

THE UNIVERSITY OF BRITISH COLUMBIA
Curriculum Vitae for Faculty Members

Date: April, 2016

Initials: SXW

1. **SURNAME:** Wang **FIRST NAME:** Shawn
MIDDLE NAME(S): Xianfu
2. **DEPARTMENT/SCHOOL:** Mathematics (Unit 5 - Mathematics, Statistics, Physics, Computer Sciences)
3. **FACULTY:** Irving K. Barber School of Arts and Sciences, UBC Okanagan (UBCO)
4. **PRESENT RANK:** Professor **SINCE:** July 1, 2011
5. **POST-SECONDARY EDUCATION**

University or Institution	Degree	Subject Area	Dates
Simon Fraser University	Ph.D.	Mathematics	09/1995-08/1999
Simon Fraser University	M.Sc.	Mathematics	09/1993-07/1995
Central South University	M.Sc.	Mathematics	09/1986-05/1989
Lanzhou University	B.Sc.	Mathematics	09/1982-07/1986

Title of Dissertation and Name of Supervisor:

"Fine and Pathological Properties of Subdifferentials", Dr. J.M. Borwein

6. **EMPLOYMENT RECORD**

(a) *Prior to coming to UBC*

University, Company or Organization	Rank or Title	Dates
Okanagan University College (OUC)	Assistant Professor (tenure track)	07/2001-06/2005
Cape Breton University (CBU)	Assistant Professor (tenure track)	01/2001-07/2001
University of British Columbia Vancouver (UBCV)	NSERC Postdoctoral Fellow and Sessional Instructor	09/1999-12/2000
Simon Fraser University (SFU)	Sessional Instructor	05/1999-08/1999

(b) *At UBC*

Rank or Title	Dates
Professor (with tenure) at UBCO	07/2011-now
Associate Professor (with tenure) at UBCO	07/2005-07/2011

(c) *Date of granting of tenure at U.B.C.:*

July 1, 2005

7. **LEAVES OF ABSENCE**

University, Company or Organization at which Leave was taken	Type of Leave	Dates
I visited the following Universities during my study leave (or sabbatical leave)		07/2009-07/2010
Mathematics, Wayne State University, Detroit, USA	Study Leave	1/12/2009-15/12/2009
Electrical Engineering, Stanford University, USA	Study Leave	1/05/2010-10/05/2010

8. **TEACHING**

(a) *Areas of special interest and accomplishments*

Teaching Philosophy

- Being a mathematician, I have the responsibility to educate students, and educate them effectively. I must provide quality teaching to students, and equip them with good mathematical, analytical and application skills.
- Effective teaching is based upon communication skills coupled with high expectations for student performances.
- Love teaching, care about students, interact with students, and listen to and learn from them.

Significant Achievements

- Graduate student Liangjin Yao supervised by Dr. H. Bauschke and I was awarded the Governor General's Gold Award of UBC Okanagan in 2008.
- Dr. Liangjin Yao was a postdoctoral fellow in the Department of Mathematics of University of Newcastle in Australia; now a postdoctoral fellow in the the Department of Mathematical and Statistical Sciences of University of Alberta in Canada.
- Directed study students went to graduate schools: Sheena Haines (in M.Sc. of Mathematics at UBC Okanagan in 2009), Francis Stelluti (accepted by the University of Ottawa for M.Sc. in Mathematics in 2005). Co-supervised USRA (with Dr. H. Bauschke) Miss M. Lavalle is doing PhD in Mathematics of UBC Okanagan under Dr. B. Spearman.
- Three publications for classroom teaching.

(b) *Courses Taught at UBC*

My standard teaching load at UBC Okanagan is 4 courses per academic year. Graduate courses do not count towards this workload.

From July 1, 2009 to July 1, 2010, I was on study leave. There was no regular teaching assignments during this period. In December 2009, I visited Prof. Boris Mordukhovich in the Department of Mathematics of Wayne State University, Detroit, USA; in May 2010, I visited Prof. Stephen Boyd in the Electrical Engineering Department of Standford University, USA .

Session	Course Number	Scheduled Hours	Class Size	Hours Taught			
				Lectures	Tutorials	Labs	Other
Year 2015/2016							
2015 W2	Math 590b		5	Team taught			
2015 W2	Math 328/Math 601	3	14	3			
2015 W1	Math 590a			Team taught			
2015 W1	Math 327	3	42	3			
2015 W1	Math 303/CSC303	3	39	3			
2015 S	Math 590c			Team taught			
Year 2014/2015							
2014 W2	Math 590b		7	Team taught			
2014 W2	Math 328/Math 601	3	20	3			
2014 W1	Math 590a		6	Team taught			
2014 W1	Math 327	3	47	3			
2014 W1	Math 100	3	177	3			
2014 S2	Math 590d		3	Team taught			
Year 2013/2014							
2013 W2	Math 590b		7	Team taught			
2013 W2	Math 328/Math 601	3	21	3			
2013 W1	Math 590a		5	Team taught			
2013 W1	Math 327	3	37	3			
2013 W1	Math 563	3	7	3			
2013 S2	Math 590d		2	Team taught			
2013 S1	Math 590c		3	Team taught			
Year 2012/2013							
Winter 12	Math 328/Math 601	3hrs/week	14	3			
Winter 12	Math 590b	2hrs/week	7	Meet with my and co-supervised graduate students			Graduate Seminar
Winter 12	Math 448	1hr/week	1	1-2			
Fall 12	Math 100	3hrs/week	122	3			
Fall 12	Math 327	3hrs/week	27	3			
Fall 12	Math 590a	2hrs/week	9	Meet with my and co-supervised graduate students			Graduate Seminar
Year 2011/2012							
Winter 11	Math 448	1hrs/week	1	1-2			
Winter 11	Math 328 /Math 601	3hrs/week	14	3			
Winter 11	Math 317	3hrs/week	56	3			
Winter11	MATH 590	1 hr/week	8	Meet with my graduate students		2hrs/week	Graduate Seminar

Fall 11	Math 448	1hrs/week	1	1-2		
Fall 11	Math 327	3hrs/week	22	3		
Fall 11	Math 220	3hrs/week	42	3		
Fall 11	MATH 590	1 hr/week	13	Meet with my graduate students	2hrs/week	Graduate Seminar
Year 2010/2011						
Winter 10	MATH 590	1 hr/week	2	Meet with my graduate students	2hrs/week	Graduate Seminar
Winter 10	MATH 448	3hrs/week	1		1hr/week	w. Dr. H. Bauschke
Winter 10	Math328/ Math 601	3hrs/week	21	3		
Winter 10	Math101	3hrs/week	276	3		
Fall 10	MATH 590	1 hr/week	2	Meet with my graduate students	2hrs/week	Graduate Seminar
Fall 10	MATH 448	3hrs/week	1		1hr/week	w. Dr. H. Bauschke
Fall 10	Math 327	3hrs/week	24	3		
Fall 10	Math 100	3hrs/week	218	3		
Year 2009/2010						
Summer 10	Math 590	1hr/week	4	Meet with my student		Seminar course
Winter 09	Math 590	1hr/week	7	Meet with my student		Seminar course
Fall 09	Math 590	1hr/week	8	Meet with my student		Seminar course
Year 2008/2009						
Winter 08	Math328/ Math 604	3hrs/week	5	3		
Winter 08	Math461/ IGS501	3hrs/week	4	3		
Winter 08	Math 590	1hr/week	5	Meet with my student		Seminar course
Fall 08	Math 100	3hrs/week	177	3		
Fall 08	Math 327	3hrs/week	20	3		
Fall 08	Math 448	2hrs/week	1	2		Directed study
Fall 08	Math 590	1hr/week	8	Meet with my student		Seminar course
Year 2007/2008						
Summer 08	Math 670	2hrs/week	3	2		Topics in Optimization with H. Bauschke
Winter 07	Math 328	3hrs/week	10	3		
Winter 07	Math 461	3hrs/week	8	3		
Fall 07	Math 100	3hrs/week	140	3		
Fall 07	Math 327	3hrs/week	18	3		
Fall 07	Math 307	3hrs/week	36	3		for a month as Dr. Yang is ill.
Fall 07	Math 590	1hr/week	2	Meet with my student		Seminar course
Year 2006/2007						
Summer 07	Math 604	3hrs/week	3	3		Topics in Optimization with Bauschke, Lucet
Winter 06	Math 101	3hrs/week	135	3		
Winter 06	Math 328	3hrs/week	6	3		
Fall 06	Math 100	3hrs/week	184	3		
Fall 06	Math 327	3hrs/week	14	3		
Fall 06	Math 448	2hrs/week	1	2		Directed study

Year 2005/2006							
Winter 05	Math 461	3hrs/week	7	3			
Winter 05	Math 328	3hrs/week	12	3			
Fall 05	Math 327	3hrs/week	14	3			
Fall 05	Math 317	3hrs/week	39	3			

(c) *Graduate Students Supervised and /or co-supervised*

Barber School in UBCO encourages interdisciplinary research and learning. The best way to achieve this goal is to co-supervise graduate and undergraduate students and write research papers together.

Graduate Students

Student Name	Program Type	Year		Principal Supervisor	Thesis Advisory Committee Member
		Start	Finish		
Chayne Planiden	Ph.D., UBCO Mathematics	01/2014		W Hare & X. Wang	
Hui Ma	Ph.D., UBCO Engineering	09/2014		Julian Cheng & X. Wang	
Jiawei Chen	Visiting Ph.D., UBCO Mathematics	09/2012	12/2012	H. Bauschke & X. Wang	
Yipin Guo	MSc. UBCO IGS Optimization	09/2012	08/2014	X. Wang	
Jessica Xu	Ph.D., UBCO Mathematics	09/2012		H. Bauschke & X. Wang	
Chayne Planiden	M.Sc., UBCO Mathematics	09/2011	05/2013	W. Hare	H. Bauschke & X. Wang
Julie Nutini	M.Sc., UBCO Mathematics	10/2010	05/2012	W. Hare	H. Bauschke & X. Wang
Sarah Moffat	Ph.D., UBCO Mathematics	01/2010	12/2014	H. Bauschke & X. Wang	Y. Lucet
L. YAO	Ph.D., UBCO Mathematics	01/2008	12/2011	H. Bauschke & X. Wang	Y. Lucet
W. MOURSI	Ph.D., UBCO Mathematics	09/2010		H. Bauschke & W. Hare	Y. Gao & X. Wang
S. Brown	M.Sc., UBCO Mathematics	09/2009	07/2011	B. Spearman	Q. Yang & X. Wang
P. Lee	M.Sc., UBCO Mathematics	09/2009	07/2011	B. Spearman	Q. Yang & X. Wang
Sheena Haines	M.Sc., UBCO Mathematics	09/2009	07/2011	X. Wang & J. Loepky	H. Bauschke & W. Hare

J. Schaad	M.Sc., UBCO Mathematics	09/2007	08/2010	H. Bauschke	Y. Lucet & X. Wang
Ning Wang	M. Applied Sci. UBCO	09/2008	06/2010	J. Cheng	R. Klukas, S. O'Leary & X. Wang
V. KOCH	M.Sc., UBCO Mathematics	09/2008	04/2010	W. Hare & Y. Lucet	H. Bauschke & X. Wang
S. MOFFAT	M.Sc., UBCO Mathematics	01/2008	12/2009	H. Bauschke & X. Wang	Y. Lucet
M. Lavalley	M.Sc., UBCO, IGS Optimization	09/2006	08/2008	B. Spearman	Q. Yang & X. Wang
L. YAO ¹	M.Sc., UBCO, IGS Number Theory	09/2006	12/2007	H. Bauschke & X. Wang	Y. Lucet
M. TRIENIS	M.Sc., UBCO, IGS Optimization	06/2006	12/2007	Y. Lucet	H. Bauschke & X. Wang

Research Undergraduate Students (NSERC USRA or URA of Barber School)

Student Name	Program Type	Year		Principal Supervisor	Outcome
		Start	Finish		
Q. Guo	Mitacs Globalink URA	07/2014	09/2014	X. Wang	MSc, Chinese Academy of Sciences
Q. An	Mitacs Globalink URA	07/2013	09/2013	X. Wang	PhD, University of North Carolina State
J. Sarada	URA	05/2011	08/2011	X. Wang & H. Bauschke	UBCO student
C. Wylie	URA	05/2010	08/2010	H. Bauschke & X. Wang	PhD at Cornell University
P. Bansal	MITACS Internship	05/2010	07/2010	H. Bauschke & X. Wang	Back to IIT India, to continue his study
S. Haines	NSERC USRA	05/2008	08/2008	X. Wang	An M.Sc. student at UBCO
S. MOFFAT	URA	05/2007	08/2007	X. Wang & H. Bauschke	A PhD student at UBCO
M. Lavalley	NSERC USRA	05/2006	08/2006	X. Wang & H. Bauschke	A PhD student at UBCO
F. Stelluti	URA	09/2004	07/2005	X. Wang	accepted by the University of Ottawa for graduate study
Kevin Lau	URA	07/2005	09/2005	X. Wang	OUC student
A. Tonner	NSERC USRA	05/2004	08/2004	X. Wang	OUC student
T. Stadnicki	NSERC USRA	05/2003	08/2003	X. Wang & M. Neumann	OUC student
J. Janzen	NSERC USRA	05/2002	08/2002	X. Wang	Computer, UBCV
R. Mercer	NSERC USRA	05/2002	08/2002	X. Wang	Education, UBCO
S. Wilson	URA of CBU	05/2001	07/2001	X. Wang	A student at Dalhousie Univ.
K. Knickle	URA of CBU	05/2001	07/2001	X. Wang	A student at St. Francis Xavier Univ.

¹Mr. Yao received the Governor General's Gold Medal at the June 6, 2008 convocation for his M.Sc. studies.

Directed Study (Undergraduate)

Student	Status	Institution	Year		Principal Supervisor	Outcome/Description
			Start	Finish		
Brett Lukens	In progress	UBCO	01/2016	04/2016	X. Wang	UBCO student
Hansley Servansing	complete	UBCO	01/2015	05/2015	X. Wang	MSc student at McMaster University
Preston Cooper	complete	UBCO	01/2014	04/2015	X. Wang	UBCO student
Riley Niran	complete	UBCO	01/2014	04/2015	X. Wang	UBCO student
Vincent Chiu	complete	UBCO	01/2013	12/2013	X. Wang	MSc student McMaster University
J. Sarada	complete	UBCO	09/2011	05/2012	H.Bauschke & X. Wang	UBCO student
C. Wylie	complete	UBCO	09/2010	04//2011	H. Bauschke & X. Wang	Two-term directed study. Working in Ravatar, Inc. (www.ravatar.com): Software Engineer Now in PHD program CORE, Cornell University
Sheena Haines	completed	UBCO	09/2008	02/2009	X. Wang	An M.Sc. graduate student in UBCO
Benjamin Klassen	completed	UBCO	09/2005	04/2006	X. Wang & H. Bauschke	Offered an NSERC PGSM but he rejected.
Kevin Lau	completed	OUC	09/2004	12/2004	X. Wang	A poster on OUC Poster Day, and a private math tutor
J. Murata	completed	OUC	05/2004	08/2004	X. Wang	OUC student
D.Tarasenko	completed	OUC	09/2003	12/2003	X. Wang	Rejected an SFU graduate study offer, worked in Iron Diamond company
N. Hebert	completed	OUC	09/2003	12/2003	X. Wang	Education, UBCO

(d) *Continuing Education Activities and Courses Taught Outside UBC***Continuing Education Activities**

New Courses or Teaching Proposal Developed	Institution	Year	Professors Involved	Outcome
Integration of Teaching and Research Proposal: TORA and MOSS: "UBCO Undergraduates Can Optimize"	UBCO	2010	PI: X. Wang Co-applicants: H. Bauschke, J. Cheng, W. Hare, Y. Lucet & PhD students	unsuccessful
Math 421: Introduction to Metric Spaces	OUC	2002	X. Wang	Offered as an undergraduate

				course
Math 332: Nonlinear Programming	CBU	2001	X. Wang	Offered as an undergraduate course
Math 331: Linear Programming	CBU	2001	X. Wang	Offered as an undergraduate course

Courses Taught Outside UBC

Between July 2001--July, 2005, I worked in the Okanagan University College, OUC. My standard teaching load was 6 courses per academic year.

Session	Course Number	Scheduled Hours	Class Size	Hours Taught			
				Lectures	Tutorials	Labs	Other
Course taught in Okanagan University College 2001-2005							
Year 2004/2005							
Winter 04	Math 421	3hrs/week	3	3			
Winter 04	Math 122	3hrs/week	13	3			
Winter 04	Math 317	3hrs/week	16	3			
Winter 04	Math 319	3hrs/week	9	3			
Winter 04	COSC 302	3hrs/week	24	3			
Fall 04	Math 112	3hrs/week	20	3			
Fall 04	Math 320	3hrs/week	5	3			
Fall 04	Math 460	3hrs/week	8	3			
Year 2003/2004							
Fall 03	Math 112	3hrs/week	22	3		2	
Fall 03	Math 320	3hrs/week	8	3			
Fall 03	Math 460	3hrs/week	3	3			
Winter 03	Math 321	3hrs/week	2	3			Directed Study
Winter 03	Math 122	3hrs/week	20	3		1	
Winter 03	Math 317	3hrs/week	26	3			
Winter 03	Math 319	3hrs/week	11	3			
Year 2002/2003							
Winter 02	Math 122	3hrs/week	20	3		1	
Winter 02	Math 220	3hrs/week	15	3			
Winter 02	Math 450	3hrs/week	6	3			
Fall 02	Math 320	3hrs/week	6	3			
Fall 02	Math 112	3hrs/week	26	3		2	
Fall 02	Math 321	3hrs/week	3	3			
Year 2001/2002							
Winter 01	Math 122	3hrs/week	22	3		2	
Winter 01	Math 220	3hrs/week	10	3			
Winter 01	Math 211	3hrs/week	9	3			
Fall 01	Math 112	3hrs/week	38	3		2	
Fall 01	Math 201	3hrs/week	4	3			
Fall 01	Math 320	3hrs/week	7	3			
Course taught in Cape Breton University 2001-2001							
Winter 01	Math 112	3hrs/week	20	3			
Winter 01	Math 122	3hrs/week	18	3			
Course taught in UBC Vancouver 1999-2000							
Fall 00	Math 200	3hrs/week	103	3			

Winter 00	Math 200	3hrs/week	50	3			
Winter 99	Math 200	3hrs/week	60	3			
Course taught in SFU 1999-2000							
Summer 99	Math 251	3hrs/week	64	3			

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

(f) *Postdoctoral Supervision*

Visiting Scholars

- 06/2016–** **Dr. Guoji Tang**, co-supervised with Dr. H. Bauschke, is a visiting scholar in UBC Okanagan; Funded by the Guangxi Education Ministry and Guangxi Normal University.
- 02/2015–02/2016** **Dr. Xianjun Long**, co-supervised with Dr. H. Bauschke, is a visiting scholar in UBC Okanagan; Funded by the Chongqing University of Business and Industrial Management, and Chongqing Education Ministry.
- 03/2015–03/2016** **Dr. Zaiyun Peng**, co-supervised with Dr. H. Bauschke, is a visiting scholar in UBC Okanagan; Funded by the Chongqing Jiao Tong University, and Chongqing Education Ministry.

Postdoctoral Fellows

- 09/2014–** **Dr. Sedi Bartz**, co-supervised with Dr. H. Bauschke, is doing his PIMS postdoctoral fellowship; Funded by the Pacific Institute for the Mathematical Sciences and NSERC.
- 09/2013–08/2014** **Dr. Nghia Tran**, co-supervised with Dr. H. Bauschke, did PIMS postdoctoral fellowship; Funded by the Pacific Institute for the Mathematical Sciences and NSERC. Starting September 2014, he has been a tenure track Assistant Professor at the Department of Mathematics and Statistics of Oakland University, USA.
- 09/2011–09/2013** **Dr. Hung M. Phan**, co-supervised with Dr. H. Bauschke and J. Ye (UVic), is doing his PIMS postdoctoral fellowship; first year at UBCO, second year at UVic. Funded by the Pacific Institute for the Mathematical Sciences, UBCO and UVic. Starting January 2015, he is a tenure track Assistant Professor at the Department of Mathematical Sciences at University of Massachusetts Lowell, USA.
- 05/2009–09/2009** **Dr. M.S. Macklem**, co-supervised with Dr. H. Bauschke. Funded by UBCO collaborative grant and various NSERC grants. Dr. Macklem is now a College Professor at the Department of Computer Science of Okanagan College, Kelowna, BC, Canada.
- 03/2007–02/2008** **Dr. X. Yuan**, co-supervised with H. Bauschke and J. Ye (UVic), Funded by the Pacific Institute for the Mathematical Sciences, UBCO and UVic. Dr. Yuan is now an Associate Professor at the Department of Mathematics of Hong Kong Baptist University, Kowloon Tong, Hong Kong.

9. SCHOLARLY AND PROFESSIONAL ACTIVITIES

(a) *Areas of special interest and accomplishments*

Research interests

Nonsmooth Analysis, Convex Analysis and Optimization. Broadly speaking, I am in the area of Variational Analysis.

Accomplishments

- 74 refereed publications in high quality journals, 7 refereed publications in high quality conference proceedings and 1 submitted paper.
- In MathSciNet, my papers have been cited 331 times by 178 authors, see <http://www.ams.org/mathscinet/mrcit/individual.html?mrauthid=601305>
My citations are much higher if one uses the Google Scholar search, see http://scholar.google.ca/scholar?q=Wang%2CXianfu&hl=en&btnG=Search&as_sdt=2001&as_sctp=on
- Postdoctoral fellows: Dr. Nghia Tran has been a tenure-track assistant professor in the Department of Mathematics and Statistics of Oakland University since 09/2014; Dr. Xiaoming Yuan is a tenured associate professor in the Hong Kong Baptist University; Dr. Mason Macklem found job in Okanagan College.
- Dr. Liangjin Yao, a co-supervised PhD student by Dr. H. Bauschke and I, was awarded a two and half year post-doctoral fellowship from the University of Newcastle, Australia, in 2011. He is now a post-doctoral fellow in the Department of Mathematical and Statistical Sciences of University of Alberta.

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

Granting Agency	Subject	COMP	\$ Per Year	Year	Principal Investigator	Co-Investigator(s)
Mitacs Global Link Research Award	Prox-regularity and proximal calculus		\$5000	2015-15	X. Wang	
Mitacs	Mathematics by Mobile Devices		\$15000	2014-14	X. Wang	
Mitacs	Mathematics by Mobile Devices		\$15000	2013-13	X. Wang	
NSERC	Variational Analysis	C	\$21000	2012-17	X. Wang	
PIMS ²	West Coast Meeting	C	\$2000	2010-11	W. Hare & X. Wang	
PIMS	PIMS Postdoctoral Fellowship	C	\$20000	2011	H. Bauschke X. Wang and Jane Ye (UVic)	
NSERC	Nonsmooth Analysis	C	\$14000	2007-12	X. Wang	
PIMS	West Coast Meeting	NC	\$1000	2008	H. Bauschke	X. Wang and Y. Lucet
PIMS	West Coast Meeting	NC	\$1000	2007	H. Bauschke	X. Wang and Y. Lucet
PIMS	UBCO Math Graduate Program	NC	\$8000	2006	H. Bauschke	X. Wang , Y. Lucet, B. Spearman, R. Tyson
CFI	Optimization Lab	C	\$39085	2003	X. Wang	
BCKDF	Optimization Lab	NC	\$39085	2004	X. Wang	

² PIMS: Pacific Institute for the Mathematical Sciences at UBCV

CFI	Infrastructure Operation Fund	NC	\$3000	2003-08	X. Wang	
NSERC	Nonsmooth Analysis	C	\$9000	2001-07	X. Wang	

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

Granting Agency	Subject	COMP	\$ Per Year	Year	Principal Investigator	Co-Investigator(s)
UBCO Internal Interdisciplinary Collaborative Research Grant	Optimizing on-off keying receiver design for optical wireless communications	C	\$15000	2013-13	Julian Cheng & X. Wang	
UBCO Internal Interdisciplinary Collaborative Research Grant	Self-dual regularization: theory, algorithms and implementations	C	\$10000	2010-11	X. Wang & H. Bauschke	
UBCO Internal Individual	Facility location optimization	C	\$5000	2009-10	X. Wang	
UBCO Internal Individual	Equilibrium point of stock markets	C	\$4000	2008-09	X. Wang	
UBCO Internal Individual	Solving variational inequalities	C	\$5000	2007-08	X. Wang	
UBCO Internal Collaborative	Proximal point algorithms	C	\$10,000	2007-08	H. Bauschke & X. Wang	
OUC Grant-in-Aid	On local Lipschitz modulus functions	C	\$2400	2001-03	X. Wang	
Cape Breton University	Startup fund	NC	\$5000	2001-01	X. Wang	

- (d) *Invited Presentations*

Invited Conference Presentations

1. "Weak subdifferentials, ri-density and maximal monotonicity" December 7, 2014, in session "Recent Advances in Variational Analysis and Linear Optimization" in 2014 CMS Winter Meeting, Hamilton, ON, Canada, December 5-8, 2014.
2. "Subgradient Projectors: Characterizations, Examples and Convergences" in ICM 2014 Satellite Conferences: The Fourth Asian Conference on Nonlinear Analysis and Optimization, Taipei, Taiwan, August 8, 2014.
3. "Iterative Methods in Hilbert Spaces," Optimization Summer School, Chongqing Normal University, Chongqing, PRC, July 1-July 25, 2014.
4. "Characterization of subgradient projectors," in the session for "Variational Analysis and Montone Operator Theory: modern trend and techniques" in the 2014 SIAM Optimization Meeting, San Diego, California, USA, May 20, 2014.

5. "Variational analysis," Optimization Summer School, Chongqing Normal University, Chongqing, PRC, July 1-July7, 2013.
6. "Variational analysis for beginners," Optimization Summer School, University of Calgary, Calgary, Canada, 9:00am—12:00pm, June 20, 2013.
7. "A fixed point algorithm for quasi-nonexpansive mapping without using demi-closed principle," Optimization Seminar, University of Calgary, Calgary, Canada, 14:00pm—15:00pm, June 20, 2013.
8. "Most maximally monotone operators have a unique zero and a super-regular resolvent," SPOM 2013, University of Newcastle, Australia, February 10, 2013.
9. "Restricted normal cones," ANZIAM 2013, University of Newcastle, Australia, February 6, 2013.
10. "Restricted normal cones and methods of alternating projections," Infinite Products of Operators and Their Applications, Technion, Israel Institute of Technology, Israel, May 21—24, 2012.
11. "On moving average, non-negative matrices and a fixed point algorithm," Theoretical and Applied Aspects of Nonnegative Matrices, Banff Research Workstation, July 29, 2012.
12. "Variational analysis for beginners," Optimization Workshop July 9-11, 2012 UBC Okanagan, Kelowna, July 9-11, 2012.
13. "On moving average and a fixed point algorithm," OCANA Seminar, UBC Okanagan, Kelowna, May 9, 2012.
14. "Convex relaxations of the maximin dispersion problem," 15th Austrian-French-German Optimization Meeting AFG'11, Toulouse, France, September 22, 2011.
15. "Maximally monotone linear subspace extensions of monotone subspaces: explicit constructions and characterizations", Jon-Fest, IRMACS, SFU, Burnaby, Canada, May 16, 2011.
16. "How to find self-dual regularizations of monotone operators?", 2010 CMS Winter Meeting, Vancouver, Canada, Sunday December 5, 2010.
17. "On the infimum values and minimizers of proximal averages for convex functions", International Optimization Summer School July 19-August 1, 2010, Institute of Computational Mathematics, Chinese Academy of Sciences, Beijing, China, July 28, 2010.
18. "Self-dual regularization of monotone operators and convex functions", Optimal Transportation and Applications Workshop, Banff Research Station, Canada, April 21, 2010.
19. "Borwein-Wiersma decompositions of monotone linear relations", CMS Winter Meeting 2009, University of Windsor, December 6, 2009.
20. "Resolvent averages of positive semidefinite matrices", Fixed Point Algorithms and Inverse Problems Workshop, Banff Research Station, Canada, November 3, 2009.
21. "An answer to Stephen Simons' question on the maximality of the sums", Variational Analysis, 2009 ISMP, University of Chicago, USA, August 25, 2009.
22. "Resolvent averages of monotone operators", Optimization and Approximation, Second Joint CMS/SMM Meeting, UBC Vancouver, Canada, August 15, 2009.

23. "What happens if its proximal mapping is single-valued everywhere?", American Mathematical Society Central Sectional Meeting, Special Session on Optimization and Variational Analysis, Kalamazoo, Michigan, October 17, 2008.
24. "Bregman Distances and Klee Sets", World Congress of Nonlinear Analysis, July 4, 2008, Florida Institute of Technology, Orlando, Florida, USA.
25. "Autoconjugate representers for linear monotone operators", June 24, 2008, Conference on Nonlinear Analysis and Optimization, Technion, Haifa, Israel.
26. "Bregman Distances and Klee Sets", West Coast Optimization Meeting, May 18, 2008, University of Washington, Seattle, USA.
27. "Bregman distance and Chebyshev sets", The Second International Conference on Nonlinear Programming with Applications 2008, Academy of Mathematics and Systems Science, Beijing, April 8, 2008.
28. "How to find maximal monotone extensions?", MOPT at McMaster University, Hamilton, Canada, August 12-15, 2007.
29. "A general primal-dual symmetric average", West Coast Optimization Meeting, University of Washington, Seattle, USA, May 28–29, 2007.
30. "Fitzpatrick functions and cyclically monotonicity", The International Conference on Nonlinear Programming with Applications 2006, Fudan University, Shanghai, China, May 29, 2006.
31. "Lipschitz functions with maximal Clarke sub-differentials are staunch", West Coast Optimization Meeting, University of Washington, Seattle, USA, May 13, 2006.
32. "Extremal characterizations of reflexive spaces", CMS 2005 Winter Meeting, Victoria, BC., December 10, 2005.
33. "Asplund sets and existence of derivatives and subderivative", 10th Workshop on Well-posedness of Optimization Problems, Bulgaria Academy of Science, Bulgaria, September 5-9, 2005.
34. "On the multiplicity points of Hadamard subdifferentials of separable spaces", CORS/INFORM Joint Meeting, Banff, Alberta, May 16, 2004.
35. "Cone monotone functions: differentiability and continuity", CMS Summer Meeting, University of Alberta, Edmonton, Alberta, June 14, 2003.
36. "A generalized variational principle with applications", Summer Symposium in Real Analysis, University of North Texas, Denton, May 23, 2000.
37. "On the construction of H^1 -older and proximal subderivatives", West Coast Optimization Meeting, Vancouver, April, 1997.
38. "Distinct differentiable functions may share the same Clarke subdifferential", West Coast Optimization Meeting, University of Washington, Seattle, October, 1995.

(e) *Other Presentations (Seminars, Colloquia, etc.)*

Invited Colloquium or Seminar Presentations

1. "Resolvents and monotone operators", Colloquium, Mathematics Department, Wayne State University, Detroit, USA, December 4, 2009.

2. "Volumes of generalized balls?", The Joint Math Contest Organized by UBCO and Okanagan College, Kelowna, May 3, 2007.
3. "Asplund sets and existence of derivatives and subderivative", Colloquium, Department of Mathematics, University of Windsor, February 24, 2005.
4. "On ϵ -Fréchet differentiability of Lipschitz functions", Analysis Seminar, Department of Mathematics, UBC Vancouver, June 8, 2004.
5. "Cone monotone functions: continuity and differentiability", CECM Optimization/Analysis Seminar, Simon Fraser University, July 25, 2002.
6. "Clarke subdifferential: a Baire category approach", Colloquium, Department of Mathematics, Michigan State University, East Lansing, Michigan, Feb. 19, 2001.
7. "Variational principles, subgradients, and their applications", Colloquium, Department of Mathematics, Statistics and Computer Science, Acadia University, Wolfville, Nova Scotia, Jan. 22, 2001.
8. "The Clarke subdifferential: a descriptive integration technique", CECM Colloquium, Simon Fraser University, September 23, 1998.
9. "Further subdifferentiability properties of Rockafellar type functions", CECM Functional Analysis Seminar, Simon Fraser University, May 20, 1998.

(f) *Presentations at UBCO*

1. "Calculus: The Father of It All", Calculus Class (section 001), UBCO, Kelowna, Canada, Nov. 26, 2008.
2. "Calculus: The Father of It All", Calculus Class (section 002), UBCO, Kelowna, Canada, Nov. 27, 2008.
3. "On the Ekeland Variational Principle", Session of Optimization, Analysis, and Healthcare, Celebrate UBC Research Week, March 6, 2007.
4. "Calculus: The Father of It All", Calculus Class (section 001), UBCO, Kelowna, Canada, Nov. 30, 2007.
5. "Calculus: The Father of It All", Calculus Class (section 002), UBCO, Kelowna, Canada, Nov. 29, 2007.
6. "Classifying rotators by cyclical monotonicity", OCANA Seminar, Mathematics., Barber School of Arts & Sciences, UBCO, Kelowna, Canada, Jan 25, 2006.
7. "Extremal characterizations of reflexive spaces", OCANA Seminar, Mathematics., Barber School of Arts & Sciences, UBCO, Kelowna, BC., Canada, September 27, 2005.

(g) *Conference Organization*

- H. Bauschke, W. Hare, Y. Lucet and **Xianfu Wang** co-organized the West Coast Optimization Meeting at UBC Kelowna [October 1, 2015]. The meeting had about 50 participants.
- **Xianfu Wang** is the session chair for "Fixed Point Theory and Applications" in ICM 2014 Satellite Conferences: The Fourth Asian Conference on Nonlinear Analysis and Optimization, Taipei, Taiwan, August 5-9, 2014.
- **Xianfu Wang** is the session chair for "Variational Analysis and Montone Operator Theory: modern trend and techniques" in the 2014 SIAM Optimization Meeting, San Diego, California, USA, May 20, 2014. It is

one of sessions in the stream "Variational Analysis and Montone Operator Theory" organized by Bauschke and Luke.

- H. Bauschke, W. Hare, Y. Lucet and **Xianfu Wang** co-organized the Optimization Workshop at UBC Kelowna [July 9-11, 2012]. The meeting had about 30 undergraduate and graduate participants.
- H. Bauschke, W. Hare, Y. Lucet and **Xianfu Wang** co-organized the West Coast Optimization Meeting at UBC Kelowna [October 1, 2011]. The meeting had about 50 participants.
- Heinz Bauschke and **Xianfu Wang** are chairs for the cluster "Convex and Variational Analysis" (16 participants) in the 2009 Winter Canadian Mathematical Society Meeting, University of Windsor, Windsor, Canada, December 5-7, 2009.
- Boris Mordukhovich and **Xianfu Wang** are chairs for the cluster "Variational Analysis" (19 sessions with 57 participants) in The 20th International Symposium of Mathematical Programming, University of Chicago, USA, August 22-29, 2009.
- Heinz Bauschke, Yves Lucet and **Xianfu Wang** are co-organizers for West Coast Optimization Meeting (40 participants), September 6, 2008, UBCO, Kelowna, BC, Canada.
- **Xianfu Wang** is a Session Chair in "Methods in Numerical Optimization": The Second International Conference on Nonlinear Programming with Applications 2008, April 7-10, 2008, AMSS, Beijing, PRC.
- Heinz Bauschke, Yves Lucet and **Xianfu Wang** are co-organizers for West Coast Optimization Meeting (36 participants), October 26-27, 2007, UBCO, Kelowna, BC, Canada.
- Heinz Bauschke and **Xianfu Wang** are co-organizers for the Convex and Nonsmooth Analysis Stream (11 sessions, about 30 participants) in Second Mathematical Programming Society International Conference on Continuous Optimization, August 13-16, 2007, McMaster University, Hamilton, Ontario, Canada.

10. SERVICE TO THE UNIVERSITY

(a) *Memberships on committees, including offices held and dates*

UBCO (University level)

2006 – Present The President's Advisory Committee on Student Discipline.

UBCO (Faculty level)

06/2011 – Present Member of the College of Graduate Studies Council
 07/2010 – 06/2011 Barber School Curriculum Review Committee.
 06/30/2010 UBCO University Thesis Examiner of Master of Science in Mathematics of Miss Jennifer Johnstone (Supervisor Dr B. Spearman): thesis examination and one thesis defense meeting.
 10/2008 NSERC PGS Selection Committee, Graduate Studies Office, UBCO.
 10/2006 NSERC PGS Selection Committee, Graduate Studies Office, UBCO.

UBCO (Unit level)

06/2011 - Present Coordinator of the Graduate Program Advisory Committee for Mathematics.
 07/2010 – 06/2011 Member of the Curriculum Review Committee for Mathematics
 04/2011- 04/2011 Member of the Merrit Award Committee for Mathematics, Statistics and Physics
 2010 - 06/2011 Member of the Graduate Program Advisory Committee for Mathematics.
 2005 - Present Maintain CFI and BCKDF Funded Optimization Lab (Sci.105).
 22/03/2010 Peer teaching evaluation for sessional instructor Dr. Jake Bobowski (2.5 hours).
 09/07/2009 Meeting with international student recruiters of UBC for UBCO success stories.

09/16/2009 Meeting with international student recruiters of UBC for UBCO success stories.
 2006 - 2009 Member of the Graduate Program Advisory Committee for Mathematics.
 2007 - 2008 Member of the Departmental Hiring Committee for Sessional and Tenure Track Positions.
 2007 - 2007 Departmental Peer Teaching Review Committee.
 2005 - 2008 Departmental Tenure and Promotion Committee.

(b) *Other service in UBC, including dates*

03/28/2013 Engineering Graduate Student Poster Competition, 2:30pm—6:30pm in EME Thursday, March 28, 2013. One of 8 judges for the MSc and PhD students' poster competition.
 04/04/2013 Barber School Undergraduate Research Conference, 1:00pm—2:30pm in Fipke Building, Thursday, April 4, 2013. One of the judges for students oral presentation competitions.
 04/2011 Judge for Undergraduate Research Meeting of UBCO.
 04/03/2009 Judge for Undergraduate Research Meeting of UBCO and Thompson River University.
 05/2007 Faculty Phone Campaign for Student Recruitment.
 03/2006 Judge for Undergraduate Research Meeting of UBCO and Thompson River University.

(c) *Services in OUC before 2005*

28/01/2004 – 05/2005 Member of OUC Academic Appeals Committee (Faculty of Science representative).
 2003 – 2005 Maintained Optimization and Computational Analysis Lab (funded by CFI & BCKDF).
 05/2004 – 08/2004 Committee Member of the Beowulf Cluster Group.

11. SERVICE TO THE COMMUNITY

(a) *Memberships on scholarly societies, including offices held and dates*

2001 – Present Member, Canadian Mathematical Society
 2001 – Present Member, American Mathematical Society
 2010 – Present Society of Industrial and Applied Mathematics
 2007 – 2009 Society of Industrial and Applied Mathematics
 2007 – 2008 Mathematical Programming Society

(b) *Memberships on other societies, including offices held and dates*

(c) *Memberships on scholarly committees, including offices held and dates*

(d) *Memberships on other committees, including offices held and dates*

(e) *Editorships (list journal and dates)*

09/2007 – 06/2012 **Associate Editor** for *Communications in Mathematical Analysis*,
<http://www.commun-math-anal.org/index.html>.
07/2012 – Present **Associate Editor** for *Abstract and Applied Analysis*
<http://www.hindawi.com/journals/aaa/>

(f) *Reviewer (journal, agency, etc. including dates)*

Referee for peer-reviewed journal publications

I have been refereeing approximately 7 manuscripts/year since 2005 for several journals including:
 Proceedings of Amer. Math. Soci.; Siam J. of Optimization;
 Real Anal. Exch.; Siam J. of Contr. Optimization;
 Journal of Global Optimization; Nonlinear Analysis: TMA;
 Journal of Convex Analysis; Mathematical Programming Series A;
 Set-valued and Variational Analysis; American Mathematical Monthly;
 Journal of Approximation Theory; European J. of Operation Research;

Journal of Mathematical Analysis and Applications.

Math reviewer

I have done 50 journal research article reviews for the American Mathematical Society.

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

External Examiner, Mr. Yong Zhang, PhD Thesis, Dr. Zhaosong Lu's PhD student, Operation Research, Surrey campus, Simon Fraser University, Tuesday, August 26, 2014 10:00 AM-13:00 PM, room 5380.

External referee for a Promotion Case from Assistant Professor to Associate Professor, invited by the Dean of Science of Penn State University. Examine the promotion materials and write the evaluation, July, 2012.

External referee for a Promotion Case from Assistant Professor to Associate Professor, invited by the Dean of Science of The University of Western Ontario. Examine the promotion materials and write the evaluation, May, 2010.

(h) *Consultant (indicate organization and dates)*

Grant proposal reviews (list agencies and number of reviews)

- Australia Research Council, Discovery Grant, 1 (16 hours);
- German Research Council, 1 (16 hours).

(i) *Other service to the community*

04-05/2010	KSS Grade 12 Dry Grad Parent Committee.
05/08/2009	Marker (together with 4 others): Math Contest in the Okanagan College organized by UBCO and Okanagan College.
04/03/2008	Judges in The Regional Science Fair at UBCO.
05/07/2004	OUC Annual Mathematics Competition for Junior and Senior High Students. Together with others, I did the marking for the contest.
04/30/2004	OUC Open House and Research Exposition. Monitored the Mathematics and Statistics Exhibition Booth.
04/08/2004	Judges in The Regional Science Fair at OUC.
10/25/2003	OUC Maple Day. I designed the poster.
05/02/2003	British Columbia Colleges High School Mathematics Contest. Together with others, I did the marking for the contest.
05/08/2003	OUC Open House and Research Exposition. Monitored the Science Booth.
05/03/2002	British Columbia Colleges High School Mathematics Contest. Together with others, I did the invigilation and marking for the contest.

12. AWARDS AND DISTINCTIONS

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

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

- Two-year NSERC Postdoctoral Fellowship, \$ 35000 per year, Natural Sciences and Engineering Research Council of Canada, March 10, 1999.

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

(d) *Other Awards or Nominees*

- Simon Fraser University Mathematics Department Nominee for 2000 Canadian Association of Graduate Studies Doctoral Dissertation Award.
- Simon Fraser University Nominee for 2000 Canadian Mathematical Society Doctoral Prize.
- Simon Fraser University Nominee for 2000 NSERC Doctoral Prize.

13. OTHER RELEVANT INFORMATION

THE UNIVERSITY OF BRITISH COLUMBIA**Publications Record****SURNAME:** Wang**FIRST NAME:** Shawn
MIDDLE NAME(S): Xianfu**Initials:** SXW
Date: 04/2016**Policy on Authorship**

In Mathematics, it is customary to list authors alphabetically provided that their contributions are equal. Co-authors that were my co-supervised or supervised students or postdoctoral fellows at the time of writing are underlined.

1. REFEREED PUBLICATIONS**(a) *Journal Articles (published or in press)***

1. Sarah M. Moffat, Walaa M. Moursi, and Xianfu Wang, Nearly convex sets: fine properties and domains or ranges of subdifferentials of convex functions, *Mathematical Programming Series A*, 160(1), 193–223.
2. Sedi Bartz, Heinz H. Bauschke, Sarah M. Moffat, and Xianfu Wang, The resolvent average of monotone operators: dominant and recessive properties, *SIAM J. Optim.*, 26 (2016), no. 1, 602–634.
3. H. Bauschke, J.Y. Bello Cruz, H. Phan, Tran Nghia, and X. Wang, Optimal Rates of Linear Convergence of Relaxed Alternating Projections and Generalized Douglas-Rachford Methods for Two Subspaces, *Numerical Algorithms*, DOI 10.1007/s11075-015-0085-4, accepted November 30, 2015.
4. X. Long, Z. Peng and X. Wang, Characterizations of the solution set for nonconvex semi-infinite programming problems, *Journal of Nonlinear and Convex Analysis*, vol. 17, no. 2, 2016, pp.251-265. submitted to *Journal of Nonlinear and Convex Analysis*, April, 2015; accepted, June, 2015.
5. S. Simons and X. Wang, Weak subdifferentials, ri-density and maximal monotonicity, *Set-Valued Var. Anal.* 23 (2015), no. 4, 631–642, accepted, March 27, 2015.
6. X. Wang and X. Yang, On the existence of minimizers of proximity functions for split feasibility problems, *J. Optim. Theory Appl.* 166 (2015), no. 3, 861–888., submitted, July 2014, accepted, February 13, 2015.
7. H. Bauschke, C. Wang, X. Wang and J. Xu, On subgradient projector, *SIAM J. Optim.* 25 (2015), no. 2, 1064–1082, March, 2014, accepted February 15, 2015.
8. Chayne Planiden, X. Wang, Most convex functions have a unique minimizer, *Journal of Convex Analysis*, to appear, accepted February 2, 2015.
9. H. Bauschke, C. Wang, X. Wang, and J. Xu, On the finite convergence of a projected cutter method, *J. Optim. Theory Appl.* 165 (2015), no. 3, 901–916.
10. H. Bauschke, J.Y. Bello Cruz, H. Phan, and X. Wang, The rate of linear convergence of the Douglas-Rachford algorithm for subspaces is the cosine of the Friedrichs angle, *J. Approx. Theory* 185 (2014), 63–79.
11. H. Bauschke, J. Chen, and X. Wang, A Bregman projection method for approximating fixed points of quasi-Bregman nonexpansive mappings, November 18, 2013, accepted, *Applicable Analysis*, 2014, *Appl. Anal.* 94 (2015), no. 1, 75–84

12. H. Bauschke, H. Phan, and X. Wang, The Method of Alternating Relaxed Projections for two nonconvex sets, *Vietnam J. Math.* 42 (2014), no. 4, 421–450.
13. S. Haines, J. Loeppky, P. Tseng, X. Wang, Convex relaxations of the weighted maxmin dispersion problem, accepted, August 10, 2013, *SIAM Journal of Optimization*, 23 (2013), no. 4, 2264–2294.
14. H. Bauschke, R. Luke, H. Phan and X. Wang, Restricted normal cones and sparsity optimization, *Foundations of Computational Mathematics*, accepted, May, 2013, *Found. Comput. Math.* 14 (2014), no. 1, 63–83.
15. H. Bauschke, R. Luke, H. Phan and X. Wang, Restricted normal cones and the method of alternative projections: theory, submitted to *Set-Valued and Variational Analysis*, April, 2012; revision, February 2013, accepted April 17, 2013. *Set-Valued Var. Anal* (2013) 21:431–473.
16. H. Bauschke, R. Luke, H. Phan and X. Wang, Restricted normal cones and the method of alternative projections: applications, submitted to *Set-Valued and Variational Analysis*, April, 2012; revision, February 2013, accepted April 17, 2013. *Set-Valued Var. Anal* (2013) 21:475–501.
17. X. Wang, Most maximally monotone have a unique zero and a super-regular resolvent, *Nonlinear Analysis*, 87 (2013) 69–82.
18. H. Bauschke, J. Sarada and X. Wang, On moving averages, *Journal of Convex Analysis* 21 (2014), 219-235.
19. H. Bauschke, J. Chen and X. Wang, A projection method for approximating fixed points of quasi nonexpansive mappings without the usual demiclosedness condition, *Journal of Nonlinear and Convex Analysis*, vol. 15, no. 1, 2014, 129-135.
20. H. Bauschke, X. Wang and L. Yao, On paramonotone monotone operators and rectangular monotone operators, *Optimization*, 2012, 1--18.
21. H.H. Bauschke, J.M. Borwein, X. Wang, and L. Yao, Monotone operators and "bigger conjugate" functions, *Journal of Convex Analysis*, 20 (2013), no. 1, 143-155. <http://arxiv.org/abs/1108.2578>
22. H.H. Bauschke, J.M. Borwein, X. Wang, and L. Yao, The Brezis-Browder Theorem in a general Banach space, *Journal of Functional Analysis* 22, pp. 4948--4971, 2012.
23. H.H. Bauschke, J.M. Borwein, X. Wang, and L. Yao, Construction of pathological maximally monotone operators on non-reflexive Banach spaces, *Set-Valued and Variational Analysis*, 20 (2012), 387--415. <http://arxiv.org/abs/1108.1463>
24. H.H. Bauschke, V. Martin-Marquez, S.M. Moffat, X. Wang, Compositions and convex combinations of asymptotically regular firmly nonexpansive mappings are also asymptotically regular, *Fixed Point Theory and Applications*, 2012, **2012**:53, <http://www.fixedpointtheoryandapplications.com/content/2012/1/53>.
25. H.H. Bauschke, S.M. Moffat, and X. Wang, Near convexity, near equality, sums of maximally monotone operators, and averages of firmly nonexpansive mappings, *Mathematical Programming*, Volume 139, 1 (2013), 55-70.
26. H.H. Bauschke, J.M. Borwein, X. Wang, and L. Yao, Every maximally monotone operator of Fitzpatrick-Phelps type is also of dense type, *Optimization Letters*, accepted in August 2011, 6 (2012), no. 8, 1875–1881. <http://arxiv.org/abs/1104.0750>
27. X. Wang and L. Yao, Maximally monotone linear subspace extensions of monotone subspaces: explicit constructions and characterizations, *Mathematical Programming*, Volume 139, 1 (2013), 327-352.

28. H. Bauschke, S. Moffat and X. Wang, Firmly nonexpansive mappings and maximally monotone operators: correspondence and duality, *Set-Valued and Variational Analysis*, 20 (2012), 131-153.
29. H.H. Bauschke, X. Wang, and C. Wylie, Fixed points of averages of resolvents: geometry and algorithms, *SIAM J. of Optimization*, 22 (2012), 24-40.
30. R. Goebel, W. Hare and X. Wang, The infimum value and minimizers of the proximal average of convex functions, *Nonlinear Analysis*, 75 (2012), 1290-1304.
31. X. Wang and H.H. Bauschke, Compositions and averages of two resolvents: relative geometry of fixed point sets and a partial answer to a question by C. Byrne, *Nonlinear Analysis*, 74 (2011), 4550–4572. <http://arxiv.org/pdf/1003.4793>
32. X. Wang, Self-dual regularization of monotone operators via the resolvent average, *SIAM Journal of Optimization*, 21 (2011), 438-462.
33. H.H. Bauschke, X. Wang and L. Yao, On Borwein-Wiersma decompositions of monotone linear relations, *SIAM Journal on Optimization*, 20 (2010), 2636-2652.
34. H.H. Bauschke, X. Wang and L. Yao, Examples of discontinuous maximal monotone operators and the solution to a recent problem posed by B.F. Svaiter, *Journal of Mathematical Analysis and Applications*, Volume 370, Issue 1 (2010), 224-241.
35. H.H. Bauschke, M.S. Macklem, J.B. Sewell and X. Wang, Klee sets and Chebyshev centers for the right Bregman distance, *Journal of Approximation Theory* 162, no. 6 (2010), 1225-1244.
36. X. Wang, On Chebyshev Functions and Klee Functions, *Journal of Mathematical Analysis and Applications*, 368 (2010), 293-310.
37. H.H. Bauschke, S.M. Moffat and X. Wang, The resolvent average for positive semidefinite matrices, *Linear Algebra and Its Applications*, 432 (2010), 1757-1771.
38. H.H. Bauschke, X. Wang and L. Yao, Autoconjugate representations of continuous linear monotone operators, *Mathematical Programming*, 123 (2010), no. 1, 5-24.
39. H.H. Bauschke, X. Wang and L. Yao, An answer to S. Simons' question on the maximal monotonicity of the sum of a maximal monotone linear operator and a normal cone operator, *Set-Valued and Variational Analysis*, 17 (2009), no. 2, 195-201.
40. H.H. Bauschke, X. Wang and L. Yao, Monotone Linear Relations: Maximality and Fitzpatrick Functions, *Journal of Convex Analysis*, Volume 16 (2009), No. 3 & 4, 673-686.
41. H.H. Bauschke, X. Wang, J. Ye and X. Yuan, Bregman distances and Chebyshev sets, *Journal of Approximation Theory*, 159 (2009), 3-25.
42. H.H. Bauschke, X. Wang, J. Ye and X. Yuan, Bregman distances and Klee sets, *Journal of Approximation Theory*, 158 (2009), no. 2, 170-183.
43. H.H. Bauschke and X. Wang, The kernel average for two convex functions and its application to the extension and representation of monotone operators, *Trans. Amer. Math. Soc.*, 361 (2009), 5947-5965.
44. H.H. Bauschke, R. Goebel, Y. Lucet and X. Wang, The proximal average: basic theory, *SIAM J. Optimization*, 19 (2008), no. 2, 766-785.

45. H.H. Bauschke and X. Wang, An explicit example of a maximal 3-cyclically monotone operator with bizarre properties, *Nonlinear Analysis*, 69 (2008), 2875-2891.
46. H.H. Bauschke, Y. Lucet and X. Wang, Primal-dual symmetric antiderivatives for cyclically monotone operators, *SIAM J. Control Optim.*, vol. 46 (2007), no.6, 2031-2051.
47. H. H. Bauschke, J. M. Borwein and X. Wang, Fitzpatrick functions and continuous linear monotone operators, *SIAM J. Optim.*, vol.18 (2007), no.3, 789-809.
48. H.H. Bauschke and X. Wang, A convex-analytical approach to extension results for n-cyclically monotone operators, *Set-Valued Analysis*, Vol. 15 (2007), no. 3, 297-306.
49. S. Bartz, H.H. Bauschke, J.M. Borwein, S. Reich and X. Wang, Fitzpatrick functions, cyclic monotonicity and Rockafellar's antiderivative, *Nonlinear Anal.*, 66 (2007), no. 5, 1198-1223.
50. X. Wang, Extremal characterizations of reflexive spaces, *J. Aust. Math. Soc.*, 82 (2007), no. 3, 429-439.
51. X. Wang, Asplund sets, differentiability and subdifferentiability of functions in Banach spaces, *J. Math. Anal. Appl.*, 323 (2006), no. 2, 1417-1429.
52. M. Fabian, P.D. Loewen and X. Wang, On ϵ -differentiability of Lipschitz functions on Asplund spaces, *J. Convex Anal.*, 13 (2006), no. 3-4, 695-709.
53. J.M. Borwein and X. Wang, Lipschitz functions with maximal subdifferentials are staunch, *Bull. Austral. Math. Soc.*, 72 (2005), no. 3, 491-496.
54. J.M. Borwein and X. Wang, Cone-monotone functions: differentiability and continuity, *Canad. J. Math.*, Vol 57, No 5 (2005), 961-982.
55. X. Wang, Subdifferentiability of real functions, *Real Anal. Exchange*, 30 (2004/05), no. 1, 137-171.
56. P.D. Loewen and X. Wang, On the multiplicity points of Hadamard subdifferentials of separable spaces, *Nonlinear Anal.: TMA*, Vol. 58/1-2 (2004), 1-10.
57. X. Wang, Are Cone-monotone functions generically intermediately differentiable? *Real Anal. Exchange*, 29 (2003/04), no. 2, 729-738.
58. J.M. Borwein and X. Wang, Lipschitz functions on the line with prescribed Holder subdifferentials, *Advanced Study of Contemporary Mathematics*, 7 (2003), no.1, 93-117.
59. J.M. Borwein, J. Vanderwerff and X. Wang, Local Lipschitz-constant functions and maximal subdifferentials, *Set-valued Analysis*, 11 (2003), 37-67.
60. P.D. Loewen and X. Wang, A generalized variational principle, *Canad. J. Math.*, 53 (2001), no. 6, 1174-1193.
61. P.D. Loewen and X. Wang, Typical properties of Lipschitz functions, *Real Anal. Exch.*, 26 (2000/01), no. 2, 717-725.
62. J.M. Borwein, W.B. Moors and X. Wang, Generalized subdifferentials: a Baire categorical approach, *Trans. Amer. Math. Soc.*, 353 (2001), 3875-3893.
63. J.M. Borwein and X. Wang, Lipschitz functions with maximal Clarke subdifferentials are generic, *Proc. Amer. Math. Soc.*, 128 (2000), 3221-3219.

64. J.M. Borwein, W.B. Moors and X. Wang, Generalized subdifferentials: a Baire categorical approach (extended abstract), *Mathematical Reports of the Academy of Science*, 21 (1999), 132-138.
65. J.M. Borwein, R. Girgensohn and X. Wang, On the construction of H^{∞} -order and proximal subderivatives, *Can. Math. Bulletin*, 41 (1998), 497-507.
66. J.M. Borwein and X. Wang, The converse of the mean value theorem may fail generically, *Amer. Math. Monthly*, 105 (1998), 847-848.
67. X. Wang, The subdifferentiability properties of typical functions in $C[0,1]$, *J. Math. Anal. Appl.*, 218 (1998), 621-631.
68. X. Wang, A note on the Clarke subdifferential, *Amer. Math. Monthly*, 105 (1998), 357-359.
69. J.M. Borwein and X. Wang, Distinct differentiable functions may share the same Clarke subdifferential at all points, *Proc. Amer. Math. Soc.*, 125 (1997), 807-813.
70. J.M. Borwein, W.B. Moors and X. Wang, Lipschitz functions with prescribed derivatives and subderivatives, *Nonlinear Analysis: Theory, Methods, & Applications*, 29 (1997), 53-63.
71. D. Borwein, J.M. Borwein and X. Wang, Approximate subgradients and coderivatives in \mathbb{R}^n , *Set-Valued Analysis*, 4 (1996), 375-398.

(b) *Refereed Conference Proceedings*

1. S. Reich and X. Wang, A convex analytic inequality revisited, *Contemp. Math.*, volume 659, Amer. Math. Soc., Providence, RI, 2016, 263--272.
2. H.H. Bauschke, S.M. Moffat and X. Wang, Self-dual smooth approximations of convex functions via the proximal average, *Fixed-Point Algorithms for Inverse Problems in Science and Engineering*, Springer-Verlag, 2011, 23-32.
3. H.H. Bauschke, M.S. Macklem and X. Wang, Chebyshev sets, Klee sets, and Chebyshev centers with respect to Bregman distances: recent results and open problems, *Fixed-Point Algorithms for Inverse Problems in Science and Engineering*, Springer-Verlag, 2011, 1-21.
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4. **PATENTS**

5. **SPECIAL COPYRIGHTS**

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