

RESEARCH INTERESTS	Geographic information science, epidemiology, public health, spatial analysis, injury prevention, road safety, active transportation	
RESEARCH EXPERIENCE	<b>The University of British Columbia</b> , Vancouver, BC <i>Postdoctoral Research Fellow</i> <ul style="list-style-type: none"> <li>Leading research into evaluating sociospatial inequities in road traffic injury risk.</li> </ul> <b>The University of British Columbia</b> , Vancouver, BC <i>Health System Impact Postdoctoral Research Fellow</i> <ul style="list-style-type: none"> <li>Embedded researcher in the <i>BC Ministry of Health</i>; led research into the circumstances of road traffic trauma to active transport users in BC using linked administrative health datasets.</li> </ul> <b>Toronto Metropolitan University</b> , Toronto, ON <i>Postdoctoral Research Fellow</i> <ul style="list-style-type: none"> <li>Led research into transportation injury risks among Canadians using linked census and injury outcome databases.</li> </ul>	<i>Jan 2024 – Present</i>  <i>Jan 2021 – Dec 2023</i>  <i>May 2020 – Dec 2021</i>
EDUCATION	<b>Simon Fraser University</b> , Burnaby, BC Ph.D., Health Sciences, April 2020 <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> <b>University of Victoria</b> , Victoria, BC M.Sc., Geography, July 2015 <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 Nelson, Ph.D</li> <li>Co-Supervisor: Sarah B. Henderson, Ph.D</li> </ul> <b>University of Victoria</b> , Victoria, BC B.Sc., Geography (Geomatics Concentration), April 2013 <ul style="list-style-type: none"> <li><i>With Distinction</i></li> </ul>	
REFEREED JOURNAL PUBLICATIONS	[1] Yeo, R. E., <b>Branion-Calles, M.</b> , Rothman, L., Winters, M., & Harris, M. A. (in press). Measuring inequities in transportation injuries in a Canadian commuter cohort: Impacts of individual versus neighbourhood income. <i>Injury Epidemiology</i> . <a href="https://doi.org/10.1186/s40621-025-00615-8">https://doi.org/10.1186/s40621-025-00615-8</a> [2] <b>Branion-Calles, M.</b> , Godfreyson, A., Berniaz, K., Arason, N., Erdelyi, S., Winters, M., Teschke, K., Rajabali, F., Harris, M. A., & Brubacher, J. R. (2025). Comparing pedestrian and cyclist injuries from falls and collisions in British Columbia, Canada: Frequencies and population characteristics. <i>Journal of Transport &amp; Health</i> , 42, Article 102044. <a href="https://doi.org/10.1016/j.jth.2025.102044">https://doi.org/10.1016/j.jth.2025.102044</a> [3] <b>Branion-Calles, M.</b> , Godfreyson, A., Erdelyi, S., Winters, M., Chan, H., & Brubacher, J. R. (2025). Underreporting and selection bias of serious road traffic injuries in auto insurance claims and police reports in British Columbia, Canada. <i>Transportation Research Interdisciplinary Perspectives</i> , 30, Article 101375. <a href="https://doi.org/10.1016/j.trip.2025.101375">https://doi.org/10.1016/j.trip.2025.101375</a> [4] <b>Branion-Calles, M.</b> , Rothman, L., Winters, M., & Harris, M. A. (2024). Risk factors and inequities in transportation injury and mortality in the Canadian	

- Census Health and Environment Cohorts (CanCHECs). *Epidemiology*, 35(2). <https://doi.org/10.1097/EDE.0000000000001696>
- [5] Harris, M. A., Watson, T., **Branion-Calles, M.**, & Rosella, L. (2024). Ascertainment and description of pedestrian and bicycling injuries and fatalities in Ontario from administrative health records 2003–2017: Contributions of non-collision falls and crashes. *Injury Prevention*. <https://doi.org/10.1136/ip-2023-045217>
  - [6] Laberee, K., Nelson, T., **Branion-Calles, M.**, Ferster, C., & Winters, M. (2021). Crowdsourced bicycling crashes and near misses: Trends in Canadian cities. *Urban, Planning and Transport Research*, 9(1). <https://doi.org/10.1080/21650020.2021.1964376>
  - [7] Thompson, C., **Branion-Calles, M.**, & Harris, M. A. (2021). Translating risk to preventable burden by estimating numbers of bicycling injuries preventable by separated infrastructure on a Toronto corridor. *University of Toronto Journal of Public Health*, 2(1). <https://doi.org/10.33137/utjph.v2i1.35209>
  - [8] Caislin, F., **Branion-Calles, M.**, Winters, M., & Harris, M. A. (2021, May). Who bikes? An assessment of leisure and commuting bicycling from the Canadian Community Health Survey. *Transport Findings*. <https://doi.org/10.32866/001c.22163>
  - [9] **Branion-Calles, M.**, Teschke, K., Koehoorn, M., Espin-Garcia, O., & Harris, M. A. (2021). National population data for estimating the amount and safety of walking and bicycling in Canada. *Preventive Medicine Reports*, 22, Article 101366. <https://doi.org/10.1016/j.pmedr.2021.101366>
  - [10] Harris, M. A., **Branion-Calles, M.** (2021, February). Changes in transport to work and school due COVID-19 risk concerns: An analysis of the Canadian Perspectives Survey Series 3. *Transport Findings*. <https://doi.org/10.32866/001c.19088>
  - [11] **Branion-Calles, M.**, Hosford, K., Winters, M., Gauvin, L., & Fuller, D. (2020, September). The impact of implementing public bicycle share programs on bicycle crashes. *Transport Findings*. <https://doi.org/10.32866/001c.16724>
  - [12] Sanders, R., **Branion-Calles, M.**, & 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 Part A: Policy and Practice*, 139, 217–227. <https://doi.org/10.1016/j.tra.2020.07.009>
  - [13] **Branion-Calles, M.**, 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., & Winters, M. (2020). Cyclist crash rates and risk factors in a prospective cohort in seven European cities. *Accident Analysis & Prevention*, 141, Article 105540. <https://doi.org/10.1016/j.aap.2020.105540>
  - [14] **Branion-Calles, M.**, Winters, M., Nelson, T., de Nazelle, A., Int Panis, L., Avila-Palencia, I., Anaya-Boig, E., 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. <https://doi.org/10.1016/j.jth.2019.100651>
  - [15] **Branion-Calles, M.**, Nelson, T., Fuller, D., Gauvin, L., & Winters, M. (2019). Associations between individual characteristics, availability of bicycle infrastructure, and city-wide safety perceptions of bicycling: A cross-sectional

	<p>survey of bicyclists in six Canadian and U.S. cities. <i>Transportation Research Part A: Policy and Practice</i>, 123, 229–239. <a href="https://doi.org/10.1016/j.tra.2018.10.024">https://doi.org/10.1016/j.tra.2018.10.024</a></p> <p>[16] Winters, M., <b>Branion-Calles, M.</b>, Therrien, S., Fuller, D., Gauvin, L., Whitehurst, D. G. T., &amp; Nelson, T. (2018). Impacts of bicycling infrastructure in mid-sized cities (IBIMS): Protocol for a natural experiment study. <i>BMJ Open</i>, 8, e019130. <a href="https://doi.org/10.1136/bmjopen-2017-019130">https://doi.org/10.1136/bmjopen-2017-019130</a></p> <p>[17] <b>Branion-Calles, M.</b>, Nelson, T., &amp; Winters, M. (2017). Comparing crowdsourced near-miss and collision cycling data and official bike safety reporting. <i>Transportation Research Record: Journal of the Transportation Research Board</i>, 2662, 1–11. <a href="https://doi.org/10.3141/2662-01">https://doi.org/10.3141/2662-01</a></p> <p>[18] Winters, M., <b>Branion-Calles, M.</b> (2017). Cycling safety: Quantifying the under-reporting of cycling incidents in Vancouver, British Columbia. <i>Journal of Transport and Health</i>, 7(A), 48–53. <a href="https://doi.org/10.1016/j.jth.2017.02.010">https://doi.org/10.1016/j.jth.2017.02.010</a></p> <p>[19] <b>Branion-Calles, M. C.</b>, Nelson, T. A., &amp; Martin, G. (2017). Adjusting local alcohol consumption data for influence of tourists. <i>Journal of Substance Use</i>, 22(1), 11–19. <a href="https://doi.org/10.3109/14659891.2016.1140235">https://doi.org/10.3109/14659891.2016.1140235</a></p> <p>[20] <b>Branion-Calles, M. C.</b>, Nelson, T. A., &amp; Henderson, S. B. (2016). A geospatial approach to the prediction of indoor radon vulnerability in British Columbia, Canada. <i>Journal of Exposure Science and Environmental Epidemiology</i>, 26(6), 554–565. <a href="https://doi.org/10.1038/jes.2015.20">https://doi.org/10.1038/jes.2015.20</a></p> <p>[21] <b>Branion-Calles, M. C.</b>, Nelson, T. A., &amp; Henderson, S. B. (2015). Different radon thresholds and their associations with geographic risk characterization and lung cancer mortality trends in British Columbia, Canada. <i>BMC Public Health</i>, 15, 1144. <a href="https://doi.org/10.1186/s12889-015-2438-2">https://doi.org/10.1186/s12889-015-2438-2</a></p>
SUBMITTED JOURNAL PUBLICATIONS	<p>[1] <b>Branion-Calles, M.</b>, Somayeh, M., Erdelyi, S., Chan, H., Manaugh, K., Harris, M. A., Winters, M., &amp; Brubacher, J. R. (2025). Evaluating regional variation in neighbourhood socioeconomic inequalities in motor vehicle injury collisions. [Revisions requested, <i>Health and Place</i>].</p>
JOURNAL PUBLICATIONS IN PREPARATION	<p>[1] <b>Branion-Calles, M.</b>, Somayeh, M., Erdelyi, S., Chan, H., &amp; Brubacher, J. R. (2025). Understanding the interaction between individual and area-level socioeconomic status on road traffic injury incidence in British Columbia, Canada. [Manuscript in preparation].</p> <p>[2] <b>Branion-Calles, M.</b>, Somayeh, M., Erdelyi, S., Chan, H., &amp; Brubacher, J. R. (2025). Comparing circumstances and injury outcomes between e-bikes and pedal bikes in emergency department presentations in a prospective cohort. [Manuscript in preparation].</p>
PUBLISHED ABSTRACTS	<p>[1] Winters, M., <b>Branion-Calles, M.</b> (2016, June 13–15). <a href="#">Cycling safety: Quantifying the under-reporting of cycling incidents</a> [Conference abstract]. <i>International Conference on Transport and Health</i>, San Jose, CA, United States.</p>
CONFERENCE PRESENTATIONS	<p>[1] Yeo, R. E., <b>Branion-Calles, M.</b>, Rothman, L., Winters, M., Harris, M. A. (2025, April 29 - May 1). Measuring inequities in transportation injuries in a Canadian commuter cohort: impacts of individual versus neighbourhood income. [Poster presentation]. <i>Public Health 2025: The Canadian Public Health Association's annual conference</i>, Winnipeg, MB, Canada.</p> <p>[2] <b>Branion-Calles, M.</b>, Erdelyi, S., Chan, H., &amp; Brubacher, J. R. (2023, November</p>

- 2–5). Exploring social-spatial inequities in road traffic injury in British Columbia [Conference presentation]. *Canadian Injury Prevention Conference*, Vancouver, BC, Canada.
- [3] **Branion-Calles, M.**, Rothman, L., Winters, M., & Harris, M. A. (2022, June 19–21). Risk factors for transportation injury and mortality in the Canadian Census Health and Environment Cohorts (CanCHEC): A descriptive analysis [Conference presentation]. *Canadian Association of Road Safety Professionals Conference*, Sudbury, ON, Canada.
- [4] **Branion-Calles, M.**, Sluggett, L., Tjepkema, M., & Harris, M. A. (2021, June 1–3). Use of the National Ambulatory Care Reporting System (NACRS) to ascertain acute health-care outcomes in Canada-wide linkage data [Poster presentation]. *Canadian Society for Epidemiology and Biostatistics Conference* (virtual).
- [5] Sanders, R., **Branion-Calles, M.**, & Nelson, T. (2020, January 12–16). 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 [Poster presentation]. *Transportation Research Board 99th Annual Meeting*, Washington, DC, United States.
- [6] **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., & Winters, M. (2019, May 26–29). Exposure-adjusted bicycling crash rates and risk factors in seven European cities [Conference presentation]. *Canadian Association of Road Safety Professionals Conference*, Calgary, AB, Canada.
- [7] **Branion-Calles, M.**, Nelson, T., Gauvin, L., Fuller, D., & Winters, M. (2018, June 10–13). Associations between spatial access to bicycle-specific infrastructure, sociodemographic characteristics, and city-wide safety perceptions of bicycling: A cross-sectional survey of bicyclists in six Canadian and U.S. cities [Conference presentation]. *Canadian Association of Road Safety Professionals Conference*, Victoria, BC, Canada.
- [8] Winters, M., Therrien, S., **Branion-Calles, M.**, Gauvin, L., Whitehurst, D. G. T., & Nelson, T. (2017, June 7–10). Laying the context: Baseline findings from a natural experiment study of “Biketoria,” a city-wide cycling network in Victoria, BC [Poster presentation]. *International Society of Behavioral Nutrition and Physical Activity Annual Meeting*, Victoria, BC, Canada.
- [9] **Branion-Calles, M.**, Nelson, T., & Winters, M. (2017, January 8–12). Comparing crowdsourced near-miss and collision cycling data and official bike safety reporting [Poster presentation]. *Transportation Research Board 96th Annual Meeting*, Washington, DC, United States.
- [10] **Branion-Calles, M.** (2017, January 5–6). Evaluating the association between cycling environments and perceptions of cycling safety: The International Bikeshare Impacts on Cycling and Collisions Study (IBICCS) [Conference presentation]. *Semiahmoo Occupational, Environmental, and Public Health Conference*, Blaine, WA, United States.
- [11] **Branion-Calles, M.**, Nelson, T., & Winters, M. (2016, May 4). Evaluating crowdsourced cyclist safety data: Collisions and near-misses reported to BikeMaps.org in Victoria, British Columbia [Poster presentation]. *Simon Fraser University Health Research Day*, Surrey, BC, Canada.
- [12] **Branion-Calles, M.** (2016, January 8–9). Evaluating the cost of cyclist collisions in Vancouver [Conference presentation]. *Semiahmoo Occupational, Environmental,*

and Public Health Conference, Blaine, WA, United States.

- [13] **Branion-Calles, M.**, Nelson, T. A., & Henderson, S. B. (2015, June 1–5). Predicting indoor radon vulnerability classes and assessing differences in lung cancer mortality in British Columbia [Conference presentation]. *Canadian Association of Geographers Annual Meeting*, Vancouver, BC, Canada.
- [14] **Branion-Calles, M.**, Nelson, T. A., & Henderson, S. B. (2015, April 21–25). Predictive mapping of indoor radon vulnerability in British Columbia, Canada [Conference presentation]. *Association of American Geographers Annual Meeting*, Chicago, IL, United States.
- [15] **Branion-Calles, M.**, Nelson, T. A., & Henderson, S. B. (2014, November 5). A geospatial approach to the prediction of indoor radon vulnerability in British Columbia, Canada [Conference presentation]. *ESRI Canada User Conference*, Vancouver, BC, Canada.
- [16] **Branion-Calles, M.**, Nelson, T. A., & Henderson, S. B. (2014, March 7–9). Conflating residential radon surveys and mapping the spatial variation in indoor radon levels in British Columbia [Conference presentation]. *Western Division of the Canadian Association of Geographers Annual Meeting*, Victoria, BC, Canada.
- [17] **Branion-Calles, M.**, Nelson, T. A., & Henderson, S. B. (2014, February 6–9). Integrating residential radon surveys in British Columbia [Conference presentation]. *Spatial Knowledge and Information Conference*, Banff, AB, Canada.

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#### INVITED TALKS

- [1] **Branion-Calles, M.** (2023, March 14). *An introduction to open-sourced, script-based geographic analysis using R* [Invited lecture]. School of Occupational and Public Health Research Methods Seminar, Toronto Metropolitan University, Toronto, ON, Canada.
- [2] **Branion-Calles, M.** (2020, January 22). *Evaluating and utilising crowdsourced data and population surveys in bicycling safety research* [Invited lecture]. Spatial Analysis Research Centre (SPARC) Talks, School of Geographical Sciences and Urban Planning, Arizona State University, Tempe, AZ, United States.
- [3] **Branion-Calles, M.** (2016, March 17). *Modelling and mapping regional indoor radon risk in British Columbia, Canada* [Invited lecture]. Occupational and Environmental Health Seminar, Faculty of Health Sciences, Simon Fraser University, Burnaby, BC, Canada.
- [4] **Branion-Calles, M.** (2015, September 18). *Modelling and mapping regional indoor radon risk in British Columbia, Canada* [Invited lecture]. Occupational and Environmental Health Seminar, School of Population and Public Health, University of British Columbia, Vancouver, BC, Canada.

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#### CONSULTANT REPORTS

- [1] Sones, M., **Branion-Calles, M.**, & Winters, M. (2018). *Literature review on equity in active transportation planning: Calgary Pathway and Bikeway Plan Update* [Consultant report]. Stantec Consulting for the City of Calgary, Calgary, AB, Canada.

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#### RESEARCH REPORTS

- [1] **Branion-Calles, M.**, Godfreyson, A., & Brubacher, J. R. (2024). *Pedestrian and cyclist safety in British Columbia* [Research report]. BC Ministry of Health & BC Ministry of Transportation and Infrastructure, Victoria, BC, Canada.
- [2] Harris, M. A., Thompson, C., Myint, N., & **Branion-Calles, M.** (2020). *Lane change: Safer cycling infrastructure in Toronto, a study of Bloor–Danforth*

[Research report]. Ryerson City Building Institute, Toronto, ON, Canada.  
<https://www.torontomu.ca/city-building/news-research/2020/09/lane-change/>

GRANTS AND FELLOWSHIPS	[1] Health System Impact Fellowship (\$155,000) 2021 - 2023 Title: <i>Analyzing linked safety data to improve active transport safety in BC</i> Funder: Canadian Institutes of Health Research Award Number: HSIF-2021-2482 Role: Principal investigator
	[2] CIHR Project Grant (\$823,141) 2021 - 2025 Title: <i>Circumstances and Outcome of Active Transportation Injuries: An Inception Cohort Study</i> Funder: Canadian Institutes of Health Research Award Number: 461108 Role: Co-investigator
	[3] CIHR Project Grant (\$ 286,875) 2022 - 2025 Title: <i>A spatial analysis of inequality in road trauma outcomes in British Columbia</i> Funder: Canadian Institutes of Health Research Award Number: 468467 Role: Co-investigator
	[4] CIHR Operating Grant (\$325,125) 2021 - 2024 Title: <i>Bicyclist and pedestrian crashes in Ontario: Detection and comparison of health outcomes between police-reported collisions and injury health care records</i> Funder: Canadian Institutes of Health Research Award Number: 451942 Role: Co-investigator
SCHOLARSHIPS AND AWARDS	<i>Simon Fraser University, Faculty of Health Sciences</i>
	• Mitacs Globalink Research Award (\$6,000) 2020
	• Simon Fraser University Graduate Fellowship (\$6,500) 2020
	• Simon Fraser University Graduate Fellowship (\$6,500) 2019
	• Travel and Minor Research Award (\$764) 2018
	• Simon Fraser University Graduate Fellowship (\$9,150) 2018
	• Simon Fraser University Graduate Fellowship (\$9,750) 2017
	• Simon Fraser University Graduate Fellowship (\$3,250) 2016
	• SSHRC Doctoral Fellowship (\$80,000) 2016
	• Simon Fraser University Graduate Fellowship (\$6,500) 2015
	<i>University of Victoria, Department of Geography</i>
	• Dr. Harold Foster Memorial Scholarship(\$588) 2014
	• SSHRC Joseph Armand Bomardier CGS (\$17,500) 2014
	• UVic Graduate Fellowship (\$10,000) 2013
	• Lois M. Smith Athletes Award (\$475) 2012
	• Vikes Athletic Award (\$1,525) 2012
TEACHING EXPERIENCE	<b>Sessional Instructor</b>
	<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

### Teaching Assistant

*HSCI 424 - Strategic Applications of GIS in Health*

Fall 2015 - Spring 2018

Instructor: Meghan Winters, Ph.D

1 Section; 5 semesters

Faculty of Health Sciences,

Simon Fraser University

*GEOG 328 - GIS Analysis*

Spring 2014

Instructor: Timothy R. Mots, Ph.D

1 Section; 1 semester

Department of Geography,

University of Victoria

*GEOG 222 - Introduction to Maps and GIS*

Fall 2013

Instructor: Ian J. O'Connell, Ph.D

2 Sections; 1 semester

Department of Geography,

University of Victoria

### Workshops Facilitated

*Using R as a GIS: An Introduction*

Summer 2017

Cities, Health, and Active Transportation Research Lab,

Centre for Hip Health and Mobility

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.

*Geography 101 for Applied Public Health Research*

Summer 2021

Road Safety and Public Health Research Lab,

Research Pavilion

Two hour workshop on fundamental geographic concepts (GIS, spatial data models, geographic scale, coordinate systems and projections) and hands-on R programming implementation of these concepts.

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### RELATED PROFESSIONAL SKILLS

#### Programming Languages

- R, Python, SQL, SAS, STATA

#### Software

- ArcGIS, QGIS, RStudio, Spyder, PostgreSQL, SPSS

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### WORK EXPERIENCE

#### Spatial Data Lab Manager

2015 - 2020

*Centre for Hip Health and Mobility*

- Lead data analyst in Spatial Data Lab at the Center for Hip Health and Mobility
- Focused on developing methods for geographic approaches to mobility, health and urban form

#### GIS Summer Student

Summer 2011 & Summer 2012

*District of Sechelt*

- GIS based project work for municipal government
- Developed a sanitary infrastructure GIS application for the District of Sechelt's Enterprise GIS
- Converted paper-based fire hydrant maps for Sechelt fire department to GIS based application
- Created database solution for the Planning department to track development applications, resulting in a custom tool that could expedite information retrieval for planners



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RESEARCHER  
PROFILES



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<https://scholar.google.com/citations?user=Yq8cIZMAAAAJ>



[https://www.researchgate.net/profile/Michael\\_Branion-Calles](https://www.researchgate.net/profile/Michael_Branion-Calles)



<https://www.scopus.com/authid/detail.uri?authorId=56572983900>



<https://www.webofscience.com/wos/author/record/U-6598-2019>



<https://github.com/mbcalles>

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