

RESEARCH INTERESTS	Geographic information science, environmental health, spatial analysis, built environment, road safety, vulnerable road users
RESEARCH EXPERIENCE	<p><b>University of British Columbia</b>, Vancouver, BC</p> <p>Postdoctoral Research Fellow, January 2021 - Present</p> <ul style="list-style-type: none"> <li>• Leading research into evaluating the circumstances of road traffic trauma to active transport users in the province of British Columbia.</li> </ul> <p><b>Ryerson University</b>, Toronto, Ontario</p> <p>Postdoctoral Research Fellow, May 2020 - April 2021</p> <ul style="list-style-type: none"> <li>• Leading research into the injury risks among Canadian active transport users (bicyclists and pedestrians) using linked census and hospital injury databases.</li> </ul>
EDUCATION	<p><b>Simon Fraser University</b>, Burnaby, BC</p> <p>Ph.D., Health Sciences, April 2020</p> <ul style="list-style-type: none"> <li>• Topic: <i>Evaluating and utilizing crowdsourced data and population surveys in bicycling safety research</i></li> <li>• Supervisor: Meghan Winters, Ph.D</li> </ul> <p><b>University of Victoria</b>, Victoria, BC</p> <p>M.Sc., Geography, July 2015</p> <ul style="list-style-type: none"> <li>• Topic: <i>Modelling and Mapping Regional Indoor Radon Risk in British Columbia, Canada</i></li> <li>• Supervisor: Trisalyn A. Nelson, Ph.D</li> <li>• Co-Supervisor: Sarah B. Henderson, Ph.D</li> </ul> <p><b>University of Victoria</b>, Victoria, BC</p> <p>B.Sc., Geography (Geomatics Concentration), April 2013</p> <ul style="list-style-type: none"> <li>• <i>With Distinction</i></li> </ul>
REFEREED JOURNAL PUBLICATIONS	<ol style="list-style-type: none"> <li>1. <b>Branion-Calles, M.</b>, Hosford, K., Winters, M., Gauvin, L., and Fuller, D. (2020). The Impact of Implementing Public Bicycle Share Programs on Bicycle Crashes. <i>Transport Findings</i>, September, doi:10.32866/001c.16724</li> <li>2. Sanders, R., <b>Branion-Calles, M.</b>, Nelson, T. (2020). To Scoot or Not to Scoot: Findings from a Recent Survey about the Benefits and Barriers of Using E-scooters for Riders and Non-riders. <i>Transportation Research Part A: Policy and Practice</i>, 139, 217–227. doi:10.1016/j.tra.2020.07.009</li> <li>3. <b>Branion-Calles, M.</b>, Götschi, T., Nelson, T., Anaya-Boig, E., Avila-Palencia, I., Castro, A., Cole-Hunter, T., de Nazelle, A., Dons, E., Gaupp-Bergausen, M., Gerike, R., Int Panis, L., Kahlmeier, S., Nieuwenhuijsen, M., Rojas-Rueda, D., and Winters, M. (2020). Cyclist crash rates and risk factors in a prospective cohort in seven European cities. <i>Accident Analysis &amp; Prevention</i>, 141(105540). doi:10.1016/j.aap.2020.105540.</li> </ol>

4. **Branion-Calles, M.**, Winters, M., Nelson T., de Nazelle, A., Int Panis, L., Avila-Palencia, I., Anaya-Boig, Esther., Rojas-Rueda, D., Dons, E., Götschi, T. (2019). Impacts of study design on sample size, participation bias, and outcome measurement: a case study from bicycling research. *Journal of Transport & Health*, 15(e100651). doi:10.1016/j.jth.2019.100651.
5. **Branion-Calles, M.**, Nelson, T., Fuller, D., Gauvin, L., and Winters, M. (2019). Associations between individual characteristics, availability of bicycle infrastructure, and city-wide safety perceptions of bicycling: a cross-sectional survey of bicyclists in 6 Canadian and U.S. cities. *Transportation Research Part A: Policy and Practice*, 123, 229–239. doi:10.1016/j.tra.2018.10.024.
6. Winters, M., **Branion-Calles, M.**, Therrien, S., Fuller, D., Gauvin, L., Whitehurst, DGT., and Nelson, T. (2018). Impacts of Bicycling Infrastructure in Mid-Sized Cities (IBIMS): Protocol for a Natural Experiment Study. *BMJ Open*, 8(e019130). doi:10.1136/bmjopen-2017-019130.
7. **Branion-Calles, M.**, Nelson, T., and Winters, M. (2017). Comparing Crowdsourced Near Miss and Collision Cycling Data and Official Bike Safety Reporting. *Transportation Research Record: Journal of the Transportation Research Board*, 2662, 1–11. doi:10.3141/2662-01.
8. Winters, M., **Branion-Calles, M.** (2017). Cycling Safety: Quantifying the under reporting of cycling incidents in Vancouver, British Columbia. 7(A), 48–53 *Journal of Transport and Health*. doi:10.1016/j.jth.2017.02.010
9. **Branion-Calles, M.C.**, Nelson, T.A., and Martin, G. (2017). Adjusting Local Alcohol Consumption Data for Influence of Tourists. *Journal of Substance Use*, 22(1), 11–19. doi:10.3109/14659891.2016.1140235.
10. **Branion-Calles, M.C.**, Nelson, T.A., and Henderson, S.B. (2016). A geospatial approach to the prediction of indoor radon vulnerability in British Columbia, Canada. *Journal of Exposure Science and Environmental Epidemiology*, 26(6), 554–565. doi:10.1038/jes.2015.20.
11. **Branion-Calles, M.C.**, Nelson, T.A., and Henderson, S.B. (2015). Different radon thresholds and their associations with geographic risk characterization and lung cancer mortality trends in British Columbia, Canada. *BMC Public Health*, 15(1144), 1–13 doi:10.1186/s12889-015-2438-2.

SUBMITTED  
JOURNAL  
PUBLICATIONS

1. Harris, M.A., **Branion-Calles M.** Changes in Transport to Work and School Due COVID-19 Risk Concerns: An Analysis of the Canadian Perspectives Survey Series 3. *Transport Findings, Submitted January 2021*.
2. Laberee K., Nelson T., **Branion-Calles M.**, Ferster C., Winters M. Crowdsourced bicycling crashes and near misses: Trends in Canadian cities. *Journal of Transportation Safety & Security, Submitted January 2021*.
3. **Branion-Calles, M.**, Teschke, K., Koehoorn, M., Espin-Garcia, O., Harris, M.A. National population data for estimating the amount and safety of walking and bicycling in Canada. *Preventive Medicine Reports, Revisions submitted January 2021*.
4. Thompson, C., **Branion-Calles, M.**, Harris, M.A. Translating risk to preventable burden by estimating numbers of bicycling injuries preventable by separated infrastructure on a Toronto, Ontario corridor. *University of Toronto Journal of Public Health, Under Review January 2021*.

PUBLISHED  
ABSTRACTS

1. Winters, M., **Branion-Calles, M.** (2016). [Cycling Safety: Quantifying the Under-reporting of Cycling Incidents](#) *International Conference on Transport and Health*, June 13-15; San Jose, California. International Conference (Oral Presentation)





CONFERENCE  
PRESENTATIONS

1. Sanders, R., **Branion-Calles, M.**, and Nelson, T. (2020) “To Scoot or Not to Scoot: Findings from a Recent Survey about the Benefits and Barriers of Using E-scooters for Riders and Non-riders” *Transportation Research Board 99th Annual Meeting*. January 12-16; Washington, DC. International Conference (Poster Presentation)
2. **Branion-Calles, M.**, Götschi, T., Nelson, T., Dons, E., Castro, A., Gaupp-Bergausen, M., Int Panis, L., Cole-Hunter, T., Rojas-Rueda, D., Avila-Palencia, I., Nieuwenhuijsen, M., de Nazelle, A., Anaya-Boig, E., Gerike, R., and Winters, M. (2019) “Exposure-Adjusted Bicycling Crash Rates and Risk Factors in Seven European Cities” *Canadian Association of Road Safety Professionals Conference*. May 26-29; Calgary, AB. National Conference (Oral Presentation)
3. **Branion-Calles, M.**, Nelson, T., Gauvin, L., Fuller, D., and Winters, M. (2018) “Associations between spatial access to bicycle-specific infrastructure, sociodemographic characteristics, and city-wide safety perceptions of bicycling: a cross-sectional survey of bicyclists in 6 Canadian and U.S. cities” *Canadian Association of Road Safety Professionals Conference*. June 10-13; Victoria, BC. National Conference (Oral Presentation)
4. Winters, M, Therrien S, **Branion-Calles, M**, Gauvin L, Whitehurst, D and Nelson, T (2017) “Laying the context: Baseline findings from natural experiment study of “Biketoria”, a city-wide cycling network in Victoria, BC” *The International Society of Behavioral Nutrition and Physical Activity Annual Meeting*. June 7-10; Victoria, BC. International Conference (Poster Presentation)
5. **Branion-Calles, M.**, Nelson, T., and Winters, M. (2017) “Comparing Crowdsourced Near Miss and Collision Data and Official Bike Safety Reporting” *Transportation Research Board 96th Annual Meeting*. January 8-12; Washington, DC. International Conference (Poster Presentation)
6. **Branion-Calles, M.** (2017) “Evaluating the Association Between Cycling Environments and Perceptions of Cycling Safety: The International Bikeshare Impacts on Cycling and Collisions Study (IBICCS)” *Semiahmoo Occupational, Environmental and Public Health Conference*. January 5-6; Blaine, WA. Regional Conference (Oral Presentation)
7. **Branion-Calles, M.**, Nelson, T., and Winters, M. (2016) “Evaluating Crowdsourced Cyclist Safety Data: Collisions and Near-Misses reported to BikeMaps.org in Victoria, British Columbia” *Simon Fraser University Health Research Day*. May 4; Surrey, BC. Regional Conference (Poster Presentation)
8. **Branion-Calles, M.** (2016) “Evaluating the cost of cyclist collisions in Vancouver” *Semiahmoo Occupational, Environmental and Public Health Conference*. January 8-9; Blaine, WA. Regional Conference (Oral Presentation)
9. **Branion-Calles, M.**, Nelson, T.A., and Henderson, S.B. (2015) “Predicting indoor radon vulnerability classes and assessing differences in lung cancer mortality in British Columbia” *Canadian Association of Geographers Annual Meeting*. June 1-5; Vancouver, BC. National Conference (Oral Presentation)
10. **Branion-Calles, M.**, Nelson, T.A., and Henderson, S.B. (2015) “Predictive Mapping of Indoor Radon Vulnerability in British Columbia, Canada” *Association of American Geographers Annual Meeting*. April 21-25; Chicago, Illinois. National Conference (Oral Presentation)

	<ol style="list-style-type: none"> <li>11. <b>Branion-Calles, M.</b>, Nelson, T.A., and Henderson, S.B. (2014) “A Geospatial Approach to the Prediction of Indoor Radon Vulnerability in British Columbia, Canada” <i>ESRI Canada User Conference</i>. November 5; Vancouver, BC. Regional Conference (Oral Presentation)</li> <li>12. <b>Branion-Calles, M.</b>, Nelson, T.A., and Henderson, S.B. (2014) “Conflating Residential Radon Surveys and Mapping the Spatial Variation in Indoor Radon Levels in British Columbia.” <i>Annual Meeting of the Western Division of the Canadian Association of Geographers</i>. March 7-9; Victoria, BC. Regional Conference (Oral Presentation)</li> <li>13. <b>Branion-Calles, M.</b>, Nelson, T.A., and Henderson, S.B. (2014) “Integrating Residential Radon Surveys in British Columbia.” <i>Spatial Knowledge and Information Conference</i>. Feb. 6-9; Banff, Alberta. National Conference (Oral Presentation)</li> </ol>
INVITED TALKS	<ol style="list-style-type: none"> <li>1. <b>Branion-Calles, M.</b> (2020) “Evaluating and utilizing crowdsourced data and population surveys in bicycling safety research” <i>Arizona State University, School of Geographical Sciences and Urban Planning: Spatial Analysis Research Centre (SPARC) Talks</i>. January 22.</li> <li>2. <b>Branion-Calles, M.</b> (2016) “Modelling and Mapping Regional Indoor Radon Risk in British Columbia, Canada” <i>Simon Fraser University, Faculty of Health Sciences: Occupational and Environmental Health (OEH) Seminar</i>. March 17.</li> <li>3. <b>Branion-Calles, M.</b> (2015) “Modelling and Mapping Regional Indoor Radon Risk in British Columbia, Canada” <i>University of British Columbia, School of Population and Public Health: Occupational and Environmental Health (OEH) Seminar</i>. September 18.</li> </ol>
CONSULTANT REPORTS	<ol style="list-style-type: none"> <li>1. Sones, M., <b>Branion-Calles, M.</b>, and Winters, M. (2018). <i>Literature review on equity in active transportation planning: Calgary Pathway and Bikeway Plan Update</i>. Report to Stantec Consulting for the City of Calgary.</li> </ol>
RESEARCH REPORTS	<ol style="list-style-type: none"> <li>1. Harris, M.A., Thompson, C., Myint, N., and <b>Branion-Calles, M.</b>, (2020). <i>Lane Change: Safer Cycling Infrastructure in Toronto, a study of Bloor-Danforth</i>. Report for the Ryerson City Building Institute.</li> </ol>
SCHOLARSHIPS AND AWARDS	<p>Student Awards — Simon Fraser University, Faculty of Health Sciences</p> <ul style="list-style-type: none"> <li>• Mitacs Globalink Research Award (\$6,000) 2020</li> <li>• Simon Fraser University Graduate Fellowship (\$6,500) 2020</li> <li>• Simon Fraser University Graduate Fellowship (\$6,500) 2019</li> <li>• Travel and Minor Research Award (\$764) 2018</li> <li>• Simon Fraser University Graduate Fellowship (\$9,150) 2018</li> <li>• Simon Fraser University Graduate Fellowship (\$9,750) 2017</li> <li>• Simon Fraser University Graduate Fellowship (\$3,250) 2016</li> <li>• SSHRC Doctoral Fellowship (\$80,000) 2016</li> <li>• Simon Fraser University Graduate Fellowship (\$6,500) 2015</li> </ul> <p>Student Awards — University of Victoria, Department of Geography</p> <ul style="list-style-type: none"> <li>• Dr. Harold Foster Memorial Scholarship(\$588) 2014</li> <li>• SSHRC Joseph Armand Bomardier CGS (\$17,500) 2014</li> <li>• UVic Graduate Fellowship (\$10,000) 2013</li> <li>• Lois M. Smith Athletes Award (\$475) 2012</li> <li>• Vikes Athletic Award (\$1,525) 2012</li> </ul>

	<ul style="list-style-type: none"> <li>• Presidents Scholarship (\$1,000) 2012</li> <li>• Presidents Scholarship (\$1,500) 2011</li> <li>• Canadian Interuniversity Sports Academic All-Canadian 2010-2012</li> <li>• UVic Vikes Honour Roll 2010-2012</li> </ul>
TEACHING EXPERIENCE	<p><b>Sessional Instructor</b></p> <p><i>HSCI 424 - Strategic Applications of GIS in Health</i> Fall 2017 - Fall 2018 Faculty of Health Sciences, 1 Section; 2 semesters Simon Fraser University</p> <p><b>Teaching Assistant</b></p> <p><i>HSCI 424 - Strategic Applications of GIS in Health</i> Fall 2015 - Spring 2018 Instructor: Meghan Winters, Ph.D 1 Section; 5 semesters Faculty of Health Sciences, Simon Fraser University</p> <p><i>GEOG 328 - GIS Analysis</i> Spring 2014 Instructor: Timothy R. Mots, Ph.D 1 Section; 1 semester Department of Geography, University of Victoria</p> <p><i>GEOG 222 - Introduction to Maps and GIS</i> Fall 2013 Instructor: Ian J. O'Connell, Ph.D 2 Sections; 1 semester Department of Geography, University of Victoria</p> <p><b>Workshops Facilitated</b></p> <p><i>Using R as a GIS: An Introduction</i> Summer 2017 Winters Group Meeting, Centre for Hip Health and Mobility</p> <p>A two-hour workshop introducing the use of R as a GIS. Students learned the basics of spatial data structure as well as how to code geoprocessing of vector spatial data in R. Geoprocessing tasks learned included attribute joins, spatial queries, spatial joins, clips, and buffers.</p>
RELATED PROFESSIONAL SKILLS	<p><b>Languages</b></p> <ul style="list-style-type: none"> <li>• R, Python, SQL</li> </ul> <p><b>Software</b></p> <ul style="list-style-type: none"> <li>• ArcGIS, QGIS, RStudio, Spyder, PostgreSQL</li> </ul>
WORK EXPERIENCE	<p><b>GIS Summer Student</b> Summer 2011 &amp; Summer 2012 <i>District of Sechelt</i></p> <ul style="list-style-type: none"> <li>• GIS based project work for municipal government</li> <li>• Developed a sanitary infrastructure GIS application for the District of Sechelt's Enterprise GIS</li> <li>• Converted paper-based fire hydrant maps for Sechelt fire department to GIS based application</li> <li>• Created database solution for the Planning department to track development applications, resulting in a custom tool that could expedite information retrieval for planners</li> </ul> <p><b>Spatial Data Lab Manager</b> 2015 - 2020 <i>Centre for Hip Health and Mobility</i></p> <ul style="list-style-type: none"> <li>• Lead data analyst in Spatial Data Lab at the Center for Hip Health and Mobility</li> <li>• Focused on developing methods for geographic approaches to mobility, health and urban form</li> </ul>

RESEARCHER  
PROFILES

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