JOHN HOWAT

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Education

2008 – 2012	Ph.D. in Computer Science	Carleton University
2007 – 2008	M.C.S.	Carleton University
2003 – 2007	B.C.S. (Highest Honours), Minor in Mathematics	Carleton University

Academic Experience

2014 – 2015	Instructor I	Carleton University
2012 – 2014	Postdoctoral Fellow	Queen's University
2009 – 2012	Contract Instructor	Carleton University
2005 – 2012	Teaching Assistant	Carleton University
2007 – 2008	Research Assistant	Carleton University

Awards and Scholarships

2015	Carleton University Professional Achievement Award	$10,000
2009 – 2012	NSERC CGS-D3	$35,000/a
2009	Ontario Graduate Scholarship (declined)	$15,000/a
2008 – 2009	NSERC PGS-D	$21,000/a
2008	NSERC CGS-M	$17,500/a
2008	Ontario Graduate Scholarship (declined)	$15,000/a

Professional Duties

Program Committees: Canadian Conference on Computational Geometry (CCCG) 2010, 2015

External Referee: Canadian Conference on Computational Geometry (CCCG), *International Journal of Foundations of Computer Science*, Symposium on Computational Geometry (SOCG), *Theoretical Computer Science*, *The Visual Computer*

Teaching Duties

Carleton University:

COMP 1005	Introduction to Computer Science I	F14
COMP 1006/1406	Introduction to Computer Science II	W15 (two sections)
COMP/MATH 1805	Discrete Structures I	S09, F14, W15
COMP/MATH 3804	Design and Analysis of Algorithms I	S10, S11, W12, S12
COMP 4109	Applied Cryptography	F14

Teaching Evaluation Summary

	Term	Me			Subject				Faculty			
		Average	# Resp.	Enrl.	Average	# Resp.	Enrl.	Eval.	Average	# Resp.	Enrl.	Eval.
2009–10												
COMP 1805A	Summer	4.65	11	15	4.33	4462	1783	74	4.41	27156	12409	405
2010–11												
COMP 3804A	Summer	4.83	22	26	4.32	4696	1938	77	4.45	29780	13909	420
2011–12												
COMP 3804A	Summer	4.62	29	41	4.34	5020	1935	70	4.48	31740	14644	448
COMP 3804B	Winter	4.77	40	72	4.34	5020	1935	70	4.48	31740	14644	448
2012–13												
COMP 3804A	Summer	4.73	23	41	4.23	5195	2166	73	4.42	32586	15804	478
2014–15												
COMP 1005A	Fall	4.62	131	265	4.42	6185	2355	77	4.43	39595	16398	538
COMP 1006B	Winter	4.68	43	100	4.42	6185	2355	77	4.43	39595	16398	538
COMP 1406C	Winter	4.68	49	157	4.42	6185	2355	77	4.43	39595	16398	538
COMP 1805A	Fall	4.68	54	165	4.42	6185	2355	77	4.43	39595	16398	538
COMP 1805B	Winter	4.84	130	360	4.42	6185	2355	77	4.43	39595	16398	538
COMP 4109A	Fall	4.93	27	42	4.42	6185	2355	77	4.43	39595	16398	538
Overall		**4.73**	51	117	4.37	5591	2172	75	4.44	35507	15436	493

Publications

Articles in Refereed Journals

[1] Prosenjit Bose, John Howat, and Pat Morin. A distribution-sensitive dictionary with low space overhead. *Journal of Discrete Algorithms*, 10:140–145, 2012.

[2] Prosenjit Bose, Karim Douïeb, Vida Dujmović, and John Howat. Layered working-set trees. *Algorithmica*, 63(1):476–489, 2012.

[3] Vida Dujmović, John Howat, and Pat Morin. Biased range trees. *Algorithmica*, 62(1):21–37, 2012.

[4] Prosenjit Bose, Karim Douïeb, Vida Dujmović, John Howat, and Pat Morin. Fast local searches and updates in bounded universes. *Computational Geometry: Theory and Applications*, 46(2), 2012.

Articles in Refereed Conferences with Proceedings

[5] Prosenjit Bose, John Howat, and Pat Morin. Searching by panning and zooming. In *Proceedings of the 26th Canadian Conference on Computational Geometry (CCCG 2014)*, pages 390–394, 2014.

[6] Prosenjit Bose, Rolf Fagerberg, John Howat, and Pat Morin. Biased predecessor search. In *Proceedings of the 11th Latin American Theoretical Informatics Symposium (LATIN 2014), LNCS 8392*, pages 755–764, 2014.

[7] Prosenjit Bose, John Howat, and Pat Morin. A history of distribution-sensitive data structures. In *Space-Efficient Data Structures, Streams, and Algorithms, LNCS 8066*, pages 133–149, 2013.

[8] Prosenjit Bose, Karim Douïeb, Vida Dujmović, John Howat, and Pat Morin. Fast local searches and updates in bounded universes. In *Proceedings of the 22nd Canadian Conference on Computational Geometry (CCCG 2010)*, pages 261–264, 2010.

[9] Prosenjit Bose, Karim Douïeb, Vida Dujmović, and John Howat. Layered working-set trees. In *Proceedings of the 9th Latin American Theoretical Informatics Symposium (LATIN 2010), LNCS 6034*, pages 686–696, 2010.

[10] Prosenjit Bose, John Howat, and Pat Morin. A distribution-sensitive dictionary with low space overhead. In *Proceedings of the 11th International Symposium on Algorithms and Data Structures (WADS 2009), LNCS 5664*, pages 110–118, 2009.

[11] Vida Dujmović, John Howat, and Pat Morin. Biased range trees. In *Proceedings of the 20th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2009)*, pages 486–495, 2009.

Poster Presentations

[12] John Howat and David Rappaport. Space-efficient triangulation in meshes. Graphics Interface (GI), 2013.

Invited Talks

[13] John Howat. Counting Words in Regular Languages using ~~Magic~~ Calculus. Carleton Computer Science Lecture Series, November 2011.

Currently Under Review

[14] Prosenjit Bose, Rolf Fagerberg, John Howat, and Pat Morin. Biased predecessor search. Submitted by invitation to a special issue of *Algorithmica*, 2014.

Other Contributions

[15] John Howat, John Iacono, and Pat Morin. The fresh-finger property. *CoRR*, abs/1302.6914, 2013.

Theses

[16] John Howat. *Exploiting Non-Uniform Query Distributions in Data Structuring Problems*. PhD thesis, Carleton University, 2012.

[17] John Howat. Two results on distribution-sensitive data structures. Master's thesis, Carleton University, 2008.