

# Madeleine Bonsma-Fisher

*Postdoctoral Fellow, Civil & Mineral Engineering and Mechanical & Industrial Engineering, University of Toronto*

CivMin & MIE  
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## Education

2022–present **Data Sciences Institute Postdoctoral Fellow, University of Toronto**  
Researching equitable prioritization of active transportation infrastructure in Canadian cities.  
Advisors: Shoshanna Saxe (Department of Civil & Mineral Engineering) and Timothy Chan (Department of Mechanical & Industrial Engineering)

2015–2022 **PhD, Vanier Scholar, Physics, University of Toronto**, Toronto, Canada  
Thesis: *Population dynamics of CRISPR adaptive immunity in communities of bacteria and phages: A window into another world*  
Advisor: Sidhartha Goyal

2014–2015 **MSc, Physics, University of Toronto**, Toronto, Canada  
Thesis: *Analyzing prokaryote-phage interactions using the CRISPR locus*  
Advisor: Sidhartha Goyal

2009–2014 **BSc, Honours Co-operative Physics, Biology Minor, University of Waterloo**, Waterloo, Canada

## Publications

### Articles in Progress

2026 B. Lin, **M. Bonsma-Fisher**, S. Saxe, T. C. Y. Chan. Analytics for Better Urban Cycling at the City of Toronto, *Winner, CORS 2025 Practice Prize and Finalist, INFORMS 2025 Daniel H. Wagner Prize. Under review at INFORMS*.

2025 **M. Bonsma-Fisher**, A. Soukhov, V. Rawal, T. C. Y. Chan, S. Saxe. When proximity to sustainable transportation infrastructure does not match accessibility to opportunities: A Canadian case study, *Book chapter in revision at the Handbook of Transport Equity*.

### Refereed Journal Publications

2026 **M. Bonsma-Fisher**, M. Zanotto, K. L. Walker, S. Benoit, M. Winters, S. F. L. Kirk. Cycling rate trends from Canada's national volunteer cycling count, *Journal of Cycling & Micromobility Research* 7 (2026) 100100.

2024 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. Exploring the geographical equity-efficiency trade-off in cycling infrastructure planning, *Journal of Transport Geography* 121 (2024) 104010.

2024 T. Williams, M. Winters, **M. Bonsma-Fisher**, T. Nelson, D. G. T. Whitehurst. Cycling towards complete communities: Estimating access to destinations via low traffic stress cycling, *Transportation Research Interdisciplinary Perspectives* 26 (2024) 101179.

2024 A. A. Imrit, J. Fischer, T. C. Y. Chan, S. Saxe, **M. Bonsma-Fisher**. A Street-Specific Analysis of Level of Traffic Stress Trends in Strava Bicycle Ridership and Its Implications for Low-Stress Bicycling Routes in Toronto, *Findings*, January 2024.

2023 **M. Bonsma-Fisher**, S. Goyal. Dynamics of immune memory and learning in bacterial communities, *eLife* 12:e81692.

2019 L. W. Johnston, **M. Bonsma-Fisher**, J. Ostblom, A. R. Hasan, J. S. Santangelo, L. Coome, L. Tran, E. Sales de Andrade, S. Mahallati. A graduate student-led participatory live-coding quantitative methods course in R: Experiences on initiating, developing, and teaching, *Journal of Open Source Education* 2(16), 49.

2018 **M. Bonsma-Fisher**, D. Soutière, S. Goyal. How adaptive immunity constrains the composition and fate of large bacterial populations, *Proceedings of the National Academy of Sciences* 115, 32 (2018).

2015 L. Vermeyden, X. Ma, J. Lavoie, **M. Bonsma**, U. Sinha, R. Laflamme, K. J. Resch. Experimental test of environment-assisted invariance, *Physical Review A* 91, 012120 (2015).

2013 L. Vermeyden\*, **M. Bonsma\***, C. Noel, J.M. Donohue, E. Wolfe, K. J. Resch. Experimental violation of three families of Bell inequalities, *Physical Review A* 87, 032105 (2013). \*These authors contributed equally to this work.

## Opinion

2025 **M. Bonsma-Fisher**. Where's Vision Zero? Road safety was a motivating factor behind Complete Streets with bike lanes — but then people stopped talking about it. *City Hall Watcher* (February 24, 2025).

2024 S. Elton and **M. Bonsma-Fisher**. The bike lane debate isn't a war on cycling – it's a war on data. *The Globe and Mail* (November 27, 2024).

## Technical Reports

2024 **M. Bonsma-Fisher**, T. C. Y. Chan, S. Saxe. Impacts on businesses and people if bike lanes are removed. Report submitted to the Standing Committee on Heritage, Infrastructure and Cultural Policy, Legislative Assembly of Ontario.

2022 **M. Bonsma-Fisher**, D. Roberston. Ottawa's Winter Cycling Network: An analysis of expansion opportunities using Strava Ridership Data. Report circulated to Ottawa City Council.

## Other Publications

2023 **M. Bonsma-Fisher**, K. Bonsma-Fisher. How big a table do you need for your jigsaw puzzle? arXiv:2312.04588

2018 **M. Bonsma-Fisher**. Do left-handed people really die young? DataCamp coding tutorial.

2018 **M. Bonsma-Fisher**, A. Hasan. Working with plant phenology data and fitting a nonlinear model using least squares in R. NEON Faculty Mentoring Network, QUBES Educational Resources. doi:10.25334/Q4Q73D

2018 **M. Bonsma-Fisher**. Working with spreadsheet-style data in Python with pandas and seaborn. QUBES Educational Resources. doi:10.25334/Q4PF1D

## Teaching Experience

### Course Design, Instruction, and TA Experience

2018 **Course Instructor**, *Quantitative Methods in R for Biology*, Department of Ecology and Evolutionary Biology, Toronto, Canada  
Co-designed and co-instructed a third-year course with 26 students, prepared and delivered 2 lectures on theoretical ecology, data analysis, and programming.

2017 **Course Instructor**, *Theoretical Ecology and Reproducible Quantitative Methods in R*, Department of Ecology and Evolutionary Biology, Toronto, Canada  
Co-designed and co-instructed a fourth-year course, prepared and delivered 5 lectures on theoretical ecology and programming.

2014–2017 **Teaching Assistant**, *Department of Physics*, University of Toronto, Toronto, Canada  
Tutor for 'Topics in Biological Physics' fourth year course (3 hours/week), lab demonstrator and marker for first year engineering Classical Mechanics course (5.5 hours/week), practicals demonstrator for first year Physics course (3.5 hours/week), tutor for 'The Magic of Physics' first year course (7 hours/week).

### Workshop Design & Instruction

2018, 2020 **Girls in STEM Club Workshop Leader**  
Co-designed an interactive 1.5 hour biophysics workshops for girls in grades 6-8. Delivered workshop to two groups of students per session at two sessions.

2018–2019 **Special Projects Coordinator**, *UofT Coders*, Toronto, Canada  
Organized and facilitated coding workshops at the University of Toronto.

2018, 2019 **iSchool Workshop Lead**, *University of Toronto School of Information*, Toronto, Canada  
Designed and delivered an interactive Bash and Git workshop for Bachelor of Information students and a Python workshop for Master of Information students.

2016–2019 **Software Carpentry Instructor**  
Licensed instructor for Software Carpentry. Organized multiple workshops in Toronto, taught Git to researchers at two workshops, taught Python at one workshop, and taught Bash at one workshop.

2018 **Canada Learning Code Instructor**  
Taught introductory Python at two Ladies Learning Code workshops in Toronto.

2016 **Workshop Lead**, *Mozilla Festival*, London, UK  
Designed and led a code sprint workshop called “Hacking CRISPR”.

## Awards and Grants

### Highlights

2026 **Finalist, INFORMS 2026 Innovative Applications in Analytics Award**  
Member of author team on case study selected as a finalist for award recognizing the creative and unique application of analytical techniques. Winner to be announced in April 2026.

2025 **Finalist, INFORMS 2025 Daniel H. Wagner Prize**  
Member of author team on case study selected as a finalist for the Daniel H. Wagner Prize for Excellence in the Practice of Advanced Analytics and Operations Research.

2025 **First Prize, 2025 Canadian Operational Research Society Practice Prize Competition**  
Member of author team on case study awarded first prize for outstanding application of OR by practitioners in Canada.

2025 **14 Women Accelerating Action in Urbanism**, Women in Urbanism Canada  
Named one of 14 women and gender-diverse people who have significantly impacted Canada's urbanism sector.

2024 **Digital Research Alliance of Canada Resource Allocation Competition Award**  
Prepared application under Timothy Chan for competitive national grant for high-performance computing resources (valued at \$23,679) to support cycling network optimization. Application received a score of 4.4 out of 5.

2023 **Data Sciences Institute Research Software Development Support Program**, *University of Toronto*, Toronto, Canada  
Prepared application under Timothy Chan for software engineering support (valued at \$60,000) to create a public dashboard of cycling network optimization results.

2022 **Data Sciences Institute Postdoctoral Fellowship**, *University of Toronto*, Toronto, Canada

2016–2020 **NSERC Vanier Canada Graduate Scholarship**, *University of Toronto*, Toronto, Canada  
Canada's top graduate scholarship, \$150,000 over three years.

2016–2017 **NSERC Gilles Brassard Doctoral Prize for Interdisciplinary Research**  
Awarded to an outstanding recipient of an NSERC Vanier Canada Graduate Scholarship who best exemplifies interdisciplinary research.

2015–2016 **Van Kranendonk Teaching Assistant Award**, *University of Toronto*, Toronto, Canada  
Awarded to four physics graduate students annually based on student nominations.

### Other Grants

2021 **Digital Research Alliance of Canada Resource Allocation Competition Award**  
Prepared application under Sidhartha Goyal for high-performance computing resources (valued at \$7,332) to support population dynamics simulations. Application received a score of 4.2 out of 5.

2020 **Digital Research Alliance of Canada Resource Allocation Competition Award**  
Prepared application under Sidhartha Goyal for high-performance computing resources (valued at \$7,280) to support population dynamics simulations.

### Other Awards

2021 **Walter C. Sumner Memorial Fellowship**

2020-2021 **Queen Elizabeth II Graduate Scholarship in Science and Technology**, *University of Toronto*, Toronto, Canada

2017 **Mozilla Network 50**, 50 People Who Made the Internet a Better Place in 2016  
Awarded to 50 Mozilla network members who have done outstanding Internet health work.

2016-2017 **NSERC Alexander Graham Bell Canada Graduate Scholarship – Doctoral**, *University of Toronto*, Toronto, Canada, [Declined]

2015-2016 **NSERC Alexander Graham Bell Canada Graduate Scholarship – Master's**, *University of Toronto*, Toronto, Canada

2014-2015 **Ontario Graduate Scholarship**, *University of Toronto*, Toronto, Canada

2014-2015 **University of Toronto Fellowship**, *University of Toronto*, Toronto, Canada

2014-2015 **NSERC Alexander Graham Bell Canada Graduate Scholarship – Master's**, *University of Waterloo*, *University of Ottawa*, *McMaster University*, *Simon Fraser University*, [Declined]

2014-2015 **Ontario Graduate Scholarship**, *University of Guelph*, *University of Ottawa*, [Declined]

2009-2014 **Queen Elizabeth II Aiming for the Top Scholarship**

2013-2014 **Mike Lazaridis Scholarship in Theoretical Physics**, *University of Waterloo*, Waterloo, Canada, [Declined]

2013 **Ian R. Dagg Memorial Scholarship**, *University of Waterloo*, Waterloo, Canada

2013 **DREAMS Summer Research Award**, *Dalhousie University*, Halifax, Canada

2012 **NSERC Undergraduate Student Research Award**, *University of Waterloo*, Waterloo, Canada

2012 **President's Research Award**, *University of Waterloo*, Waterloo, Canada

2009 **President's Scholarship of Distinction**, *University of Waterloo*, Waterloo, Canada

2009 **A. Donald Maynes Entrance Scholarship**, *University of Waterloo*, Waterloo, Canada

2009 **Miller Thomson Foundation Scholarship**

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## Presentations

### Invited Talks and Panels

2025 **M. Bonsma-Fisher**. *Taking Action for Safe Cycling in the City*. Toronto Public Library civic life panel, Toronto, Canada. [Panelist]

2025 **M. Bonsma-Fisher**. *Data-driven cycling network planning in Toronto*. Canadian Institutional Research and Planning Association 2025 Conference (online). [Keynote]

2025 **M. Bonsma-Fisher**. *Prioritizing Vulnerable Road Users - Politics and Challenges*. Advancing Mobility Justice, Gender Equity & Climate Action through Sport Symposium, Toronto, Canada. [Panelist]

2025 **M. Bonsma-Fisher**. *Unleashing the Power of Cycling*. School of Cities, Toronto, Canada. [Panelist]

2025 **M. Bonsma-Fisher**. *From Bacteria to Bikes: Quantitative Cycling Research in Toronto*. Civic Tech Toronto, Toronto, Canada.

2024 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Looking beyond proximity: Who benefits from cycling infrastructure?* Toronto Urban Cycling Meetup, Toronto, Canada.

2023 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Tradeoffs between optimal and equitable bicycle infrastructure in Toronto*, Knowledge Cafe, The School of Cities, Toronto, Canada.

2023 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Exploring the geographical equity-efficiency trade-off in cycling infrastructure planning*, New perspectives on cycling policy and practice in the GTHA panel, The Centre for Active Transportation, Toronto, Canada.

2023 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Data for Social Good: Exploring the geographical equity-efficiency trade-off in cycling infrastructure planning*, 2023 Data Sciences Institute Research Day, Toronto, Canada.

2022 **M. Bonsma-Fisher** B. Lin, S. Saxe, T. C. Y. Chan. *Optimizing bicycle infrastructure placement with Level of Traffic Stress*, CHATR lab research visit, Vancouver, Canada.

2019 **M. Bonsma-Fisher**. *Immune memory in the CRISPR arms race*, MicrobeTO Seminar Series, Toronto, Canada.

2019 **M. Bonsma-Fisher**, A. Hasan, J. S. Santangelo. *Let them learn R - and reproducible, collaborative, quantitative science*, GTA R User Group, Toronto, Canada.

2018 **M. Bonsma-Fisher** *Open CRISPR: leveraging open source for scientific discovery*, Free Software and Open Source Symposium 2018, Toronto, Canada. [Keynote]

2018 **M. Bonsma-Fisher**. *Source code management for students using Git and GitHub*, 2018 Association of Computer Studies Educators Conference, Toronto, Canada.

2017 **M. Bonsma**. *Are You Open? Shaking it Up: Making Open Science Work For You*, Toronto, Canada. [Panelist]

2017 **M. Bonsma**. *Using Personas and Pathways to Build Community*, Mozilla Science Lab Working Open Workshop, Montreal, Canada.

2016 A. Collins, **M. Bonsma**. *Sprints and Events*, Mozilla Science Lab Working Open Workshop, Berlin, Germany.

### Contributed Presentations

2025 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Exploring the geographical equity-efficiency tradeoff in cycling infrastructure planning*, Velo-City 2025, Gdansk, Poland.

2025 **M. Bonsma-Fisher**, M. Zanotto, S. Benoit, K. Walker, S. F. L. Kirk. *Infrastructure matters: Findings from four years of Pedal Poll*, Ontario Bike Summit 2025, Windsor, Ontario.

2025 **M. Bonsma-Fisher**, B. Lin, C. Klamann, T. C. Y. Chan, S. Saxe. *Distributional and procedural cycling infrastructure equity in Toronto*, Ontario Bike Summit 2025, Windsor, Ontario.

2025 **M. Bonsma-Fisher**, V. Rawal, A. Soukhov, T. C. Y. Chan, S. Saxe. *Proximity or accessibility? A Canadian case study of equity measures of infrastructure benefits*, American Association of Geographers 2025 Conference, Detroit, Michigan.

2024 **M. Bonsma-Fisher**, T. C. Y. Chan, S. Saxe. *Impacts on businesses and people if bike lanes are removed*, Standing Committee on Heritage, Infrastructure and Cultural Policy, Legislative Assembly of Ontario.

2023 A. A. Imrit\*, J. Fischer, T. C. Y. Chan, S. Saxe, **M. Bonsma-Fisher**. *A Street-Specific Analysis of Level of Traffic Stress Trends in Toronto Cyclists*, ITE Canada 2024 Conference, Hamilton, Canada. \*Presenter

2024 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Equity-driven vs. utilitarian planning for cycling network expansion*, TAC Symposium on Equity in Transportation [online].

2024 Kate Walker, **M. Bonsma-Fisher**, Samuel Benoit. *Pedal Poll/Sondo Vélo: Findings from Canada's national bicycle count*, CapaCITY/È Webinar

2023 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Tradeoffs between optimal and equitable bicycle infrastructure placement in Toronto*, 2023 Sustainability: Transdisciplinary Theory, Practice and Action Conference, Mississauga, Canada.

2023 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Tradeoffs between optimal and equitable bicycle infrastructure placement in Toronto*, 2023 Emerging Mobility Scholars Conference, Toronto, Canada.

2023 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Tradeoffs between optimal and equitable bicycle infrastructure placement in Toronto*, 2023 Canadian Operational Research Society Conference, Montreal, Canada.

2022 **M. Bonsma-Fisher** and S. Goyal. *Diversity-generating host-disease coevolution with CRISPR adaptive immunity*, 2022 Canadian Association of Physicists Congress, Hamilton, Canada. Received 1st place in Division of Physics in Medicine and Biology.

2021 **M. Bonsma-Fisher** and S. Goyal. *Who lives, who dies: Average immunity predicts population outcomes in host-disease coevolution*, Ontario Networking Event in Biophysics.

2018 **M. Bonsma-Fisher**, D. Soutière, S. Goyal. *Adaptive immunity constrains the composition and fate of large bacterial populations*, APS March Meeting 2018, Los Angeles, USA.

2017 **M. Bonsma-Fisher**, D. Soutière, S. Goyal. *The CRISPR-Cas system: a window into the microbial world*, Physics Summer Colloquium, Toronto, Canada.

2017 **M. Bonsma-Fisher**, D. Soutière, S. Goyal. *Modelling the effect of CRISPR on bacteria-virus interactions*, Ontario Networking Event in Biophysics, Mississauga, Canada.

2016 **M. Bonsma**, L. Tran, L. Coome, L. Johnston. *Study Groups - Crossing the Boundaries of Discipline*, Mozilla Festival, London, UK. [Workshop]

2015 **M. Bonsma**, S. Goyal. *Building bacteria-phage interaction networks using the CRISPR locus*, Women in Physics Canada Conference, Toronto, Canada.

2013 L. Vermeyden, **M. Bonsma**, C. Noel, J. M. Donohue, E. Wolfe, K.J. Resch. *Locally-Biased Nonlocality: Experimental violation of three families of Bell inequalities*, Canadian Undergraduate Physics Conference, Hamilton, Canada. Received 3rd place in quantum condensed matter category.

### Posters

2026 **M. Bonsma-Fisher**, B. Lin, Z. Li, E. J. Miller, T. C. Y. Chan, S. Saxe. *Should we rip out our bike lanes? Data science for evidence-based decision-making*, Data Sciences Institute Talent Showcase, Toronto, Canada. Awarded best poster for outstanding research question and impact.

2024 **M. Bonsma-Fisher**, B. Lin, T. C. Y. Chan, S. Saxe. *Exploring the geographical equity-efficiency trade-off in cycling infrastructure planning*, Data Sciences Institute Research Day, Toronto, Canada.

2024 **M. Bonsma-Fisher**, B. Lin\*, T. C. Y. Chan, S. Saxe. *Exploring the geographical equity-efficiency trade-off in cycling infrastructure planning*, Transportation Research Board 2024 Meeting, Washington, DC, United States. \*Presenter

2023 A. A. Imrit, J. Fischer, T. C. Y. Chan, S. Saxe, **M. Bonsma-Fisher**. *Revealed preferences for low-stress cycling routes in Strava data*, Data Sciences Institute Research Day, Toronto, Canada.

2019 **M. Bonsma-Fisher**, S. Goyal. *Signatures of co-evolution in the CRISPR adaptive immune system*, CRISPR 2019, Québec, Canada.

2018 **M. Bonsma-Fisher**, D. Soutière, S. Goyal. *How adaptive immunity constrains the composition and fate of large bacterial populations*, Canadian Society for Ecology and Evolution 2018 Meeting, Guelph, Canada.

2018 **M. Bonsma-Fisher** and S. Goyal. *Diversity and survival in the CRISPR adaptive immune system*, Ontario Networking Event in Biophysics, Mississauga, Canada.

2017 **M. Bonsma-Fisher**, D. Soutière, S. Goyal. *Modelling the effect of CRISPR on bacteria-virus interactions*, Beg Rohu Summer School, Saint Pierre Quiberon, France.

2015 **M. Bonsma**, S. Goyal. *Building bacteria-phage interaction networks using the CRISPR locus*, The Ninth q-bio Conference, Blacksburg, USA.

2013 **M. Bonsma**, J. V. Romero, J. R. Dahn. *Synthesis of Copper and Manganese Compounds for Gas Adsorption*, IRM Research Day, Halifax, Canada.

### Mentorship & Outreach

2014–present **Mentor**, *Department of Physics, University of Toronto*, Toronto, Canada  
Met monthly with an undergraduate student to discuss career plans and graduate school.

2024–2025 **Mentor**, *Women in Science and Engineering Industry Mentorship Program*, Toronto, Canada  
Met monthly with an undergraduate student to discuss career plans.

2023 **Data Working Group Lead**, *Bike Ottawa*  
Coordinated a volunteer group to analyze and cycling-related data.

2023 **Presentation Judge**, *UofT Engineering Research Conference*, Toronto, Canada  
Evaluated graduate student presentations at the annual science fair.

2022–2023 **Bike Talk Podcast Interviewer, Bike Talk**  
Toronto correspondent for Bike Talk, a weekly podcast on cycling around the world.

2021–2023 **Data Working Group Volunteer, Bike Ottawa**  
Analyzed City of Ottawa bike counter data and Strava Metro cycling data for Bike Ottawa's 2020 annual report.

2019–2020 **Mentor, eLife Innovation Leaders**  
Mentored a community project creator to develop and grow an open science project.

2019 **Science Fair Judge, UofT Department of Physics Undergraduate Research Fair**, Toronto, Canada  
Evaluated three undergraduate research posters at the annual science fair.

2018 **NEON Data Education Fellows Faculty Mentoring Network, National Ecological Observatory Network and the Quantitative Undergraduate Biology Education and Synthesis project**  
Participant in semester-long faculty discussion group on bringing data into the classroom.

2015–2018 **President, UofT Coders**, Toronto, Canada  
Founded and organized cross-disciplinary study group to foster skill sharing, idea generation, and peer support among scientists who code. uoftcoders.github.io

2016–2018 **Mentor, Mozilla Open Leadership Training Series**  
Mentored open science leaders to grow and improve their projects and communities.

## Service and Committee Membership

2024 **Referee**, Transportation Research Part D

2023–present **Advisory Group Member**, Cycling Guide Foundation

2023–present **Advisory Board Member**, Movements and Mobility

2021–2023 **Member of the Board of Directors**, Bike Ottawa, Ottawa, Ontario

Summer 2018 **Physics Graduate Chair Search Committee Member**, Department of Physics, University of Toronto

Winter 2018 **Department of Physics Chair Search Committee Member**, Department of Physics, University of Toronto

## Selected Courses and Training

2024 **CIV531: Transport Planning**, *Department of Civil & Mineral Engineering*, University of Toronto, Canada [audited]

2023 **Machine Learning Bootcamp**, *Data Sciences Institute and Centre for Analytics & Artificial Intelligence Engineering*, Toronto, Canada

2023 **Measuring what matters: Cities and urban mobility in an era of climate emergency**, *Mobility Network Summer School*, Toronto, Canada

2023 **Three Page Project Management for Research**, Alison Paprica, PhD, PMP, Simon Fraser University [online]

2021 **Understanding and Addressing Anti-Black Racism**, *Anti-Racism & Cultural Diversity Office*, University of Toronto, hosted by Department of Physics [online]

## Selected News and Interviews

2025 **City of Toronto to add bike lanes by decreasing size of driving lanes**. *Interview by John Musselman*, CTV News.

2025 **Toronto looking to install 20km of new bike lanes**. *Interview by Alan Carter*, City News.

2025 **Toronto proposes over 20 km of new bike lanes, bypassing provincial veto**. *Interview by Jim Richards*, Newstalk 1010.

2025 **Cycling made better: U of T researchers win at Canadian Operational Research Society**. *Phill Snel*, UofT Department of Civil & Mineral Engineering.

2025 **Pedal politics: How Toronto's bike lanes became so divisive** *Interview by Jay Cockburn, The Globe and Mail City Space podcast.*

2025 **Dividing Line** *Interview by Kate Lunau, Toronto Life.*

2024 **Ontario Government Move to Limit Bike Lanes Sparks Outrage in Toronto.** *Interview by Ron Johnson, Momentum Magazine.*

2024 **Machine learning analysis sheds light on who benefits from protected bike lanes.** *Interview by Tyler Irving, UofT News.*

2024 **Critics slam Ford's proposal to block new bike lanes to fix traffic problems.** *Interview by Abdul Matin Sarfraz, Canada's National Observer.*

2024 **Taking the Road Less Traveled | Madeleine Bonsma-Fisher (BASC 2014).** *Interview by Natasha Forth, Conrad Grebel University College.*

2024 **Let's Calculate How Much Table Space You Need for Your Jigsaw Puzzle.** *Interview by Caroline Delbert, Popular Mechanics.*

2023 **Many Torontonians are parking their cars in favour of bikes. Here's why.** *Interview by Lex Harvey, Toronto Star.*

2023 **Love a jigsaw but struggle finding the best-sized surface to lay out ALL your pieces? Well, now scientists have the answer (and no, it's NOT just buying a bigger table!)** *Story by Victoria Allen, Daily Mail.*

2023 **The mathematically perfect table size for solving any jigsaw puzzle.** *Interview by Chen Ly, New Scientist.*

2023 **Streets where people triumph over traffic.** *Interview by Abdul Matin Sarfraz, Canada's National Observer.*

2023 **Calculating space for your puzzle pieces.** *Interview by Kelsey McEwen, CTV Your Morning.*

2023 **Mathematical Solution Found For Jigsaw Problem We've All Faced.** *The Physics arXiv Blog, Discover Magazine.*

2023 **Ottawa Now – Should Ottawa issue a blanket ban for right turns on red lights?** *Interview by Kristy Cameron, 580 CFRA.*

2023 **Madeleine Bonsma-Fisher, UofT data scientist, explains to Moore In The Morning why Toronto should ban right turns on red, a proposal many US cities are considering.** *Interview by John Moore, Newstalk 1010.*

2023 **Ontario's Waterford and Turkey Point as cycling destinations? Three generations of this Toronto family gave it a try.** *Interview by Janet Hurley, Toronto Star.*

2023 **Madeleine Bonsma-Fisher, University of Toronto data scientist and cycling enthusiast, tells Moore In The Morning how Toronto could and should pedestrianize streets like Montreal, which has been a boon for businesses there.** *Interview by John Moore, Newstalk 1010.*

2023 **Car-free streets in downtown Montreal took 'political guts.' Can Toronto do the same?** *Interview by Lex Harvey, Toronto Star.*

2023 **Between road issues, construction and planning decisions, research looks at why it's so hard to bike around Toronto.** *Interview by Piya Chattopadhyay, CBC Metro Morning.*

2023 **Shifting gears: How data science led Madeleine Bonsma-Fisher from studying germ models to bike lanes.** *Interview by Adina Bresge, UofT News.*

2022 **City urged to get wheels in motion for its own bike-sharing program.** *Interview by Giacomo Panico, CBC Ottawa.*

2019 **Women in STEM: Madeleine Bonsma-Fisher.** *Interview by Javiera Gutierrez Duran, The Varsity.*

2017 **NSERC recognizes U of T research into self-driving cars and microbial ticking time bombs in our bodies.** *Interview by Sean Bettam, UofT News.*