

Cole Zmurchok

The University of British Columbia
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EDUCATION

The University of British Columbia

Ph.D., Mathematics expected 2018
Fields: Mathematical Biology, Applied Mathematics
Supervisor: Leah Edelstein-Keshet

University of Alberta

M.Sc., Applied Mathematics 2014
Supervisor: Gerda de Vries

B.Sc., Honors Mathematics 2012

PUBLICATIONS

C. Zmurchok, T. Small, M. J. Ward, and L. Edelstein-Keshet. Application of quasi-steady-state methods to nonlinear models of intracellular transport by molecular motors. *Bulletin of Mathematical Biology*, 79(9):1923–1978, 2017

H. Knutsdottir, C. Zmurchok, D. Bhaskar, E. Palsson, D. Dalle Nogare, A. B. Chitnis, and L. Edelstein-Keshet. Polarization and migration in the zebrafish posterior lateral line system. *PLoS Computational Biology*, 13(4):1–26, 2017

INVITED TALKS

“Application of quasi-steady-state methods to nonlinear models of intracellular transport by molecular motors” July 2017
Annual Meeting of the Canadian Society of Applied and Industrial Mathematics, Halifax, NS

“Modelling the Interplay Between Cell Signalling and Cell Mechanics” May 2017
SIAM Conference on Applications of Dynamical Systems, Snowbird, UT

AWARDS

TEACHING

The University of British Columbia
Killam Graduate Teaching Assistant Award Apr 2017

University of Alberta
Leonard E. Gads Teaching Assistant Award, Faculty of Engineering May 2013

ACADEMIC

The University of British Columbia
Faculty of Science Graduate Award 2014–2017

Best Poster Prize “Modelling the polarization, migration, and neuromast deposition in the zebrafish posterior lateral line system” European Conference for Mathematical and Theoretical Biology/Society for Mathematical Biology Joint Conference University of Alberta Queen Elizabeth II Graduate Scholarship	July 2016 2012
TEACHING	
The University of British Columbia	
Instructor	
Differential Calculus with Physical Applications	Sep–Dec 2017
Differential Calculus with Applications to the Life Sciences	Sep–Dec 2016
Integral Calculus with Applications to the Life Sciences	Jan–Apr 2015
Recitation Instructor	
Integral Calculus with Applications to the Physical Sciences	Jan–Apr 2017
Tutorial Instructor	
Ordinary Differential Equations	Jan–Apr 2016
Ordinary Differential Equations for Mechanical Engineering	Sep–Dec 2015
Teaching Assistant	
Grading for Partial Differential Equations	Jan–Apr 2017
Grading for Applied Partial Differential Equations	Jan–Apr 2016
Grading for Vector Calculus, Math Learning Centre Staff (drop-in help)	Sep–Dec 2014
University of Alberta	
Teaching Assistant	
Lab Instructor for Science 100, Grading for Engineering Calculus III	Jan–Apr 2014
Lab Instructor for Science 100, Support Centre Staff (drop-in help)	Sep–Dec 2013
Lab Instructor for Science 100 and Elementary Calculus I	Jan–Apr 2013
Lab Instructor for Engineering Calculus I, Support Centre Staff (drop-in help)	Sep–Dec 2012
PROFESSIONAL EXPERIENCE	
The University of British Columbia	
Tutor, First Nations Longhouse	Sep 2017
Instructional Skills Workshop Facilitator, Centre for Teaching, Learning, and Technology and Mathematics Department	2017
Teaching Assistant Training Facilitator, Mathematics Department	2016–2017

Organizer, Frontiers in Biophysics Conference	June 2016
Student Committee Member, Institute of Applied Mathematics	2014–2017
Science World, Vancouver, British Columbia	
Future Science Leaders Fellow	2016–2017
University of Alberta	
Co-organizer, 10th PIMS Young Researchers Conference	May 2013
Secretary and Webmaster, Graduates at Alberta Mathematics Etc. (GAME) Student Committee	2012-2013
Research Assistant with Dr. Gerda de Vries “Study of animal movement and group formation”	2012
NSERC USRA Research Assistant with Dr. Feng Dai “Applications of nonlinear optimization techniques in approximation theory”	2011
Research Assistant with Dr. Gerda de Vries “Enriching the high school mathematics curriculum with applied content in the area of mathematical biology”	2009–2010
Snow Valley Ski Club, Edmonton, Alberta	
Course Conductor, Level 1 Certified Ski Instructor Course	2011–2014
Supervisor, Winter Sports Training Centre	2011–2014
Ski Instructor, Winter Sports Training Centre	2005–2011

ACCREDITATIONS

The University of British Columbia	
Teaching Assistant Accreditation Program, Mathematics Department	Jan–Apr 2017
Facilitator Development Workshop, Centre for Teaching, Learning and Technology	Jan 2017
Instructional Skills Workshop	2015
Math 599: Mathematics Teaching Techniques Course	2014
University of Alberta	
Graduate Teaching and Learning Program, Level 1	2012
Canadian Ski Instructors’ Alliance	
Level 1 Course Conductor Certification	2010
Ski Instructor Certification (Level 3 2010, Level 2 2006, Level 1 2005)	2005–2010
National Coaching Certification Program, Special Olympics Coaching Course	2007