organization](#), I visit schools in BC with interactive science workshops and activities. I visit at least 5-6 schools a year. The schools I have visited in the last 10 years include the schools in Chilliwack, Harrison Hot Springs, Nanaimo, Victoria, Saanich, East Vancouver, North Vancouver, Vancouver, etc. I have ample positive feedback both from the students and from the teachers who learn a lot from my demonstrations and activities. Many of these teachers keep in touch with me after the event is over. Based on my calculations, I have interacted with more than **1500 K-12 students** in British Columbia so far.
21. Milner-Bolotin, M. (April 20, 2010). Introducing elementary students to science – an invited talk at the Spirit Day at Seaforth Elementary School in Burnaby, BC.

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

Role	University/organization	Timeline	Comments
Presented invited talks all across Israel	Weizmann Institute of Science, Hebrew University of Jerusalem, Tel Aviv University	March 8-16, 2017	I was invited to speak about the use of technology in STEM teacher education.
Presented invited talks for faculty and graduate students	Beijing Normal University	October 31 – November 4, 2016 May 23-28, 2017	I also provided feedback to undergraduate and M.Ed. students on their research

Presented two one-week long professional development courses for secondary STEM teachers in Beijing, China	Beijing Institute of Education, Chaoyang Branch	May 17-30, 2015 (two one-week courses, 30 hours per course).	Received overwhelmingly positive feedback and was invited to present another course in December 2015.

(f) *Other: Graduate Examination Activities*

Candidate's Name	Exam Type	Department	Role	Date
Jiao Ji	Ph.D. Oral Defense	Department of Curriculum & Pedagogy, Faculty of Education, UBC	University Examiner Research Supervisor: Prof. David Anderson	September, 2015
Laura Stiles-Clarke	M.A.	Science Ed., Faculty of Education, St. Francis-Xavier Univ., Nova Scotia	External Examiner	July 20 th , 2015
Natasha Grace Holmes	Ph.D. Oral Defense	Physics and Astronomy, Faculty of Science, UBC	University Examiner Research Supervisor: Prof. Doug Bonn	November 26 th , 2014
Diana Dragomir	Ph.D. Oral Defense	Physics and Astronomy, Faculty of Science, UBC	Chair of the Ph.D. Defense; Research Supervisor: Prof. Jaymie Mathews	November 8, 2012
Jong-Mun Kim	Ph.D. Oral Defense	Department of Curriculum & Pedagogy, Faculty of Education, UBC	University Examiner	May 15, 2014
Robert William Singley	Ph.D. Oral Defense	Faculty of Music Composition	Chair; Research Supervisor: Dr. Stephen Chatman	June 6, 2014

9. SCHOLARLY AND PROFESSIONAL ACTIVITIES

(a) *Areas of special interest and accomplishments: (399 words)*

My research explores (i) physics pedagogy and how it is mediated through educational technology; and (ii) how the results of educational research can be implemented into practice. My scholarly activity is grounded in the UBC Collective Agreement/SAC Guidelines for Reappointment, Promotion & Tenure Procedures at UBC (2014-15) and for many years has been located as a blend of traditional scholarly activity (Section 3.1.5) and the scholarship of teaching (3.1.6-3.1.11). This is reflected in grant funding, presentations and my publication record. I have been actively involved in K-12 physics teaching since 1991 and in college level physics education since 1998. At UBC I have initiated the research-driven redesign of the first year labs (2004-2007) to incorporate inquiry-based approach. I introduced data collection technologies and inquiry labs into introductory physics courses. While at Ryerson University (2007-2009) I was a PI on the HP educational technology grant which introduced technology-supported collaboration into undergraduate physics. My inquiry into introductory physics education culminated in co-authoring of an introductory physics textbook and supplementary materials that are currently used by thousands of students in Canada and abroad. Being currently actively involved in physics teacher education, I am especially interested in how we can support teacher-candidates in order to help them implement research-informed pedagogies during the practicum and post-graduation. Driven by this interest I received three-year long funding to develop [Mathematics and Science Teaching and Learning through Technology educational resource](#) that is currently widely used not only by the UBC teacher-candidates but by practicing teachers in Canada and abroad. Thus, my intended audience for my publications, presentations, the pedagogical materials I develop includes educational researchers, K-12 and university physics educators and teacher-educators. I actively present my research at educational conferences, teacher professional development events, workshops and seminars. I view my scholarly and professional activities as deeply intertwined, as it is important for me that the results of my research have an impact on classroom practice. Thus, I have received a number of UBC grants that support implementation and investigation of the impact of technology-enhanced pedagogical innovations on undergraduate physics teaching and on teacher education. I also have held many leadership positions in local, national and international educational organizations. This way I am able to conduct educational research, implement it into practice, and provide educational leadership. I am especially proud of my research on collaborative technologies, such as electronic response systems, PeerWise, data collection tools, and computer simulations.

(b) *Research or equivalent grants (indicate whether grants were obtained competitive (C) or non-competitively (NC))*

*UBC Teaching and Learning Enhancement Grant (TLEF) is aimed at improving UBC students' learning by bridging education research with teaching practices. The TLEF grants I have received (2010-2015) helped improve mathematics and science teacher education at UBC by incorporating research-based technology-enhanced pedagogies into practice. These are **practice-improvement-oriented grants**. The SSHRC and Hampton Fund grants were research grants that focused on investigating student learning in undergraduate physics and physics teacher education courses. These are **research-oriented grants**.*

Total: \$ 687,039.00 CAD

Granting Agency/Grant focus	Subject	C/ NC	\$	Year	Principal Investigator	Co-Investigator (s)
Halbert Centre	Teaching and Teachers in the Era of Change: to organize and international conference on STEM teacher education in the age of rapid technological advances	C	\$12,000 CAD	2017-2018	Marina Milner-Bolotin	Dragana Martinovic, Yifat Kolikant Ben-David

Beijing Advanced Innovation Center for Future Education	Reimagining technology-enhanced STEM teacher education for 21st century: From more technology to increased quality of teaching and learning	C	\$20,000 USD	2016-2017	Marina Milner-Bolotin	
HSS Faculty of Education Special Grant	Creating a model for investigating parental engagement in elementary students' mathematics and science learning	C	\$5,833.00	2016-2017	Marina Milner-Bolotin	
TLEF, UBC, Large grant	Improving and monitoring the digital literacy and competency of teacher-candidates	C	\$84,315	2016-2017	Natasha Boskic	M. Milner-Bolotin ; W. Carr; K. James, Y. Dawy-diak, E. Jordan, J. Naslund
TLEF, UBC Year 1	Making a Big Difference with Very Little: Creating a Community Resource for Hands-on Math and Science Activities on a 'Shoestring Budget'	C	\$47,004	2016-2017	M. Milner-Bolotin	S. Scott D. Adler D. Egersdorfer
TLEF, UBC Year 3 <i>Practice-oriented grant</i>	Turning teacher-candidates to Inquiry: Improving preparation of future K-12 teachers in math & science through active technology engagement	C	\$57,415	2014 – 2015	M. Milner-Bolotin	D. Egersdorfer
UBC Faculty of Education Special Research Dissemination HSS Grant <i>Research-oriented grant</i>	Disseminating the results of the educational technology research in science teacher education	C	\$5,833	2013 – 2014	M. Milner-Bolotin	
Centre for Teaching Learning and Technology (CTLT) UBC	A teaching scholarship fund for research on teaching and learning	C	\$2,000	2014	M. Milner – Bolotin	
TLEF, UBC Year 2	Turning teacher-candidates to Inquiry: Improving preparation of future K-12 teachers in	C	\$55,227	2013 – 2014	M. Milner-Bolotin	With graduate students:

<i>Practice-oriented grant</i>	math & science through active technology engagement					H. Fisher and A. MacDonald
TLEF, UBC Year 1 <i>Practice-oriented grant</i>	Turning teacher-candidates to Inquiry: Improving preparation of future K-12 teachers in math & science through active technology engagement	C	\$39,600	2012 – 2013	M. Milner-Bolotin	C. Nicol
UBC Hampton Grant <i>Research-oriented grant</i>	Investigating the "Best Technology-Based Science Instructional Practices" in Canadian & Korean Secondary Teacher Ed. Programs	C	\$10,000	2011 – 2013	M. Milner-Bolotin	S. Nashon
SSHRC <i>Research-oriented grant</i>	Personal epistemologies as barriers & facilitators to learning by Science & Eng. undergraduates	C	\$139,655	2010-2013	C. Kalman	M. Milner-Bolotin T. Antimirova M. Aulls B. Shore
HSS Large <i>Research-oriented grant</i>	Elementary teachers as designers of technology-enhanced science instruction: The effects on teachers' views of the nature of science and Technological Pedagogical Content Knowledge	C	\$6,841	2010 – 2012	M. Milner – Bolotin	S. Nashon
Mitacs Globalink Grant <i>Research-oriented grant</i>	Design of dynamic multi-dimensional database for math and science teaching resources	NC	\$3,000	2010	M. Milner-Bolotin	
Teaching Scholars Program UBC <i>Practice-oriented grant</i>	Research on scholarship of teaching and learning: Identifying benchmarks & barriers for successful implement. of ed. techn. in undergrad. classrooms	C	\$5,500	2010	M. Milner-Bolotin	
HP Technology for Higher Education <i>Practice-oriented grant</i>	Mobile lab for science and engineering teaching	C	\$77,000 USD	2008-2009	M. Milner-Bolotin	T. Antimirova P. Goldman
SSHRC Ryerson Internal <i>Research-oriented grant</i>	Students' backgrounds and attitudes towards science as predictors of conceptual learning	C	\$6,936	2007-2008	M. Milner-Bolotin	T. Antimirova

TAG UBC <i>Practice-oriented grant</i>	A teaching scholarship fund for research on teaching and learning	C	\$2,000	2006	M. Milner – Bolotin	
ISOTL Research Collaboration UBC <i>Practice- and research-oriented grant</i>	Assessing effectiveness of Peer Response systems and Interactive Lecture Experiments in 1 st year large introductory physics course	C	\$17,000	2006 – 2007	M. Milner – Bolotin	
UBC TLEF <i>Practice-oriented grant</i>	Improving student lab experiences for 1st year large introductory physics courses	C	\$51,547	2006 – 2008	M. Milner – Bolotin	F. Bates, A. Kotlicki S. Nashon
Shell Environmental grant <i>Practice-oriented grant</i>	Creating online resources for environmentally-oriented conceptual questions for science teaching	C	\$5,000	2006-2007	M. Milner-Bolotin	
UBC TLEF <i>Practice-oriented grant</i>	Enhancing student Lab experiences in 1 st year large introductory physics courses	C	\$36,886	2005 – 2006	I. Cavers	J. Nakonechny M. Milner-Bolotin
UBC TLEF <i>Practice-oriented grant</i>	Enhancing student Lab experiences in 1 st year large introductory physics courses	C	\$42,447	2005 – 2006	M. Milner – Bolotin	F. Bates A. Kotlicki
Skylight development grant <i>Practice-oriented grant</i>	(1) New generation of science demonstrations for Improving undergrad. teaching in large science courses	C	\$10,000	2006	M. Milner – Bolotin	F. Bates A. Kotlicki
Skylight development grant <i>Practice-oriented grant</i>	(2) New generation of science demos for improving undergrad. teaching in large science courses	C	\$8,000	2006	A. Kotlicki	F. Bates M. Milner-Bolotin
Skylight development grant <i>Practice-oriented grant</i>	Physics Resource Centre – building success in 1st year physics courses	C	\$7,000	2005	M. Milner – Bolotin	F. Bates A. Kotlicki

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

Granting Agency	Subject	C/ NC	\$	Year	Principal Investigator	Co-Investigator(s)
UBC Dean of Education, Teacher Education Office, EDCP and PIMS	Support for 6 th Math and Science Family Day (We are turning this events into a research project investigating the effect of outreach on volunteers)	NC	\$2,000	2016	M. Milner-Bolotin	
UBC Dean of Education, Teacher Education Office, EDCP	Support for 5 th Math and Science Family Day (We are turning this events into a research project investigating the effect of outreach on volunteers)	NC	\$1,500	2015	M. Milner-Bolotin	
UBC Dean of Education, Teacher Education Office, EDCP	Support for 4 th Math and Science Family Day	NC	\$1,200	2014	M. Milner-Bolotin	
Active Textbook, Evident Point Company	Investigation of the applications of Active Textbook in science teaching	NC	\$2,000	2011-2012	M. Milner-Bolotin	
UBC Dean of Education, Teacher Education Office, EDCP	Support for 3 rd Math and Science Family Day	NC	\$1,200	2012	M. Milner-Bolotin	S. Nashon C. Nicol
UBC Dean of Education, Teacher Education Office, EDCP	Support for 2 nd Math and Science Family Day	NC	\$1,200	2011	M. Milner-Bolotin	S. Nashon C. Nicol
UBC Dean of Education, Teacher Education Office, EDCP	Support for 1 st Math and Science Family Day	NC	\$1,200	2010	M. Milner-Bolotin	S. Nashon C. Nicol
UBC Dean of Science	Support for Faraday Christmas Science Show	NC	\$500/year	2004-2007	M. Milner-Bolotin	A. Kotlicki C. Waltham J. McKenna

(c1) Grant applications under review

Granting Agency	Subject	C/ NC	\$	Year	Principal Investigator	Co-Investigator(s)
SSHRC	STEM Education "Investigating Intelligent Partnership with Technology in Mathematics & Science Teacher Education"	C	399,830	2017	M. Milner-Bolotin	D. Martinovic A. Manizade S. Chachashvili-Bolotin

(d) *Invited Presentations:*

INTERNATIONAL CONFERENCES AND SPECIAL EVENTS (Invited):

1. Milner-Bolotin, M. (2017). *An examination of research-based innovations in physics teacher education at the University of British Columbia*. Paper presented at the Colloquium at the Department of Physics and Astronomy, Eotvos Lorand University, Budapest, Hungary.
2. Milner-Bolotin, M. (2017). *Physics Outreach in Canada: What, why, when and how*. Paper presented at the Colloquium at the Department of Physics and Astronomy, Eotvos Lorand University, Budapest, Hungary.
3. Milner-Bolotin, M. (2017). Developing deliberate pedagogical thinking with online collaborative tools in STEM teacher education (Invited keynote address). May 26, 2017. Tong Zhou School District Educational Conference, Beijing, China.
4. Milner-Bolotin, M. (2017). *Reimagining technology-enhanced STEM teacher education for 21st century: From more technology to increased quality of teaching and learning (International case studies)*. Invited presentation at the Future Schools 2030, May 25, 2017, Beijing, China.
5. Milner-Bolotin, M. (2017). Developing deliberate pedagogical thinking with online collaborative tools in STEM teacher education (Invited talk ed.). March 8, 2017. Jerusalem, Israel: Hebrew University of Jerusalem.
6. Milner-Bolotin, M. (2017). Developing deliberate pedagogical thinking with online collaborative tools in STEM teacher education (Invited talk ed.). March 9, 2017, Weizmann Institute of Science, Rehovot, Israel.
7. Special presentation on educational technology use in physics teaching to the teachers of HEMDA – Schwarz-Reismann Science Education Center (a special Science Secondary School), Tel-Aviv, Israel, March 15, 2017 (invited by Corina Polinger, a physics teacher at the school, <http://www.hemda.org.il/english/template/default.asp?maincat=2>).
8. Milner-Bolotin, M. (2017). *Reimagining technology-enhanced STEM teacher education for 21st century: From more technology to increased quality of teaching and learning (Part II)*. Invited presentation at the Second Seminar at the Future Schools 2030, Beijing, China.
9. Milner-Bolotin, M. (November 4, 2016). Promoting technology-enhanced collaboration in STEM teacher education: From theory to research-informed Practice *People's Education Press: Invited talk*. Beijing, China: People's Education Press.

10. Milner-Bolotin, M. (November 3, 2016). Invited presentation for mathematics and science teachers and teacher educators at the People's National Education Press in Beijing, China, Promoting technology-enhanced collaboration in STEM teacher education: From theory to research-informed Practice *People's Education Press: Invited talk (~100 teachers)*.
11. Milner-Bolotin, M. (October 27, 2016). Invited presentation for mathematics and science teachers, graduate students, and teacher educators at the 4th International STEM Conference at Beijing Normal University in Beijing, China, Promoting technology-enhanced collaboration in STEM teacher education: From theory to research-informed Practice: *Invited workshop (~70 attendees)*.
12. Milner-Bolotin, M. (August 25, 2016). Invited to participate in a special conference **Towards 2035 Schools** – an international conference sponsored by Amdocs and Israeli Ministry of Education, dedicated to reimagining education in 2030, Raanana, Israel.
13. Milner-Bolotin, M. (April 9, 2016). Invited presenter at the **EuroScienceFun 2016 Public science show** (700 attendees) in Reykjavik, Iceland. April 9, 2016.
14. Milner-Bolotin, M. (April 5-9, 2016). *Family mathematics & science day at UBC Faculty of Education*. Paper presented at the **EuroScienceFun 2016 conference**, Reykjavik, Iceland.
15. Milner-Bolotin, M. (March 23, 2015). *Technology transforming STEM education: Are we there yet?* Aarhus University, STEM Education Center, **Aarhus University, Denmark**.
16. Milner-Bolotin, M. (January 5, 2015). *Reimagining best practices in technology-enhanced physics teacher education*. (An invited talk by the AAPT Physics Teacher Education division). Annual Winter Meeting of the **American Association of Physics Teachers, San Diego, CA**.
17. Milner-Bolotin, M. (November 21-22, 2014). Closing the research-practice gap through innovative technology use in STEM teacher education. **Plenary speaker** at the [Fifth GeoGebra North American Conference \(GeoGebra-NA 2014\): Explorative Learning with Technology](#), Ontario Institute for the Studies in Education, **Toronto, ON**.
18. Milner-Bolotin, M. (August 7, 2014). An invited member of the *Women in Science* panel: Dual career families. **5th International Conference on Women in Physics/International Union of Pure and Applied Physics, Waterloo, ON**.
19. Milner-Bolotin, M. (February 16, 2014). Using educational technologies to promote inquiry and the nature of science in physics teacher education. Invited keynote speaker. [Korean Association for Science Education International Conference](#), Daegu University at **Gyeongsan, Gyeongbuk, Republic of Korea**.
20. Milner-Bolotin, M. (January 15, 2012). *Physics teacher preparation in Canada: Challenges and successes*. (An invited talk by the International Physics Education division). **American Association of Physics Teachers Winter Meeting, Ontario, CA**.
21. Milner-Bolotin, M. (March 15, 2012). *Teachers' playground: Enhancing science learning through effective technology implementation*. (Invited colloquium). **Ruppin Academic Center, Netanya, Israel**.
22. Milner-Bolotin, M. (March 14, 2012). *Beyond the paradigm: Implications of Kuhn's "Structure" on educational research and teacher education*. (Invited colloquium). Department of Science Education, **Hebrew University of Jerusalem, Jerusalem, Israel**.

23. Naslund, J., Levine, S., & Milner-Bolotin, M. (February 12, 2012). *Celebrate science: Bridging science educators, science writers and librarians in order to promote science learning in British Columbia*. (Invited workshop). **American Association for the Advancement of Science, Vancouver, BC.**
24. Milner-Bolotin, M. (January 5, 2011). **American Association of Physics Teachers**, (Invited panel member by the Committee on the Women in Physics). Panel: "State of Women in Physics". **Jacksonville, FL.**
25. Milner-Bolotin, M. (2009). *Helen Sawyer Hogg: A woman, an astronomer, and a great communicator of science*, (Invited talk by the Committee on Women in Physics). **American Association of Physics Teachers, Ann Arbor, MI.**
26. Milner-Bolotin, M. (2009, August 19). *Using clickers to engage students in university classrooms*. Online Webinar by invitation from **e-Instruction** Company in collaboration with the **University of Northern Colorado**.
27. Milner-Bolotin, M., & Antimirova, T. (April 21, 2008). *Making your classes click: Effective use of classroom response system in undergraduate science*. (Invited education colloquium). **Department of Physics, State University of New York, Buffalo.**
28. Milner-Bolotin, M. (March 26, 2008). *Helping students learn how to think like scientists: Using Physics Education Research to transform science teaching and teacher preparation*. (Invited colloquium). **University of Duisburg-Essen, Germany.**
29. Milner-Bolotin, M. (March 23, 2007). *Breaking technology myth: Using educational research to transform science teacher preparation*. (Invited colloquium). **Eastern Washington University, Spokane, Washington.**
30. Milner-Bolotin, M. (March 23, 2007). *Helping students learn how to think like scientists: Using Physics Education Research to transform science teaching and teacher preparation*. (Invited colloquium). **University of Hawaii, Oahu Campus. College of Education.**
31. Milner-Bolotin, M. (February 14, 2007). *Helping students learn how to think like scientists: Using Physics Education Research to transform science teaching and teacher preparation*. (Invited colloquium). **Fordham University, College of Education, New York, NY.**

NATIONAL AND LOCAL CONFERENCES AND SPECIAL EVENTS (Invited)

1. Milner-Bolotin, M., Scott, S., Adler, D., Tembrevilla, G., Khodaeifaal, S., & Egersdorfer, D. (2017). *STEM education videos for teachers and students*. Poster presented with Gerald Tembrevilla at the UBC CTLT Celebrate Learning Week Conference, UBC (May 4, 2017).
2. Milner-Bolotin, M. (2017). *A comparative study of STEM educators' views of technology: A case of Canada, China and Korea*. Paper presented at the Department of Curriculum and Pedagogy 2016-2017 Seminar Series, April 20, UBC.
3. Milner-Bolotin, M. (2016, October 17). Invited to lead a [day-long professional development day](#) for a Chinese delegation of physics teachers from Hangzhou, visiting BC.
4. Milner-Bolotin, M. (2016, October 21). Invited to present at CATALYST 2016 Conference of the BC Science Teachers' Federation. "[Using Technology to Promote High Quality Science Education Online and Face-to-Face](#)", H.J. Cambie Secondary School, Richmond, BC.
5. Milner-Bolotin, M. (2016, May 21). Invited to present at the Next Leader Academy. Interacted with the parents and secondary students. Answered questions about effective STEM learning.

6. Milner-Bolotin, M. (2016, May 2). Invited to be a member of the mentoring panel of scholars at the inaugural STEM Mentoring Café for K-12 students (Sponsored by the Pharmaceutical Sciences and Prof. Helen Burt).
7. Milner-Bolotin, M. (2015, June 18). Investigation of PeerWise technology implementation to promote pedagogical Content Knowledge of physics teacher-candidates: from theory to practice. (Invited talk by the Division of Physics Education). **Canadian Association of Physicists Congress, Edmonton, ON.** (June 15-19, 2015).
8. Milner-Bolotin, M. (2015, June 17). Physics Education Research Panel: Improving physics learning in Canada. (Invited talk by the Committee on Women in Physics). **Canadian Association of Physicists Congress, Edmonton, AB.** (June 15-19, 2015).
9. Milner-Bolotin, M. (2014, June 20). The high cost of science disengagement of Canadian youth: Reimagining physics teacher education. (Invited workshop by the Division of Physics Education). **Canadian Association of Physicists Congress, Sudbury, ON.**
10. Milner-Bolotin, M. (2010, October 19). *What students' use of computer modeling can tell us about how students learn science and how we should teach it?* **Peter Wall Institute, UBC, Exploratory Workshop "Nano-Biophysics Institute", Vancouver, BC.**
11. Milner-Bolotin, M. (2010, June 16). *Confessions of a struggling physics teacher: When one has more questions than answers (plenary).* **Canadian Association of Physicists, Toronto, ON.**
12. Milner-Bolotin, M. (2010, June, 17). *Introduction to interactive pedagogies: Creating & using successful conceptual questions.* **Canadian Association of Physicists, Toronto, ON.**
13. Milner-Bolotin, M. (2010, June 17). *Using YouTube & Facebook in teaching large intro physics course for architecture students.* **Canadian Association of Physicists, Toronto, ON.**
14. Milner-Bolotin, M. (2009, November). *Helping students learn how to think like scientists: Using Physics Education Research to transform science teaching and teacher preparation.* **McGill University, Montreal, QB.**
15. Milner-Bolotin, M. (2009, December 11). *Peer Instruction beyond the First Year: 2nd year Modern Physics course with clickers.* **Queens University, Kingston, ON.**
16. Milner-Bolotin, M. (2009, December 11). *Teachers' playground: Enhancing teacher professional development through the use of technology.* **Queens University, Kingston, ON.**
17. Milner-Bolotin, M. (2009, October 19). *Teachers' playground: Enhancing teacher professional development through the use of technology.* **University of British Columbia, Vancouver, BC.**
18. Milner-Bolotin, M. (2008, May 12). *Physics for Architects: Design, implementation and evaluation of experienced-based physics curricula.* **Ryerson University, Toronto, ON.**
19. Milner-Bolotin, M. (2008, March). *How to teach physics, so the students learn: Teaching extraordinary physics or ordinary things.* **Department of Physics, Simon Fraser University, Burnaby, BC.**
20. Milner-Bolotin, M. (2007). Using technology to make large intro classes smaller. **E-learning open house 2007, University of British Columbia, Vancouver, BC.**

21. Milner-Bolotin, M. (2007, April 12). *Helping students learn how to think like scientists: Using Physics Education Research to transform science teaching and teacher preparation*. **University of Calgary. Department of Physics and Astronomy, the University of British Columbia, Vancouver, BC.**
22. Milner-Bolotin, M. (2006, October 5). *Using Peer Instruction in small and large classes*. **Skylight Science Supper Series. The University of British Columbia, Vancouver, BC.**
23. Milner-Bolotin, M. (2004). *Student achievement, ownership and motivation in Inquiry-Based Science Classroom*. January, 2004. **Colloquium (Faculty of Science and Faculty of Education), University of British Columbia, Vancouver, BC.**

(e) Other Presentations (where I was a presenting author or presented with my co-authors)

Refereed Conference presentations:

1. Milner-Bolotin, M. (2016, January 8-12). *Leading successful technology-enhanced Pro-D in Beijing: Lessons learned*. Presented at the Winter-2016 American Association of Physics Teachers (AAPT) National Meeting, New Orleans, LA.
2. Milner-Bolotin, M., (2015, April 11-14), *Using PeerWise online collaborative tool to improve physics teacher-candidates' questioning skills*, National Association of Research in Science Teaching (NARST) International Annual Conference, Chicago, IL.
3. Milner-Bolotin, M. (2015, January 5). *PER to the Rescue: Incorporating research in physics teacher education*. Annual Winter Meeting of the American Assoc. of Physics Teachers, San Diego, CA.
4. Milner-Bolotin, M. (2015). Professional development workshop for physics teachers "Mathematics and science education with technology", 37th UBC Physics Olympics, at UBC, March 7, 2015.
5. Milner-Bolotin, M. (2014, August 4). *Helping physics teacher-candidates develop questioning skills through innovative technology use*. 5th International Conference on Women in Physics, Waterloo, ON.
6. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014, August 5). *Exploring technology-enhanced active learning in physics teacher education*. 5th International Conference on Women in Physics, Waterloo, ON.
7. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014, August 5). *Design, Implementation, & Evaluation of Research-based Resources in STEM Teacher Education*. 5th International Conference on Women in Physics, Waterloo, ON.
8. Naslund, J.-A. M., Levine, S., Johnston, L., & Milner-Bolotin, M. (2014, July 14). *Pathways to improving mathematics and science literacy: STEM community engagement*. STEM education and our planet: Making connections across contexts, Vancouver, BC.
9. Chachashvili-Bolotin, S., & Milner-Bolotin, M. (2014, July 15). *Gender and socioeconomic gaps in secondary students' interest in science-related tertiary education: The case of Israel*. [STEM education and our planet: Making connections across contexts](#), Vancouver, BC.
10. Milner-Bolotin, M. (2014). *Engaging 21st century students in physics learning: Why, when, where and how?* Presented at the Canadian Association of Physicists, Sudbury, ON.
11. MacDonald, A., Carolan, J., Nashon, S., Fisher, H., & Milner-Bolotin, M. (2014, July 13). *Analyzing undergraduate students' attitudes and beliefs about physics: influence of gender and year of study*. [STEM education and our planet: Making connections across contexts](#), Vancouver, BC.
12. Fisher, H., Butler, D., MacDonald, A., Roll, I., & Milner-Bolotin, M. (2014, July 15). *Measuring short-term effects of self-regulatory prompts on problem-solving abilities in introductory genetics*. [STEM education and our planet: Making connections across contexts](#), Vancouver, BC.
13. Milner-Bolotin, M., MacDonald, A., & Fisher, H. (2014, July 15). Investigating the effects of PeerWise & Peer Instruction pedagogy on the development of Pedagogical Content Knowledge of prospective physics teachers. [STEM education and our planet: Making connections across contexts](#), Vancouver, BC.

14. Milner-Bolotin, M. (2014, June 20). *Teaching conceptual science with technology*. Canadian Association of Physicists, Sudbury, ON.
15. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014, January 5). *Helping physics Teacher-Candidates develop questioning skills through innovative technology use*. American Association of Physics Teachers Winter National Meeting, Orlando, FL.
16. MacDonald, A., Fisher, H., & Milner-Bolotin, M. (2014, January 5). *Investigating the impact of clicker-enhanced pedagogy in a secondary physics methods course*. American Association of Physics Teachers Winter National Meeting, Orlando, FL.
17. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014, January 6). *Exploring technology-enhanced active learning in physics teacher education*. American Association of Physics Teachers Winter National Meeting, Orlando, FL.
18. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2013, July 18). *Using technology for conceptual learning in physics teacher-education: Engaging teacher candidates as learners and teachers*. International Perspectives on Technology-Enhanced Learning: Lessons, Challenges and Possibilities, Vancouver, BC.
19. Milner-Bolotin, M., Cha, J., Chachashvili-Bolotin, S., & Raisinghani, L. (2013, July 17). *An international study of technology use in mathematics and science teacher education*. Presented at the International Perspectives on Technology-Enhanced Learning: Lessons, Challenges and Possibilities, Vancouver, BC.
20. Fisher, H., MacDonald, A., & Milner-Bolotin, M. (2013, May 30). *Design, implementation & evaluation of research-based resources in secondary science teacher education*. Canadian Society of Studies in Education Conference, Victoria, BC, Canada.
21. Chachashvili-Bolotin, S., Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2013, October 20-25). *When deeper conceptual understanding is just one click away: Using technology-enhanced formative assessment to promote physics teacher-candidates' Pedagogical Content Knowledge*. International Association for Educational Assessment Conference, Tel Aviv, Israel.
22. Naslund, J., Levine, S., & Milner-Bolotin, M. (2012, February 15). *Celebrate science: Bridging science educators, science writers and librarians in order to promote science learning in British Columbia*. American Association for the Advancement of Science, Vancouver, BC.
23. Milner-Bolotin, M., Cha, J., & Hunter, K. (2012, April 15). *Investigating science questioning practices of elementary pre-service teachers: Design of elementary science questions evaluation rubric*. American Educational Research Association Annual Meeting, Vancouver, BC.
24. Milner-Bolotin, M. (2012, February 22). *A physics teaching exchange warming up to physics: Connecting new & seasoned physics teachers*. BC Association of Physics Teachers Professional Development Day, the University of British Columbia, Vancouver, BC.
25. Milner-Bolotin, M. (2012, June 4). *Multiple-choice questions in elementary science methods courses: An opportunity or a constraint?* Canadian Society of Studies in Education Conference, Waterloo, ON.
26. Milner-Bolotin, M. (2012, November 28). *21st Century framework for science teacher preparation: Using modern technologies to affect science teaching and learning*. Second STEM Conference, Beijing, China.
27. Milner-Bolotin, M. (2012, August 1). *Engaging pre-service elementary teachers in science outreach*. American Association of Physics Teachers Summer National Meeting, Philadelphia, PA.
28. Kalman, C. S., Milner-Bolotin, M., & Antimirova, T. (2012, July 29). *Changing students' approach to learning physics in gateway post-secondary courses*. Physics Education Research Conference, Philadelphia, PA.
29. Predoi-Cross, A., Dasgupta, A., McKenna, J., Milner-Bolotin, M., Steinitz, M., Austin, R. (2011, April 9). *Women in physics in Canada*. International Conference for Women in Physics, Stellenbosch, South Africa.
30. Milner-Bolotin, M., & Vokos, S. (2011). *Working Group: [Physics Education Research Collaboration in the Northwest](#)*. Foundations and Frontiers of Physics Education Research: Port Angeles, WA.

31. Milner-Bolotin, M., Predoi-Cross, A., Dasgupta, A., Xu, L., Steinitz, M., Austin, R. (2011). *Physics outreach activities in Canada: A university-industry-government collaboration*. American Association of Physics Teachers Summer National Meeting, Omaha, Nebraska.
32. Milner-Bolotin, M., Predoi-Cross, A., Dasgupta, A., Xu, L., Steinitz, M., Austin, R. (2011). *Physics outreach activities in elementary, secondary and post-secondary schools in Canada: A university-industry-government collaboration*. International Conference for Women in Physics, Stellenbosch, South Africa.
33. Milner-Bolotin, M., Cha, J., & Hunter, K. (2011). *Facilitating engagement of pre-service elementary teachers with technology: Design and evaluation of effective multiple-choice science questions*. International Conference on Educational Technology, Madrid, Spain.
<http://www.iated.org/inted2011/publications>
34. Milner-Bolotin, M. (2011, October 17). *Exploring Refraction of Light*. Presented at the [Catalyst 2011: BC Science Teachers Association Bi-Annual Conference](#), Richmond, BC.
35. Milner-Bolotin, M. (2011, October 17). *Video-based motion analysis for classroom and homework*. [Catalyst 2011: BC Science Teachers Association Bi-Annual Conference](#), Richmond, BC.
36. Milner-Bolotin, M. (2011, October 17). *Hands-on science on a shoe-string Budget: 10 science activities with a one-dollar bag of magic water pearls*. [Catalyst 2011: BC Science Teachers Association Bi-Annual Conference](#), Richmond, BC.
37. Milner-Bolotin, M. (2011). *Teach me science tricks: do not tell me how it works!* Canadian Association of Physicists Congress, St. John's, NF.
38. Milner-Bolotin, M. (2011). *Report on the 2011 International Conference for Women in Physics*. Presented at the Canadian Association of Physicists Congress, St. John's, NF.
39. Milner-Bolotin, M. (2011). *Brief Introduction to Video-Based Motion Analysis: Physics Teachers' Perspective*. Annual Meeting of the BC Association of Physics Teachers, Kelowna, BC.
40. Milner-Bolotin, M. (2011, April 9). *A science adventure of a girl who wanted to be a physicist*. International Conference for Women in Physics, Stellenbosch, South Africa.
41. Noack, A., Antimirova, T., & Milner-Bolotin, M. (June, 2010). *Creating positive attitudes towards physics: Figuring out what works*. Society for Teaching and Learning in Higher Education Annual Meeting, Toronto, ON.
42. Milner-Bolotin, M. (2010, June 20). *Introduction to interactive pedagogies: Creating & using successful conceptual questions*. Canadian Association of Physicists Annual Congress, Toronto, ON.
43. Milner-Bolotin, M. (2010, March 8-10). *Teachers' playground: Enhancing teacher professional development through the use of technology*. INTED 2010. International Technology, Education and Development Conference, Valencia, Spain.
44. Antimirova, T., & Milner-Bolotin, M. (February, 2010). *Enhancing student learning: Using tablet PCs in Electricity and Magnetism*. American Association of Physics Teachers Winter Meeting, Washington, DC.
45. Noack, A., Milner-Bolotin, M., & Antimirova, T. (May, 2009). *Closing the Gender Gap in First Year Introductory Science Courses: What Instructors Should Know and What It Means for Women in Science*. Ryerson Faculty Conference: Shaping our Future: Teaching Excellence in a Changing Climate, Ryerson University, Toronto, ON.
46. Milner-Bolotin, M., & Carvalho, M. J. (May, 2009). *Professor collaboration in design, implementation and evaluation of two large introductory project-based physics courses*. Ryerson Faculty Conference: Shaping our Future: Teaching Excellence in a Changing Climate, Ryerson University, Toronto, ON.
47. Milner-Bolotin, M., & Carvalho, J. (May, 2009). *Teaching studio-based second-year modern physics course with technology*. Winter National Meeting of the American Association of Physics Teachers, Chicago, IL.
48. Milner-Bolotin, M., Antimirova, Tetyana, & Lariviere, Peter. (2009). *Clickers beyond the first year: workshop*. Canadian Association of Physicists Congress 2009, Moncton, NB.

49. Milner-Bolotin, M., Antimirova, T., & Kalman, C. (2009). *Comparison of conceptual conflict collaborative group intervention with modified Peer Instruction*. American Association of Physics Teachers National Winter Meeting, Chicago, IL.
50. Milner-Bolotin, M., Antimirova, T., & Kalman, C. (2009). *Comparison of two active learning teaching methods: Conceptual conflict collaborative group and Peer Instruction*. Canadian Association of Physicists Congress 2009, Moncton, NB.
51. Milner-Bolotin, M., Antimirova, T., Andriati, R., & Berezovsky, T. (July, 2009). *Technology as a lens for examining instructor's Pedagogical Content Knowledge*. Physics Education Research Conference, Ann Arbor, MI.
52. Milner-Bolotin, M., & Antimirova, T. (June, 2009). *Clickers beyond the First Year: Interactive Teaching in Upper Level Physics Courses*. 7th Annual Canadian e-Learning Conference, Vancouver, BC.
53. Milner-Bolotin, M., & Antimirova, T. (2009). *HP Mobile Science Lab: Tablet PCs for science teaching*. Ryerson Faculty Conference: Shaping our Future: Teaching Excellence in a Changing Climate, Ryerson University, Toronto, ON.
54. Milner-Bolotin, M., & Antimirova, T. (February, 2009). *Let the dialog begin: Undergraduates - teachers - university faculty*. American Association of Physics Teachers, Chicago, IL.
55. Kalman, C., Milner-Bolotin, M., & Antimirova, T. (February, 2009). *Comparison of Conceptual Conflict Collaborative Group Intervention with Modified Peer Instruction*. Paper presented at the National Winter Meeting of the American Association of Physics Teachers, Chicago, IL.
56. Antimirova, T., & Milner-Bolotin, M. (2009). *Ryerson Outreach to High School Community in Greater Toronto Area*. American Association of Physics Teachers, Chicago, IL.
57. Kalman, Calvin S., Antimirova, T., & Milner-Bolotin, M. (2009, June). *Comparison of Two Active Learning Teaching Methods: Conceptual conflict collaborative group and Peer Instruction*. Canadian Association of Physicists Congress 2009, Moncton, NB.
58. Antimirova, T., & Milner-Bolotin, M. (2009). *Introduction to Video-Based Motion Analysis*. Paper presented at the Canadian Association of Physicists Congress 2009, Moncton, NB.
59. Antimirova, T., Noack, A., & Milner-Bolotin, M. (2009, July 29). *The Effect of classroom diversity on conceptual learning in physics*. Physics Education Research Conference, Ann Arbor, MI.
60. Schuster, D., Undreiu, A., Adams, B., Brookes, D., & Milner-Bolotin, M. (July, 2008). *Motion reproduction: A challenge activity to generate motion descriptor concepts*. American Association of Physics Teachers National Summer Meeting, Edmonton, AB.
61. Milner-Bolotin, M. (2008). *Physics for Architects: Design, implementation and evaluation of innovative physics curricula*. Canadian Association of Physicists Congress, Quebec City, QB.
62. Milner-Bolotin, M. (2008). *Changing roles of science educators: Science education for non-science majors and general public*. 33rd McGraw Hill Ryerson Teaching, Learning and Technology Conference, Vancouver, BC.
63. Milner-Bolotin, M. (2008). *Using Logger Pro Video Analysis to create interactive physics lectures*. Conference of the Ontario Association of Physics Teachers, Ryerson University, Toronto, ON.
64. Milner-Bolotin, M. (May, 2008). *Physics for architects: Design, implementation and evaluation of experienced-based physics curricula*. Ryerson Faculty Conference: Building Community, Creating Learning Space, Ryerson University, Toronto, ON.
65. Milner-Bolotin, M. (January, 2008). *Designing, implementing and evaluating innovative physics curricula: Physics for Architects at Ryerson University*. Winter 2008 Meeting of the American Association of Physics Teachers, Baltimore, MD.
66. Milner-Bolotin, M., Stewart, J., Ives, J., & Eastwood, M. (June 16-21, 2007). *Teaching resources for Environmental Education in introductory science courses*. Canadian Association of Physicists Annual Conference, Saskatoon, Saskatchewan, Canada.
67. Milner-Bolotin, M., Moll, R., Kotlicki, A., Rieger, G., & Zhdanovich, S. (2007, January 10th, 2007). *The impact of Interactive Lecture Experiments on student academic achievement, motivation and attitudes towards science*. Winter 2007 Meeting of the American Association of Physics Teachers, Seattle, WA.

68. Milner-Bolotin, M., Moll, R., Kotlicki, A., Rieger, G., & Nashon, S. (2007, June 16-21). *Effect of Interactive Lecture Experiments on student academic Achievement, motivation and attitudes towards science*. Canadian Association of Physicists Annual Conference, Saskatoon, SK.
69. Milner-Bolotin, M. (2007). *Assessment reconsidered: Using modern technology to create authentic assessment in science courses*. 31 McGraw-Hill Ryerson Teaching, Learning and Technology Conference: Students in the Centre: Transforming Education ... and Lives, Ryerson University, Toronto, ON.
70. Milner-Bolotin, M. (2007). Using CPS Clicker Technology to Promote Interactivity in Undergraduate Classroom (workshop facilitator). Toronto, Ontario: Ryerson University, Toronto, ON.
71. Milner-Bolotin, M. (2007). *MasteringPhysics* Workshop: Using online interactive problem solving database to facilitate student learning in introductory physics. Toronto, ON: Ryerson University.
72. Milner-Bolotin, M., & Phelps, D. (2006, October 20th, 2006). *Inquiry-based activities for teaching electro-magnetism*. High Energy Physics - BC Professional Development Day for Science Teachers, TRIUMF, Vancouver, BC.
73. Milner-Bolotin, M., Milner, A., Milner, V., & Milner, A. (July, 2006). *Scientists and Innovators in the Schools: Helping teachers make a difference*. American Association of Physics Teachers Annual Meeting, Syracuse, NY.
74. Milner-Bolotin, M., Marziali, A., Bates, F., Bonn, D., Coope, R., Halpern, M. (2006). *Reforming undergraduate physics teaching at UBC*. Achieving Systemic Changes in Physics Teaching at Leading Research Universities, College Park, MD.
75. Milner-Bolotin, M., Kotlicki, A., Rieger, G., & Bates, F. (June 9-14, 2006). *Using technology to make large introductory science courses smaller: Interactive Lecture Experiments in physics 100*. Canadian Association of Physicists Annual Conference, Brock University, St. Catherine's, ON.
76. Milner-Bolotin, M. (June 9-14, 2006). *Bringing the excitement of physics to the community*. Canadian Association of Physicists Conference, Brock University, St. Catherine's, ON.
77. Milner-Bolotin, M. (May 11-12, 2006). *Using Technology to Make Large Introductory Science Courses Smaller: Interactive Lecture Experiments in Physics 100*. UBC Learning Conference: At a Crossroads in Teaching: Reflection, Innovation, Technology, Learning, University of British Columbia, Vancouver, BC.
78. Milner-Bolotin, M. (July 13-16 2005). *The role and place of imagination in contemporary science education: A case study of the introductory physics course*. 3rd International Conference on Imagination and Education, Vancouver, BC.

Other Local presentation at UBC:

1. Milner-Bolotin, M. (2017). *Examination of technology-enhanced collaboration in STEM teacher education: Opportunities, challenges and possibilities*. Paper presented at the Designing for People - HCI@UBC Seminar Series, UBC Vancouver.
2. Milner-Bolotin, M. (2017). Physics teaching with technology – addressing the challenges of the new BC science curriculum – a special Professional Development day for physics teachers during the UBC 39th Physics Olympics, March 4, 2017, UBC.
3. Milner-Bolotin, M. (March 4, 2016). 3rd Annual UBC Education Graduate Student Conference, was invited to participate in the panel: *Exploring the tensions between theory and practice in our word in the field of education*.
4. Milner-Bolotin, M. (2015, July 8-9). Using PeerWise online technology to promote collaboration in methods courses, [UBC Faculty of Education TEC-Expo 2015](#), Vancouver, BC.
5. Milner-Bolotin, M. (2015). *Making online graduate teacher education courses matter - from theory to successful technology-enhanced practice*. Paper presented at the 18th UBC Investigating Our Practices Conference, Vancouver, BC.
6. Vinayagam, M., Egersdorfer, D., & Milner-Bolotin, M. (2015). *Creating interactive classroom activities in GeoGebra for secondary math*. Paper presented at the 18th UBC Investigating Our Practices Conference, Vancouver, BC.

7. Egersdorfer, D., Vinayagam, M., & Milner-Bolotin, M. (2015). *Using PeerWise technology to promote physics teacher-candidates' pedagogical content knowledge*. Paper presented at the 18th UBC Investigating Our Practices Conference, Vancouver, BC.
8. Milner-Bolotin, M. (September, 2012, 2013, 2014). Invited research presentation at William Pinar's graduate course at the Department of Curriculum and Pedagogy. UBC Faculty of Education (three one-hour long presentations).
9. Milner-Bolotin, M. (2013, May 4). *Exploring extraordinary science of ordinary things: Engaging teacher-candidates in science & mathematics learning through modern technologies*. Investigating Our Practices Conference, University of British Columbia, Vancouver, Canada.
10. Milner-Bolotin, M. (2012). *Modern technology use in teacher education: Are we ready?* [2012/2013 CREATE Seminar Series](#), UBC Faculty of Education, Vancouver, BC.
11. Hunter, K., Cha, J., Nashon, S., & Milner-Bolotin, M. (2011, May 3). *Using interactive questioning technology to promote inquiry-driven science and mathematics instruction*. Investigating Our Practices: Faculty of Education Conference, Vancouver, BC.
12. Milner-Bolotin, M. (2007, February 20). *Making your classes click: How to ask good clicker questions and get the most out of your teaching experience*. University of British Columbia Technology Series: Office of Learning Technologies, The University of BC, Vancouver, BC.

(f) **Other: Media Engagement: Interviews**

Media	Forum	Interview location	Title of the media piece	Date	Reference
West Canada Weekly (Vancouver Chinese Newspaper)	Newspaper	Vancouver	Education upfront: An interview with Dr. Marina Milner-Bolotin	June 2, 2016	http://www.wcweekly.com/
UBC ETC services	UBC, Educational Technology Services, Faculty of Education	UBC ETC (video interview)	The use of Collaborative Learning Annotation Software (CLAS) in teacher education	February -March, 2016	https://clas.sites.olt.ubc.ca/marina-milner-bolotin-in-curriculum-and-pedagogy-uses-clas-for-mini-teaching-by-teaching-candidates/
Vancouver Sun	Vancouver newspaper	On the phone	Coding to be added to BC school curriculum, sort of	January 17, 2016	http://blogs.vancouver.sun.com/2016/01/19/coding-to-be-added-to-bc-school-curriculum-sort-of/
UBC Public Affairs Office	UBC Centennial Lectures	UBC PR (Lou Bosshart)	Math phobias: Fighting the fear (interview, UBC Expert Q&A)	October 21, 2015	http://news.ubc.ca/2015/10/21/math-phobias-fighting-the-fear/
Sunmedia.ca	Contacted me via UBC PR	Stefania Seccia	Overcoming math anxiety: what can the parents do to help their children	October 21, 2015	http://vancouver.24hrs.ca/newspapers

Web & face-to-face	Katie Hylsop: Tyee series on science education	Phone	The Tyee (an online news magazine) to come out in June	March 26, 2015	http://vancouver.nerdnite.com/
Face-to-face	Nerd-Nite Vancouver 9.0	Nerd-Nite Vancouver 9.0	http://vancouver.nerdnite.com/	January 21, 2015	http://vancouver.nerdnite.com/
Radio, TV, newspapers	CTV, local Vancouver newspapers, (Ming-Pao)	PNE – Playland – BC Brightest Minds Competition	BC Brightest Minds Competitions	April 29, 2014	http://edcp.educ.bc.ca/bc-brightest-minds-2014/
UBC Podcast	Faculty of Education Podcast	UBC Faculty of Education by David Roy	STEM Education and STEM 2014 Conference	December 2013	http://pdce.educ.bc.ca/ep-69-stem-spooks/
Radio	Radio Vera – 96.1 FM – Russian Voice of Vancouver	Phone	Bullying: how can we help to educate teachers to prevent bullying in our schools	October 12, 2013	http://www.russianvoice.net/
Radio	Radio Vera – 96.1 FM – Russian Voice of Vancouver	Phone	Back to school: how to help your child succeed in mathematics and science (in Russian)	September 3, 2013	http://www.russianvoice.net/
Radio	Radio Vera – 96.1 FM – Russian Voice of Vancouver	Studio of Radio Vera, Richmond, BC. Interviewer Alexandra Gerson	Status of Women in Science, Engineering and Business in Canada	August 25, 2010	http://vancouverovka.com/index.cfm?a=radio_vera
MITACS	MITACS	Phone interview with Chelsea Dibble	An interview about interview opportunities for Canadian Faculty members to work with undergraduate students from around the world	April 18, 2012	http://www.mitacs.ca/globalink
Ming- Pao	Chinese newspaper in Richmond, BC	On UBC Campus by Louisa Chan	In Mandarin. The topic: Exploring the science behind everyday life electric phenomena.	December 7, 2012	The article is available by request.
Global TV	Global National Series on Education	On UBC campus	Canadians worried about kids' grasp of math literacy: poll	Thursday, September	http://edcp.educ.ubc.ca/congratulations-to-marina-milner-bolotin/

				er 6, 2012	
The Globe & Mail	Canadian National Newspaper	On UBC campus	Clickers help teachers read the classroom	May 3, 2012	See Globe and Mail archives
The Ubysey	UBC student newspaper	On UBC campus by Coral Kasirer	Tech supplement: the i>clicker	September 12, 2012	http://ubyssey.ca/features/tech-supplement-past-tech-revolutions/
NSTA Reports	NSTA Monthly Newsletter	Phone interview by Connie Olivier	Making the most of a scientist's visit	November, 2011	http://www.nsta.org/publications/news/story.aspx?id=59024
Physics in Canada	The Journal of the Canadian Association of Physicists	Toronto, Canada, by Prof. Robert Thompson	Interview with Marina Milner-Bolotin, June 2010	June 2010	<i>Physics in Canada</i> , 66(3), 207-212.

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

Conference/Association	Conference Location	Role	Date	Reference
International STEM 21016 Conference	Beijing Normal University, BJ, China	Member of the organizing committee, represented UBC. I have been helping our Chinese colleagues since summer 2015	October 24-26, 2016	http://stem.bnu.edu.cn/
BC Association of Physics Teachers - BCAPT	Vancouver, BC	Member of the organizing committee, (couldn't attend the conference but took an active part in the organization)	May 14, 2016	www.bcapt.ca
Investigating Our Practices, 19 th Conference	UBC, Vancouver, BC	Volunteer, participant, presenter	May 14, 2016	http://iop.educ.ubc.ca/
6 th Aboriginal Math Symposium at UBC Long House	UBC, Vancouver, BC	Participant, volunteer	May 12, 2016	
CTLT Special Events celebrating UBC Centennial: How to get Smarter keynote by Annie Murphey Paul TLEF showcase	UBC, Vancouver, BC	Participant	May 5, 2016	https://events.cltl.ubc.ca/events/keynote-brilliant-the-science-of-how-to-get-smarter/

Special panel about the future of higher education with President Martha Piper, David Farrar, Angela Redish, etc.				
EuroScienceFun Conference	Reykjavik, Iceland	Participant, presenter – talk and public science show	April 5-9, 2016	http://wiki.europhysicsfun.org/projects/showscience_2016/participants
Winter 2016 American Association of Physics Teachers National Meeting	New Orleans, LA	Participant, presenter, awardee	January 9-12, 2016	www.aapt.org
BC Science Teachers' Association Catalyst 2015 Conference	Vancouver, BC	Invited workshop leader	October 23, 2015	http://catalyst.bcscta.ca/program/program.htm
The Canadian Association of Physicists, Annual Congress	Edmonton, AB Canada	Invited panel speaker, contributed talk, poster	June 15-19, 2015	http://www.cap.ca/en/home/?set_language=en
EESD 15 – The 7 th Conference on Engineering Education for Sustainable Development	UBC	Participant, participated in pre-conference workshops on sustainability education	June 9-12, 2015	http://eesd15.engineering.ubc.ca/
18th UBC Investigating our Practices Conference	UBC	Participant, presented 3 contributed talks: two with my students and one by myself	May 2, 2015	http://iop.educ.ubc.ca/
Learning Technologies and Ecosystems Workshop	UBC Centre for Teaching Learning and Technology	Participant	April 28, 2015	
Cultivating Learning Network, UBC Department of Curriculum and Pedagogy	UBC Farm	Participant	April 24, 2015	Organized by S. Gerofsky, S. Friedman
2015 International Conference of the National Association of Research in Science Teaching	Chicago Illinois	Participant, presented a contributed talk; chaired a session	April 11-14, 2015	http://sciencecharter.ca/science-outreach-workshop/2015-science-outreach-workshop/

2015 BC Science Outreach Workshop	TELUS World of Science, Vancouver, BC	Participant	March 2, 2015	http://sciencechart er.ca/science-outreach-workshop/2015-science-outreach-workshop/
American Association of Physics Teachers	San Diego, CA	Invited speaker	January 3-6, 2015	www.aapt.org
Technion, Israel: STEM Education conference	Haifa, Israel	Participant	December 17, 2014	
International Women in Physics Conference	Waterloo, Ontario, Canada	Invited speaker – panelist, conference organizer	August 3-6, 2014	http://icwip2014.wlu.ca/
The Canadian Association of Physicists, Annual Congress	Sudbury, ON, Canada	Invited speaker	June 16-20, 2014	http://www.cap.ca/en/home/?set_language=en
Surrey Science Teachers Association Annual Convention 2014	Surrey, BC	Invited speaker	May 2, 2014	http://www.staconvention.ca/
The Korean Association for Science Education	Daegu, South Korea	Invited Speaker	February 13-16, 2014	http://www.koreascience.org/
2014 American Association of Physics Teachers National Winter Meeting	Orlando, Florida, USA	Presented 2 contributed papers and 2 posters	January 3 rd – 8 th , 2014	www.aapt.org
International Perspectives on Technology-Enhanced Learning (IPTEL 2013) Conference: Lessons, Challenges and Possibilities	UBC, Vancouver, BC	Contributed a paper, a workshop, reviewed 6 papers, helped with the organization	July, 2013	http://ocs.educ.ubc.ca/index.php/IPTEL/IPTEL2013
Canadian Women in Physics Conference	SFU, Vancouver, BC	Participant: Women in science panel	July, 2013	
CSSE Annual Congress	Victoria, BC	Presented 2 papers with my grad students	June 1 st – 5 th , 2013	
Investigating Our Practices Educational Conference	UBC, Vancouver, BC	Organized and facilitated a panel with teacher-candidates	May, 2013	
2013 AAPT Winter Meeting (American Association of Physics Teachers)	New Orleans, LA	Member of the AAPT Organizing Committee, Presented a contributed talk.	January 5 th – 9 th , 2013	www.aapt.org
CSSE Annual Congress	Waterloo, ON	Presented a paper with my grad students	May 26-30, 2012	
STEM 2012 Conference, Beijing, China	Beijing Normal University	Presented a workshop	November 24-27, 2012	http://stem2012.bnu.edu.cn/cfp.html

2012 AAPT Summer Meeting (American Association of Physics Teachers)	Philadelphia, PA	Member of the Organizing Committee; presented invited talk & poster.	July 28 th – August 1 st , 2012	www.aapt.org
2012 Canadian Association of Physicists' Congress	Calgary, AB	Contributed a talk; member of the Org. Committee, Division of Physics Education.	June, 2012	www.cap.ca
American Educational Research Association Annual Conference	Vancouver, BC	Presented a poster	April, 2012	
American Association for the Advancement of Science Annual Conference	Vancouver, BC	Presented a workshop	February, 2012	
2012 American Association of Physics Teachers (AAPT) Winter Meeting	Ontario, CA	Member of the Org. Committee, contrib. a talk, an invited panel member.	February 4 th – 8 th , 2012	www.aapt.org
CATALYST Conference of BC Science Teachers' Association	Richmond, BC	Invited presentation/workshop and a contributed presentation	October, 17, 2011	
2011 Physics Education Research Conference	Omaha, NB	Presented a contributed talk and a poster.	August 1 st – August 2 nd , 2011	www.aapt.org
2011 American Association of Physics Teachers (AAPT) Summer National Meeting	Omaha, NB	Member of the AAPT Org. Committee; presented a contrib. talk and a poster.	July 30 th – August 1 st , 2011	www.aapt.org
2011 Canadian Association of Physicists (CAP) Congress	St. John's, NF	Invited speaker; contributed a talk; member of the Org. Comm. for the Division of Physics Education.	June, 2011	www.cap.ca
2011 BC Association of Physics Teachers Annual Conference	Kelowna, BC	Invited speaker, conference organizer	May, 2011	
International Union of Pure and Applied Physics (IUPAP) 3 rd International Women in Physics Conference	Stellenbosch, South Africa	Presented a workshop, 4 posters and an outreach event	April 5-9, 2011	
2011 Foundations and Frontiers of Physics Education Research Conference	Puget Sound, Olympic Pacific Institute, Olympic Nat. Park, WA	Participant, presented a poster	March 17–20, 2011	

2011 American Association of Physics Teachers (AAPT) Winter Meeting	Jacksonville, Florida	Member of the AAPT Org. Committee, contributed a talk	January, 2011	www.aapt.org
Ubiquitous Learning International Conference	Vancouver, BC	Presenter, reviewed 4 papers	Dec., 2010	
Peter Wall Institute Exploratory Workshop	UBC, Vancouver, BC	Presenter	October, 2010	
2010 American Association of Physics Teachers (AAPT) Summer Meeting	Portland, OR	Member of the AAPT Org. Committee; contributed a talk & a poster	July, 2010	www.aapt.org
Objectivity in Science Conference	UBC, Vancouver, BC	Participant	June, 2010	
2010 CAP Congress (Canadian Association of Physicists)	Toronto, ON	Invited speaker/workshop; Org. Com. Member, Div. of Physics Education	June, 2010	www.cap.ca
Educational Technologies Roundtable by UBC Office of Learning Technologies	UBC, Vancouver, BC	Participant	May, 2010	
UBC TAG Institute: Instructor Capacity Building for working in Diverse Classrooms – UBC's engagement with aboriginal issues	UBC, Vancouver, BC	Participant	May, 2010	
Investigating our Practices, UBC Annual Teaching Conference	UBC, Vancouver, BC	Presenter	May, 2010	
UBC Teaching Scholars Program 3-day Workshop – by invitation	UBC, Vancouver, BC	Participant	April, 19-22, 2010	
International Conference on Technology, Education and Development, INTED 2010 – International Association for Technology, Education and Development	Valencia, Spain	Presenter	March, 2010	
Hewlett Packard Innovations in Education Worldwide Summit	San-Francisco, CA	Contributed a poster	February, 2010	
2010 Symposium on Physics Education	Washington, DC	Participant	February, 2010	www.aapt.org

2010 American Association of Physics Teachers (AAPT) Winter Meeting	Washington, DC	Member of the AAPT Org. Comm., contributed a talk	February, 2010	www.aapt.org
Physics Teachers Education Coalition Annual Conference	Washington, DC	Participant	February, 2010	www.aapt.org
Educational Technology Webinar by the University of Northern Colorado	Online	Organizer, led a workshop	August, 2009	
2009 American Association of Physics Teachers (AAPT) Summer Meeting	Ann Arbor, Michigan	Member of the AAPT Org. Committee, contributed a talk and a poster	July, 2009	www.aapt.org
2009 Physics Education Research Conference	Ann Arbor, Michigan	Conference Organizer, presenter	July, 2009	www.aapt.org
2009 Canadian Association of Physicists (CAP) Congress	Moncton, NB	Invited speaker; workshop leader; organizer for the Div. of Physics Ed.	June, 2009	www.cap.ca
CeLC Conference	UBC, Vancouver, BC	Presenter	June, 2009	
Ryerson University Faculty Conference: Shaping our Future: Teaching Excellence in a Changing Climate	Toronto, ON	Presented 3 papers and a workshop	May, 2009	
HP Innovations Worldwide Summit	La Jolla, CA	Presenter	February, 2009	
2009 American Association of Physics Teachers (AAPT) Winter Meeting	Chicago, IL	Member of the Org. Committee, Presented 2 contributed talks and 2 posters	February, 2009	www.aapt.org
2008 American Association of Physics Teachers (AAPT) Summer Meeting	Edmonton, AB	ON Section Rep., Council Member, contrib. talk; a poster	July, 2008	www.aapt.org
2008 CAP Congress (Canadian Association of Physicists)	Laval, QB	Presenter	June, 2008	www.cap.ca
33rd McGraw Hill Ryerson Teaching, Learning and Technology Conference, Simon Fraser University and McGraw Hill	Burnaby, BC	Presenter	May, 2008	

Ontario Association of Physics Teachers Annual Conference 2008	Toronto, ON	Member of the Conference Org. Comm. Presented a paper, organized a panel	May, 2008	www.oapt.ca
Ryerson University Faculty Conference	Toronto, ON	Presented two papers	May, 2008	
Buffalo State University	Buffalo, NY	Presented an invited workshop during a special event on educational technologies	March, 2008	
Sloan-C Foundation Online Workshop: Moving the Laboratory Online: Situating the Online Laboratory Learning Experience for Future Success	Bellingham, Washington, online workshop	Presented an invited workshop	March, 2008	
2008 AAPT Winter Meeting (American Association of Physics Teachers)	Baltimore, MD	Section Rep. for ON, Council member, contributed a talk	January, 2008	www.aapt.org
Ryerson McGraw Hill Teaching and Learning Conference	Ryerson University, Toronto, ON	Presenter	Nov., 2007	
2007 American Association of Physics Teachers (AAPT) Summer Meeting	Greensboro, NC	BC Section Rep, Council member, contributed a talk	July, 2007	www.aapt.org
International Society for the History and Philosophy of Science International Conference	Calgary, AB	Presenter	July, 2007	
2007 Canadian Association of Physicists (CAP) Congress	Saskatoon, SK	Contributed a talk; Org. Com. member for Physics Educ. Div.	June, 2007	www.cap.ca
2007 American Association of Physics Teachers (AAPT) Winter Meeting	Seattle, WA	BC Section Rep., Council member, contributed a talk.	January, 2007	www.aapt.org
2006 American Association of Physics Teachers (AAPT) Summer Meeting	Syracuse, NY	BC Section Rep., Member of the Council, Presented a contributed talk	July, 2006	www.aapt.org
2006 Canadian Association of Physicists (CAP) Congress	St. Catherine's, ON	Contributed a talk; Member of the Org. Com. for the Division of Physics Education	June, 2006	www.cap.ca

Achieving Systemic Changes in Physics Teaching at Leading Research Universities	Washington, DC	Invited poster	March, 2006	
National Science Teachers Association Annual Meeting	Anaheim, CA	Award recipient, participant	April, 2006	www.nsta.org
Skylight Science Supper Series	UBC, Vancouver, BC	Invited presenter	February 8, 2006	
2006 American Association of Physics Teachers (AAPT) Winter Meeting	Anchorage, Alaska	Contributed a talk	January, 2006	www.aapt.org
3rd Intern. Conference on Imagination and Education	Vancouver, BC, Canada	Presented an invited talk	July, 2005	
2005 American Association of Physics Teachers (AAPT) Summer Meeting	Salt Lake City, Utah	BC Section Rep, Council member, contributed a talk	July, 2005	www.aapt.org
Canadian Association of Physicists (CAP) Congress	Vancouver, BC	Presenter	June, 2005	www.cap.ca
2003 American Association of Physics Teachers (AAPT) Winter Meeting	Austin, TX	Contributed a talk, participated in workshops.	January, 2003	www.aapt.org
2002 American Association of Physics Teachers (AAPT) Winter Meeting	Philadelphia, PA	Contributed a talk, participated in workshops.	January, 2002	www.aapt.org
2001 American Association of Physics Teachers (AAPT) Summer Meeting	Rochester, NY	Contributed a talk	July, 2001	www.aapt.org

10. SERVICE TO THE UNIVERSITY & WIDER SCHOLARLY COMMUNITY

(a) *Areas of special interest and accomplishments (200 words)*

My goal is strengthening math and science education through bridging research and practice. Therefore, my service is intertwined with my research and practice. In 2010, I initiated [UBC Faculty of Education Family Math and Science Day](#) – the largest outreach event in the Faculty. This year it attracted ~400 guests and volunteers! Since 2010, I co-organize [UBC Physics Olympics](#) (450+ participants annually). In 2008, I became the first Canadian to serve on the American Association of Physics Teachers (AAPT) Executive Board. Since 2010, I've organized 4 international and 10 national/provincial conferences. Since 2008, I serve as an Associate Editor of the Canadian Journal of Physics (Education section). I served as a President of the BC Association of Physics Teachers (an Executive member since 2004). I represented Canada at the Women in Physics Congresses in Stellenbosch, S. Africa (2011), and in [Waterloo, ON \(2014\)](#). In 2014 I became a Vice-Chair of the Canadian Association of Physicists [Committee to Encourage Women in Physics](#). For my contributions

to promoting physics education worldwide I was awarded [2016 Homer L. Dodge AAPT Distinguished Service Citation](#). Since 2010, I have done more than 50 interviews, panels, community appearances, workshops to promote mathematics and science education worldwide.

(b) *Memberships on committees, including offices held and dates (since 2010)*

Period	Committee
2010 – present	Department of Curriculum and Pedagogy Outreach Committee, Chair
2011 - present	Department of Curriculum and Pedagogy: Co-Organizer (with the Faculty of Science) UBC Physics Olympics (representative of the Faculty of Education)
2016 - present	Member of the Advisory Board of the LUMAT Centre for Mathematics and Science Education in Finland: http://www.luma.fi/centre/ (by invitation)
2017-2018	Science Education area chair for the Department of Curriculum and Pedagogy
2016-2017	Member of the Search Committee for the Department of Curriculum and Pedagogy STEM faculty position.
2016-2017	Faculty of Education representative to the Faculty of Science
2016-2017	Teacher Education Office, Faculty of Education, Middle Years consultation group (represented Department of Curriculum and Pedagogy)
2015 – 2016	Department of Curriculum and Pedagogy Graduate Awards Committee
2015-2016	Department of Curriculum and Pedagogy Merit Committee
2015 – present	UBC-wide CIRTLE Committee – Centre for the Integration of Research, Teaching and Learning: http://www.cirtl.net/expansion . This Committee works on applying for the membership in the CIRTLE organization and promoting research-teaching connections on UBC campus. The goal of CIRTLE is to advance the teaching of STEM disciplines in higher education.
2015 – present	Planning committee for the Fourth Science, Technology, Engineering and Mathematics in Education (STEM 2016) conference to be hosted by Beijing Normal University, member of the International Organizing Committee
2014 – 2015	Department of Curriculum and Pedagogy Merit Committee
May 2015	Departmental Task Force (Group # 2) for updating lab spaces and lab equipment in the Department.
April 2015 – March 2016	Advisory Committee for the selection of a Head for the Department of Curriculum & Pedagogy (EDCP)
2014-2015	University-wide Educational Technology Advisory Group
Spring 2015	Member of the Faculty of Education Killam Teaching Award Committee
2012 – 2014	Planning committee for the Science, Technology, Engineering and Mathematics in Education (STEM 2014) conference hosted by UBC's Faculty of Education in 2014, member of the Organizing Committee
2011 – 2014	International Women in Physics Conference 2014 - Organizing Committee member (hosted the conference in Waterloo, Canada)

Summer 2013	Helped with the organization of the UBC Conference International Perspectives on Technology-Enhanced Learning: Lessons, Challenges, Possibilities in 2013 Reviewed 15 papers
2012 – 2013	Department of Curriculum and Pedagogy Merit Committee
2011 – 2013	Graduate Advisory Committee, Member
2011 – 2012	Department of Curriculum and Pedagogy Seminar Committee, Member
2011 – 2012	Faculty of Education Congress
2011 – 2012	Department of Curriculum and Pedagogy, Department Standing Personnel Committee, Member
2011 – 2012	Faculty of Education, Social Media Working Group, Member
2011 – 2013	Faculty of Education Educational Technology Group
2011 – 2013	Faculty of Education, Community Engagement Working Group, Member
2010 – 2011	Faculty of Education Walkabout Committee, Member
2010 – 2013	Celebrate Learning: Faculty of Education Mathematics and Science events. In collaboration with UBC Library, UBC Faculty of Food and Land Systems.

(c) *Other Service, including dates*

Date	Role
2010 – present	Organization of UBC Physics Olympics . This event draws hundreds of students from all over BC to come to UBC to compete in hands-on physics activities (www.physoly.phas.ubc.ca). It also brings more than 50 physics teachers to UBC. This provides a great opportunity for us to invite teachers to consider graduate studies with us. Since 2014, I began organizing special Pro-D events for teachers during the Olympics. This is a long-term collaboration between the Faculty of Education and Faculty of Science. Since 2013, I am in charge of the event from the Faculty of Education.
2010 – present	Faculty of Education Mathematics and Science Family Day . I envisioned and spearheaded this Faculty-wide outreach event for the first time in 2010 that engages our teacher-candidates with promoting mathematics and science to the community. I collaborate on this event with other faculty members – Dr. Samson Nashon, Dr. Cynthia Nicol, Dr. Sandra Scott, Dr. Doug Adler, and many others. This is a great opportunity to showcase our Faculty and our Department and the work we do.
2010 – 2014	Organization of BC Brightest Minds Competition at Playland - PNE. Involved since 2010; since 2013 I have been in charge of this event. The event draws more than 20 teams of grade 11-12 students from all over Lower Mainland to think outside the box and to apply physics concepts to Playland rides.

11. SERVICE TO THE COMMUNITY(a) *Memberships on scholarly societies, including offices held and dates*

Period	Society	Position
2004 – present	British Columbia Association of Physics Teachers (BCAPT): www.bcapt.ca	Member of the Executive Board, Vice-President (2010-2011), President (2011-2012), Past President (2012-2013), Section Representative (2004-2007, 2010-2013), Public Relations officer, Communications officer
1998 – present	American Association of Physics Teachers (AAPT); www.aapt.org	Member, Member of the Executive Board, Chair and Vice-Chair of Section Representatives of AAPT.
2014 – present	Canadian Physics Education Research Group: http://www.ciphergroup.ca/#executive	Executive Board member, founding member, BC Representative
2010 – present	Canadian Society for the Study of Education (CSSE)	Member
2005 – present	Scientists and Innovators in the Schools; https://www.scienceworld.ca/sis	Volunteer conducting science workshops, lessons and demonstrations at local K-12 schools (5-6 visits per year across BC)
2005 – present	Canadian Association of Physicists (CAP); http://www.cap.ca/	Member, Member of the Division of Physics Education; Member of the Committee to Encourage Women in Physics
PAST		
2010-2015	American Educational Research Association (AERA)	Member
2013-2014	National Association of Research in Science Teaching (NARST)	Member
2007-2012	Ontario Association of Physics Teachers	Member, Member of the Executive Board, Section Representative
2011 – 2012	American Association for the Advancement of Science	Member
2004-2007	New Jersey Association of Physics Teachers	Member
2004 – 2012	National Association of Science Teachers	Member
2004-2007	American Physical Society	Member
2004-2007	Intern. Society for the Scholarship of Teaching & Learning	Member
2005-2005	Society for Teaching and Learning in Higher Education	Member

(b) Editorships (list journal and dates)

Date	Journal	Position
2008 - present	Canadian Journal of Physics	Associate Editor , responsible for the Physics Education Section of the Journal (1-2 papers a month)
2009 - 2015	Science Education Review	Member of the Editorial Board
2007 - present	Physics in Canada	Consultant for the Physics Education Section of the Journal

(c) Reviewer (journal, agency, etc. including dates)

Date	Journal	Associations /Granting Agencies
2010 – present	Canadian Society for the Studies in Education Annual Conference	Canadian Society for the Studies in Education
2016-2017	Canadian Journal of Physics (3 papers) Cogent Education (1 paper) LUMAT Science Education journal, Finland (2 papers) Science Education (1 paper) Physics Teacher (2 papers) American Journal of Physics (1 paper) Physics in Canada (14 papers)	These journals represent many STEM Education agencies and publishers, such as American Association of Physics Teachers, LUMA – Finish Association for STEM Education, Canadian Association of Physicists, etc.
Spring-Summer 2016	Reviewed four chapters for an edited book (I am a member of the Editorial Board)	IGI Global, Editors D. Tsybulsky and I. Levin. Tentative title: Exploring technology-enabled science education
Spring-Summer 2016	International STEM Conference, BJ, China- reviewed 10 proposals	BNU, STEM
Winter 2015-2016	Canadian Association of Teacher Education Conference proposals (6 proposals)	CATE - CSSE
December 2015	Reflective Practice	Taylor & Francis educational journal
2014 – present	LUMAT: Research and Practice in Math, Science and Technology Education (Finish journal)	University of Helsinki, LUMA Centre for math and science education
2015 - present	Scandinavian Journal of Educational Research (~1 manuscript annually)	
2012 – present	Journal of Chemical Education (~1 manuscript annually)	American Chemical Society
2004 – present	The Physics Teacher	American Association of Physics Teachers
2004 – present	American Journal of Physics	American Association of Physics Teachers, American Physical Society

2005 - present	Physics Review Letters, Special topics, Physics education research	American Association of Physics Teachers, American Physical Society
2010 – present	Canadian Journal of Science, Math, & Technology Education	Ontario Institute for the Studies of Education
2004 – present	Canadian Journal of Physics	Canadian Association of Physicists (Division of Physics Education)
2004 – present	Physics in Canada	Canadian Association of Physicists (Div. of Physics Education section)
2010 – 2014	AERA Conference	American Educational Research Association
2010 – 2014	NARST Conference	National Association for Research in Science Teaching
2004 – present	Physics Ed. Research Conf., Proc.	American Association of Physics Teachers, American Physical Society
2013 – 2014	STEM 2014 proposal reviewer	STEM 2014 Conference Proposals
2012, 2013	Western Conf. on Science Ed.	Reviewed conference proposals
2012 – present	Canadian Journal of Action Research	
2012 – present	Journal of Curriculum Studies	
2012 – present	Journal of Science Education and Technology	National Association of Research in Science Teaching
2012	Canadian Journal of Learning and Technology In Education	
2012	Canadian Journal of Higher Education	
2012	STEM 2012 Conference (Beijing)	Reviewed conference proposals
2013	IPTEL Conference (UBC)	Reviewed 15 proposals
2010 – 2011	Ubiquitous Learning Conference	Reviewed conference proposals
2010-2011	NSERC Crystal Grant review	National Science and Engineering Research Council, Canada (NSERC)

(d) *External examiner (indicate universities and dates)*

Candidate	Degree	Institution	Date
Laura Stiles-Clarke	M.A.	St. Francis Xavier University	July 20, 2015

(e) *Other service to the community*

12. AWARDS AND DISTINCTIONS

(a) *Awards for Teaching (indicate name of award, awarding organizations, date)*

Date	Award	Organization
May, 2015	Appointed as a foreign expert in the International Training Program at Beijing Institute of Education Chaoyang Branch (May 2015).	Beijing Institute of Education Chaoyang Branch
May, 2014	UBC Killam Teaching Award	UBC, Killam Trust
June, 2010	Canadian Association of Physicists Excellence in Undergraduate Physics Teaching Medal	Canadian Association of Physicists
November, 2009	Ryerson Faculty of Engineering Architecture and Science Excellence in Teaching Award	Ryerson Faculty of Architecture, Engineering, and Science
2007	UBC Faculty of Science Excellence in Science Teaching Award	UBC Faculty of Science

(b) *Awards for Scholarship (indicate name of award, awarding organizations, date)*

Date	Award	Organization
October, 2016	4 th International STEM Conference, BJ, China, Best Paper Award	http://stem.bnu.edu.cn/
July, 2014	STEM Education and Our Planet International Conference: Best paper award	www.stem2014.ubc.ca
March, 2006	NSTA Vernier Educational Technology Award (\$3,000)	National Science Teachers Association

(c) *Awards for Service (indicate name of award, awarding organizations, date)*

Date	Award	Organization
September, 2016	Was elected to be a Fellow of the American Association of Physics Teachers	American Association of Physics Teachers www.aapt.org
October, 2015	A recipient of Homer L. Dodge Citation for distinguished service to the American Association of Physics Teachers	American Association of Physics Teachers
February, 2013	American Association of Physics Teachers Certificate of Appreciation	American Association of Physics Teachers
November, 2006	UBC Faculty of Science Service Award	UBC Faculty of Science

(d) *Conference Attendance Sponsorship Awards*

Conference	Sponsor & Award	Venue	Date
EuroScienceFun Conference 2016	European Science Outreach Organization	Reykjavik, Iceland	April 5-9, 2016

Canadian Association of Physicists Annual Conference, 2014	UBC Center for Teaching, Learning and Technology	Sudbury, ON	June 16-20, 2014 http://www.cap.ca/en/congress/2014
Korean Association for Science Education International Conference,	Korean Association for Science Education	Daegu, South Korea	February 10-17, 2014
Canadian Association of Physicists Annual Conference, 2012	UBC Center for Teaching, Learning and Technology	Calgary, AB	June 11-15, 2012 http://www.cap.ca/en/congress/2012

(d) *Other Awards and Recognitions:*

In June 2014 I received a special award at Club 59 of Vancouver Toastmasters: Doug Anderson Award for Toastmaster of the year. This award is given to a Toastmasters Club 59 member who has made significant contributions to the life of the Club and who has showed professionalism, leadership, and initiative.

In March 2015 I received a special letter, signed by the International President of Toastmasters International Organization for my contributions to the Organization over the five year period – 2010 – 2015.

13. OTHER RELEVANT INFORMATION (Maximum One Page)

As an educator and an educational researcher I have to communicate to my students, colleagues and the general public. I also have to be a leader. This was the reason behind my joining a Toastmasters International Organization in April 2010. At that time I joined Club 59 of Toastmasters International, located in Kitsilano in Vancouver. Since 2010, I have completed the following levels: Competent Communication, Competent Leadership, Advanced Communication Bronze, Silver, and Gold, and Advanced Leadership Bronze. During the academic years 2013-2015 I served as the Club's VP of Education and VP of Public Relations: <http://59.toastmastersclubs.org/>.

I think my participation in this organization significantly improved my communication and leadership skills and positively contributed to my professional work. It also helped me be a better mentor to my students (especially teacher-candidates) in helping them improve their communication and leadership skills.

THE UNIVERSITY OF BRITISH COLUMBIA***Publications Record*****SURNAME:** Milner-Bolotin**FIRST NAME:** Marina**Initials:** MMB**MIDDLE NAME:****Date:** November 22, 2016**Legend:**

- No other identifier if Dr. Milner-Bolotin is a sole author;
- First Author (FA) – Conceptualized and led the study as well as wrote the bulk of the manuscript;
- Second Author (CA) – Contributing author – Conceptualized and conducted the study with first author and jointly wrote the manuscript;
- Senior Author (SA) – Conceptualized and led the study and supervised the writing of the manuscript;
- Other authors (CRSE) – Critical reading and substantive editing of the manuscript;
- *Italicized* author – Graduate student mentored by Dr. Milner-Bolotin in capacity of supervisor/co-supervisor or committee member.

1. REFEREED PUBLICATIONS

My research explores (i) physics pedagogy and how it is mediated through educational technology; and (ii) how the results of educational research can be implemented into practice. My scholarly activity is grounded in the UBC Collective Agreement/SAC Guidelines for Reappointment, Promotion & Tenure Procedures at UBC (2014-15) and for many years has been located as a blend of traditional scholarly activity (Section 3.1.5) and the scholarship of teaching (3.1.6-3.1.11). This is reflected in my publication record. Therefore, I decided to divide my papers below published in refereed journals into two categories: research papers that represent more traditional physics education research and scholarship of teaching and learning papers. By traditional research papers I mean papers that describe studies that were designed to answer research questions using conventional methods (for example, statistical analysis in case of a quantitative study of student learning outcomes or attitudinal changes). While by the scholarship of teaching and learning papers I mean papers that shed light on different ways of improving pedagogical practices and connecting educational research to its implementation. I also wish to point out that although some of the papers might appear short, many physics education journals have page or word limitations. This is despite the fact that these journals are highly competitive and have a lot of impact on the field. For example, the Physics Education section in "*Physics in Canada*" will not accept papers exceeding 2 pages. The journal, however, is read by more than a 1000 Canadian physics educators and its papers have a significant impact on how physics is taught in Canada and elsewhere. The same applies to "*The Physics Teacher*", "*The Journal of College Science Teaching*", "*Canadian Journal of Physics*", "*The Journal of Chemical Education*", etc. Besides, many of these journals are printed on Letter-size pages, as well as a double-column format, which might convey the impression of a somewhat short article.

Refereed research papers:

1. Milner-Bolotin, M., & Johnson, S. (2017). Foreword to the Science Outreach Issue. *Physics in Canada*, 73(3), 3.
2. Milner-Bolotin, M., & Milner, V. (2017). Family Mathematics and Science Day at UBC Faculty of Education. *Physics in Canada*, 73(3), 4.
3. Milner-Bolotin, M. (2017). Promoting reflective physics teaching through the Use of Collaborative Learning Annotation System. *The Physics Teacher*, Accepted June 2017, 4.
4. Liao, T., McKenna, J., & Milner-Bolotin, M. (2017). Four decades of High School Physics Olympics Competitions at the University of British Columbia *Physics in Canada*, 73(3), 3.
5. Milner-Bolotin, M., Egersdorfer, D., & Vinayagam, M. (2016). Investigating the effect of question-driven pedagogy on the development of physics teacher-candidates' Pedagogical Content Knowledge.

Marina Milner-Bolotin CV - Updated June 2017

Physics Review Special Topics - Physics Education Research, 32. (LA, published with two graduate students).

6. Chachashvili-Bolotin, S., Milner-Bolotin, M., & Lissitsa, S. (2016). Examinations of factors predicting secondary students' interest in tertiary STEM Education. *International Journal of Science Education*, 38(2), 25 p.(CA)
7. Milner-Bolotin, M. (2016). Rethinking Technology-Enhanced Physics Teacher Education: From Theory to Practice. *Canadian Journal of Science, Mathematics and Technology Education*, 16, 25.
8. Milner-Bolotin, M. (2015). Learning physics teaching through collaborative design of conceptual multiple-choice questions. *The Canadian Journal of Action Research*, 16(2), 22-41.
9. Milner-Bolotin, M., Fisher, Heather, & MacDonald, Alexandra. (2013). Modeling active engagement pedagogy through classroom response systems in a physics teacher education course. *LUMAT: Research and Practice in Math, Science and Technology Education*, 1(5), 525-544. (FA)
10. 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.
11. 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. (FA)
12. Milner-Bolotin, M., Antimirova, T., Noack, A., & Petrov, A. (2011). Attitudes about science and conceptual physics learning in university introductory physics courses. *Physical Review Special Topics - Physics Education Research*, 7, 020107-020109. (FA)
13. Kalman, C., Milner-Bolotin, M., & Antimirova, T. (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(5), 325-332. (CA)
14. Milner-Bolotin, M., Antimirova, T., & Petrov, A. (2010). Clickers beyond the first year science classroom. *Journal of College Science Teaching*, 40(2), 18-22. (FA)
15. Noack, A., Antimirova, T., & Milner-Bolotin, M. (2009). Student diversity and the persistence of gender effects on conceptual physics learning. *Canadian Journal of Physics*, 87(12), 1269-1274. (CA)
16. Moll, Rachel, & Milner-Bolotin, M. (2009). The effect of interactive lecture experiments on student academic achievement & attitudes towards physics. *Canadian Journal of Physics*, 87(8), 917-24. (FA)
17. Milner-Bolotin, M., & Moll, R. F. (2008). Physics exam problems reconsidered: Using Logger Pro technology to evaluate student understanding of physics. *The Physics Teacher*, 46(8), 494-500. (FA)
18. Milner-Bolotin, M., Kotlicki, Andrzej, & Rieger, Georg. (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. (FA)

Refereed scholarship of teaching and learning papers:

1. Milner-Bolotin, M. (2015). Increasing girls' participation in physics: Education research implications for practice. *Physics in Canada*, 71(2), 94-97.
2. Milner-Bolotin, M. (2014). Using PeerWise to promote student collaboration on design of conceptual multiple-choice questions. *Physics in Canada*, 70(3), 149-150.
3. Milner-Bolotin, M. (2014). Promoting research-based physics teacher education in Canada: Building bridges between theory and practice. *Physics in Canada*, 70(2), 99-101.
4. Milner-Bolotin, M. (2012). Growing water pearls: Exciting physical science activities on a shoestring budget. *The Science Teacher*, 79 (Summer), 38-42.
5. 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.
6. Milner-Bolotin, M. (2012). Water pearls optics challenges for everybody. *The Physics Teacher*, 50(1), 144-145.
7. Milner-Bolotin, M. (2010). Reflections on teaching an advanced graduate online course in educational technology: Challenges and successes. *Ubiquitous Learning an International Journal*, 2, 16.
8. Schuster, D., Undreiu, A., Adams, Betty, Brookes, David, & Milner-Bolotin, M. (2009). Motion-matching: A challenge game to generate motion concepts. *The Physics Teacher*, 47(7), 381-385. (CA)

9. Milner-Bolotin, M. (2009). Exploring scaling: From concept to applications. *Science Education Review*, **8**, 70-77.
10. Antimirova, T., & Milner-Bolotin, M. (2009). A brief introduction to Video Analysis. *Physics in Canada*, **65** (April-May), 74. (CA)
11. Antimirova, T., Goldman, P., Lasry, N., Milner-Bolotin, M., & Thompson, R. (2009). Recent developments in physics education in Canada. *Physics in Canada*, **65**(1), 19-22. (CA)
12. 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.
13. Milner-Bolotin, M. (2007). Teachers as actors: The implications of acting on physics teaching. *The Physics Teacher*, **45**(October), 58-60.
14. 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), [Article 25](#), 6 p.
15. Milner-Bolotin, M. (2004). Tips for using a Peer Response System in the large introductory physics classroom. *The Physics Teacher*, **42**(8), 47-48.
16. Milner-Bolotin, M. (2001). Creating community among the graduate teaching assistants: Benefits, challenges, & lessons learned. *Journal for Graduate Teaching Assistants Development*, **8**(2), 65-70.
17. Milner-Bolotin, M., & Svinicki, M. D. (2000). Teaching physics of everyday life: Project-based instruction and collaborative work in undergraduate physics course for non-science majors. *Journal of Scholarship in Teaching and Learning*, **1**(1), 25-40. (FA)

(a) *Conference Proceedings*

1. Milner-Bolotin, M. (2014). *Helping physics teacher-candidates develop questioning skills through innovative technology use*. Proceedings of the 5th International Conference on Women in Physics, Waterloo, ON. (In press).
2. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014). *Exploring technology-enhanced active learning in physics teacher education*. Proceedings of the 5th International Conference on Women in Physics, Waterloo, ON. (In press) (FA)
3. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014). *Design, Implementation, & Evaluation of Research-based Resources in STEM Teacher Education*. Proceedings of the 5th International Conference on Women in Physics, Waterloo, ON. (In press) (FA)
4. Milner-Bolotin, M. (2014, November 21-22, 2014). *Closing the research-practice gap through innovative technology use in STEM teacher education*. [Proceedings of the Fifth GeoGebra North American Conference \(GeoGebra-2014\)](#): Explorative Learning with Technology, Ontario Institute for the Studies in Education, Toronto, ON, pp. 2-21.
5. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2013, July). *Using technology for conceptual learning in physics teacher-education: Engaging teacher candidates as learners and teachers*. International Perspectives on Technology-Enhanced Learning: Lessons, Challenges and Possibilities, Vancouver, BC. (FA)
6. Milner-Bolotin, M., Cha, Jeongho D., Chachashvili-Bolotin, S., & Raisinghani, L. (2013). *An international study of technology use in mathematics and science teacher education*. International Perspectives on Technology-Enhanced Learning: Lessons, Challenges and Possibilities, Vancouver, BC. (FA)
7. Kalman, C. S., Milner-Bolotin, M., Aulls, M. W., Charles, E. S., Coban, G. U., Shore, B. M., . . . Fu, G. (2012, July, 1-6). *Understanding the Nature of Science and Non-scientific Modes of Thinking in Gateway Science Courses*. In M. F. Taşar (Ed.), *Proceedings of the World Conference on Physics Education*. Paper presented at the World Conference on Physics Education, Istanbul, Turkey, 9, Ankara, Turkey: Pegem Akademi, p. 1291-1299.
8. Antimirova, T., & Milner-Bolotin, M. (2010, 5-7 July 2010). *Video Analysis in science and engineering education*. EDULEARN10, Barcelona, Spain. (CA)
9. Milner-Bolotin, M., & Antimirova, T. (2010, July 2010). *Multipurpose Mobile HP lab for science and engineering students*. EDULEARN10, Barcelona, Spain. (CA)

10. Milner-Bolotin, M. (2010, March 8-10, 2010). *Teachers' playground: Enhancing teacher professional development through the use of technology*. INTED 2010. International Technology, Education and Development Conference, Valencia, Spain. (FA)
 11. Milner-Bolotin, M., & Antimirova, T. (2010). HP Grants for tablet technologies in science teaching: From dream to innovation. In L. G. Chova, D. M. Belenguer & I. C. Torres (Eds.), *INTED 2010. International Technology, Education and Development Conference* (Vol. 1, pp. 003432-003443). Valencia, Spain: International Association of Technology, Education and Development (IATED). (FA)
 12. Antimirova, T., Noack, A., & Milner-Bolotin, M. (2009). *The effect of classroom diversity on conceptual learning in physics*. Physics Education Research Conference, Ann Arbor, MI. (FA)
 13. Lasry, N., Milner-Bolotin, M., & Antimirova, T. (2009, July 29-30, 2009). *Physics education across paradigms*. Physics Education Research Conference, Ann Arbor Michigan. (CA)
- (c) *Conference Presentation Papers where I was the presenter (not including invited papers listed earlier)*
1. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014). *Helping physics teacher-candidates develop questioning skills through innovative technology use*. Presented at the American Association of Physics Teachers Winter National Meeting, Orlando, FL.
 2. Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2014). *Exploring technology-enhanced active learning in physics teacher education*. American Association of Physics Teachers Winter National Meeting, Orlando, FL.
 3. MacDonald, A., Fisher, H., & Milner-Bolotin, M. (2014). *Investigating the impact of clicker-enhanced pedagogy in a secondary physics methods course*. American Association of Physics Teachers Winter National Meeting, Orlando, FL.
 4. Predoi-Cross, A., Austin, R., Dasgupta, A., Ghose, S., Milner-Bolotin, M., Steinitz, M. (2013). *Women in physics in Canada*. Women in Physics: 4th IUPAP International Conference on Women in Physics, Stellenbosch, South Africa. (CA)
 5. Milner-Bolotin, M. (2013). *Exploring extraordinary science of ordinary things: Engaging teacher-candidates in science & mathematics learning through modern technologies*. Investigating Our Practices Conference, the University of British Columbia, Vancouver, BC, Canada.
 6. Fisher, H., MacDonald, A., & Milner-Bolotin, M. (2013). *Design, implementation & evaluation of research-based resources in secondary science teacher education*. Canadian Society of Studies in Education Conference, Victoria, BC, Canada. (FA)
 7. Chachashvili-Bolotin, S., Milner-Bolotin, M., Fisher, H., & MacDonald, A. (2013). *When deeper conceptual understanding is just one click away: Using technology-enhanced formative assessment to promote physics teacher-candidates' Pedagogical Content Knowledge*. International Association for Educational Assessment Conference, Tel Aviv, Israel. (FA)
 8. Naslund, J, Levine, S., & Milner-Bolotin, M. (2012). *Celebrate science: Bridging science educators, science writers and librarians in order to promote science learning in British Columbia*. American Association for the Advancement of Science, Vancouver, BC, Canada. (CA)
 9. Milner-Bolotin, M., Cha, J., & Hunter, K. (2012). *Investigating science questioning practices of elementary pre-service teachers: Design of elementary science questions evaluation rubric*. American Educational Research Association Annual Meeting, Vancouver, BC, Canada. (FA)
 10. Milner-Bolotin, M. (2012). *Panel: Report on IUPAP International Conference on Women in Physics*. Winter AAPT National Meeting, Ontario, CA.
 11. Milner-Bolotin, M. (2012). *A physics teaching exchange Warming pp to physics: Connecting new & seasoned physics teachers*. BC Association of Physics Teachers Professional Development Day, the University of British Columbia, Vancouver, BC.
 12. Milner-Bolotin, M. (2012). *Multiple-choice questions in elementary science methods courses: An opportunity or a constraint?* Canadian Society of Studies in Education Conference, Waterloo, ON.
 13. Milner-Bolotin, M. (2012, November 24-27). *21st Century Framework for science teacher preparation: Using modern technologies to affect science teaching and learning*. Second STEM Conference, Beijing, China.
 14. Milner-Bolotin, M. (2012, August 1). *Engaging pre-service elementary teachers in science outreach*. AAPT Summer National Meeting, Philadelphia, PA.
 15. Milner-Bolotin, M. (2012). *Physics teacher preparation in Canada: Challenges and successes*. APT Marina Milner-Bolotin CV - Updated June 2017

Winter Meeting, Ontario, CA.

16. Kalman, C.S., Milner-Bolotin, M., & Antimirova, T. (2012). *Changing students' approach to learning physics in gateway post-secondary courses*. Physics Education Research Conference, Philadelphia, PA, USA.
17. Eskandari, M., & Milner-Bolotin, M. (2012). *Technology is not enough: Integration of digital technologies in K-12 pedagogy*. Investigating Our Practices Conference, Faculty of Education, the University of British Columbia, Vancouver, BC, Canada.
18. Predoi-Cross, A., Dasgupta, A., McKenna, J., Milner-Bolotin, M., Steinitz, M., Austin, R. (2011). *Women in physics in Canada*. International Conference for Women in Physics, Stellenbosch, South Africa.
19. Milner-Bolotin, M., & Vokos, S. (2011, March 17-20). *Physics education research collaborations in the Northwest: Summary of working group discussion*. Foundations & Frontiers of Physics Education Research: Olympic Pacific Institute, WA.
20. Milner-Bolotin, M., Predoi-Cross, A., Dasgupta, A., Xu, L., Steinitz, M., Austin, R. (2011). *Physics outreach activities in Canada: A university-industry-government collaboration*. AAPT Summer National Meeting, Omaha, NE.
21. Milner-Bolotin, M., Predoi-Cross, A., Dasgupta, A., Xu, L., Steinitz, M., Austin, R. (2011). *Physics outreach activities in elementary, secondary and post-secondary schools in Canada: An university-industry-government collaboration*. International Conference for Women in Physics, Stellenbosch, South Africa.
22. Milner-Bolotin, M. (2011). *A science adventure of a girl who wanted to be a physicist*. International Conference for Women in Physics, Stellenbosch, South Africa.
23. Milner-Bolotin, M. (2011). *Video-based motion analysis for classroom and homework*. Catalyst 2011: BC Science Teachers Association Bi-Annual Conference, Richmond, BC.
24. Hunter, K., Cha, J., Nashon, S., & Milner-Bolotin, M. (2011). *Using interactive questioning technology to promote inquiry-driven science and mathematics instruction*. Investigating Our Practices Conference, the University of British Columbia, Vancouver, BC.
25. Milner-Bolotin, M. (2011). *Hands-on science on a shoe-string budget: 10 science activities with a one dollar bag of magic water pearls*. Catalyst 2011: BC Science Teachers Association Bi-Annual Conference, Richmond, BC.
26. Milner-Bolotin, M. (2011). *Report on the 2011 International Conference for Women in Physics*. Canadian Association of Physicists Congress, St. John's, NF.
27. Milner-Bolotin, M. (2011). *Teach me science tricks: do not tell me how it works!* Canadian Association of Physicists Congress, St. John's, NF.
28. Noack, A., Antimirova, T., & Milner-Bolotin, M. (2010). *Creating positive attitudes towards physics: Figuring out what works*. Society for Teaching and Learning in Higher Education Annual Meeting, Toronto, ON.
29. Antimirova, T., & Milner-Bolotin, M. (2010). *Enhancing student learning: Using tablet PCs in electricity and magnetism*. AAPT Winter Meeting, Washington, DC.
30. Milner-Bolotin, M. (2010). *Introduction to interactive pedagogies: Creating & using successful conceptual questions*. Canadian Association of Physicists Congress, Toronto, ON.
31. Milner-Bolotin, M. (2009). *Helen Sawyer Hogg: A Woman, an Astronomer and a Great Communicator of Science*. AAPT Summer Meeting, Ann Arbor, MI.
32. Milner-Bolotin, M. and T. Antimirova. (2009). *Let the dialog being: Undergraduates - teachers - university faculty*. American Association of Physics Teachers Winter meeting, Chicago, IL. (CA)
33. Antimirova, T. and Milner-Bolotin, M. (2009). *Ryerson Univ. outreach to High School community in Greater Toronto Area*. American Association of Physics Teachers Winter meeting, Chicago, IL. (CA)
34. Carvalho, J. and Milner-Bolotin, M. (2009). *Students' projects in large intro physics courses at Ryerson University*. American Association of Physics Teachers Winter meeting, Chicago, IL. (FA)
35. Milner-Bolotin, M. (2008). *Physics for Architects: Design and implementation of innovative physics curricula*. American Association of Physics Teachers Summer meeting, Baltimore, MD.
36. Moll, R., M. Milner-Bolotin, F. Bates, A. Kotlicki and G. Rieger. (2007). *Implementing Interactive*

Lecture Experiments in large introductory physics courses. American Association of Physics Teachers Winter meeting. Seattle, WA. (FA)

37. Milner-Bolotin, M., R. Moll, F. Bates, A. Kotlicki, G. Rieger and S. Nashon. (2007). *The impact of Interactive Lecture Experiments on student academic achievement, motivation and attitudes towards Science.* American Association of Physics Teachers. Seattle, WA. (FA)
38. Milner-Bolotin, M. (2006). *How to Teach Physics so the Students Will Learn: Teaching Extraordinary Physics of Ordinary Things.* American Assoc. of Physics Teachers Summer meeting. Syracuse, NY.
39. Milner-Bolotin, M. (2006). *Scientists and Innovators in the Schools: Science outreach in British Columbia.* American Association of Physics Teachers Summer meeting. Syracuse, NY.
40. Milner-Bolotin, M. (2005). *The role and place of imagination in introductory physics teaching.* American Association of Physics Teachers Summer meeting. Salt Lake City, UT.
41. Milner-Bolotin, M., O. Fookson and M. Marvin. (2003). *Physics enrichment program for middle school students.* American Association of Physics Teachers Winter meeting, Austin, TX. (FA)
42. Milner-Bolotin, M. and R. Fiorillo. (2002). *Bridging the gap between motion diagrams and 1-D motion graphs.* American Association of Physics Teachers Winter Meeting, Rochester, NY. (FA)
43. Milner-Bolotin, M. (2002). *Creating community among the graduate teaching assistants: Benefits, challenges, and lessons.* American Assoc. of Physics Teachers Summer meeting, Philadelphia, PA.
44. Kazachkov, A., M. Milner-Bolotin and G. Polovina. (2002). *Frictional magic: Didactic aspects.* American Association of Physics Teachers Summer meeting, Philadelphia, PA. (CA).
45. Milner-Bolotin, M., A. Kazachkov and G. Polovina. (2002). *Teacher Training in Ukraine, Israel, and US: A Comparative Study.* Amer. Assoc. of Physics Teachers Summer meeting, Philadelphia, PA.
46. Milner-Bolotin, M. and M. Svinicki. (2001). *Teaching physics of everyday life: The effects of topic choice in Project-Based Instruction on undergraduate physical science students' interest, ownership, and motivation.* Amer. Assoc. of Phys. Teachers Summer meeting, Rochester, NY.

2. NON-REFEREED PUBLICATIONS

(a) Journals

1. Thompson, R., & Milner-Bolotin, M. (2010). Interview with Marina Milner-Bolotin, June 2010. *Physics in Canada*, **66**(3), 207-212.
2. Milner-Bolotin, M. (2010). Audience Response System: Response to Readers' Questions. *Science Education Review*, **9**(2), 51-52.
3. Milner-Bolotin, M. (2009). *Letter: Editorial - The Evolution of Teaching and the Role of Teaching-Only Faculty in Physics Departments.* *Physics in Canada*, **65** (April-May), 57.
4. Milner-Bolotin, M. (2008). *An Ultimate Elevator Ride: Weight and Apparent Weight Demonstration.* Newsletter of the Ontario Association of Physics Teachers (November 2008), 1-2.
5. Milner-Bolotin, M. (2008). 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.
6. Antimirova, T., Milner-Bolotin, M., & Goldman, Pedro. (2008). Physics education on the move in Canada. *Newsletter of the International Consortium on Physics Education (ICPE)*, **55**(April), 2-4.
7. Milner-Bolotin, M., & Antimirova, T. (2007). Physics Education in Canada: Recent developments. *Canadian Undergraduate Physics Journal*, **6**(1), 28-29.
8. 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, fall 2006*(13), 7-8.
9. Phelps, Dan, & Milner-Bolotin, M. (2005). *Improving on "Predict, observe, explain": A model-based view of science education.* *Momentum*, **6**(2), 28-29.
10. Milner-Bolotin, M. (2006). *Demonstration of a variable tension in a pendulum's string.* Newsletter of the Ontario Section of the American Association of Physics Teachers, *Fall 2006*.

(b) *Conference Proceedings*(c) *Other: Reports and Book reviews*

1. Milner-Bolotin, M. (2015). *Teaching mathematics and science with technology in the 21st century (Course materials)*. Chaoyang School District, Beijing: Education Committee, Chaoyang School District, Beijing, China.
2. Milner-Bolotin, M. (2011). Book Review: Teacher education matters: A study of middle school mathematics teacher preparation in six countries. *Teachers College Press*.
3. Yoon, J. H., Hartline-Karplus, B., & Milner-Bolotin, M. (2011, April 4-9, 2011). *Professional Development Workshop Report*. Presented at the IV International Conference on Women in Physics, Stellenbosch, South Africa.
4. Milner-Bolotin, M., Predoi-Cross, A., Austin, R., Dasgupta, A., Ghose, S., Steinitz, M. (2011). Report on Canadian Team's Participation in the 4th International Conference for Women in Physics. *Physics in Canada*, 67(3 (July-Sept.)), ICWIP2-ICWIP5.
5. Milner-Bolotin, M. (2010). *Book Review: "Back of the envelope physics" by Clifford Swartz*. Ontario Association of Physics Teachers Newsletter (November), 3.
6. Milner-Bolotin, M. (2009). *Book Review: The Manga Guide to Physics*. *Science Education Review*, 8, 51-52.

3. **BOOKS**(a) *Authored*

1. Hawkes, R., Iqbal, J., Mansour, F., **Milner-Bolotin, M.**, & Williams, P. (2018). *Physics for scientists and engineers: An interactive approach*. 2nd Edition. Toronto: Nelson Education.
2. Hawkes, R., Iqbal, J., Mansour, F., **Milner-Bolotin, M.**, & Williams, P. (2014). *Physics for scientists and engineers: An interactive approach*. Toronto: Nelson Education.
3. Ahmed, N. S., Gerase, M., D'Agostino, S., Stortz, G., Hawkes, R., Iqbal, J., **Milner-Bolotin, M.**, Mansour, F., Williams, P. (2014). *Student solutions manual for use with Physics for Scientists and Engineers: An interactive approach*. Toronto: Nelson Education.

(b) *Edited**Chapters in Edited books:*

1. Milner-Bolotin, M. (2017). Nurturing creativity in future mathematics teachers through embracing technology and failure. In V. Freiman, J. Tassell, & D. Martinovic (Eds.), *Creativity and Technology in Math Education* (pp. 22). Switzerland: Springer. (In press, 2017).
2. Milner-Bolotin, M. (2017). Technology-supported inquiry in STEM teacher education: Collaboration, challenges and Possibilities. In I. Levin & D. Tsybulsky (Eds.), *Digital Tools and Solutions for Inquiry-Based STEM Learning: Vol. 1*, 252-281, IGI-Global.
3. Milner-Bolotin, M. (2016). Promoting Deliberate Pedagogical Thinking with Technology in physics teacher education: A teacher-educator's journey. In K. MacLeod and T. G. Ryan (Eds.), *The Physics Educator: Tacit Praxes and Untold Stories*. (pp. 112-141), Champaign, IL, USA: Common Ground.
4. Milner-Bolotin, M. (2015). STEM teacher-candidates' engagement with technology: Challenges and possibilities. In X. Ge, D. Ifenthaler & J. M. Spector (Eds.), *Emerging technologies for STEAM Education* (pp. 137-156): Springer, Switzerland.
5. Milner-Bolotin, M. (2015). Visual literacy skills in STEM education. In M. J. Spector (Ed.), the SAGE *Encyclopedia of Educational Technology*. V. 2, 825-829. ISBN: 9781452258225.
6. Milner-Bolotin, M. (2014). Making online graduate teacher education courses matter - from theory to successful technology-enhanced practice. In T. G. Ryan & D. C. Young (Eds.), *Teaching Online: Stories from Within* (pp. 10-31). Champaign, IL, USA: Common Ground.

7. Milner-Bolotin, M. (2010). The Canadian science education landscape: Trends, challenges and successes. In D. A. Cancilla & S. P. Albon (Eds.), *Moving the Laboratory Online: Situating the Online Laboratory Learning Experience for Future Success* (Vol. 1, pp. 129-140): The Sloan Consortium: A consortium of Institutions and Organizations Committed to Quality Online Education.

4. **PATENTS**

5. **SPECIAL COPYRIGHTS**

6. **ARTISTIC WORKS, PERFORMANCES, DESIGNS**

7. **OTHER WORKS**

8. **WORK SUBMITTED (including publisher and date of submission)**

(a) *Work Submitted To Refereed Journals and Conference Proceedings*

(b) *Papers Submitted To Refereed Conferences*

9. **WORK IN PROGRESS (including degree of completion)**

- 1) My students and I have submitted two papers to a special issue of LUMAT international STEM journal special issue on science outreach: The papers focus on parental involvement in students' STEM education. The first paper is literature meta-analysis and the second paper is the analysis of the case study we conducted at UBC:
 - a) Marotto, C., & Milner-Bolotin, M. (2017). Examination of parental engagement in children's STEM education. Part II: Parental views on promoting children's STEM education In- and Out-of-School. *LUMAT: Research and Practice in Math, Science and Technology Education*.
 - b) Milner-Bolotin, M., & Marotto, C. (2017). Examination of parental engagement in children's STEM education. Part I: Meta-analysis of the Literature. *LUMAT: Research and Practice in Math, Science and Technology Education*.