

# Harlan Campbell, PhD.

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## EDUCATION

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| Sept, 2015 - June, 2019 | <b>University of British Columbia</b> , PhD - Statistics<br>Supervisor: Prof. Paul Gustafson        |
| Sept, 2009 - Dec, 2011  | <b>Simon Fraser University</b> , Master of Science - Statistics<br>Supervisor: Prof. Charmaine Dean |
| Sept, 2004 - Dec, 2008  | <b>McGill University</b> , Bachelor of Science - Mathematics<br>Minor concentration in Music        |

## EMPLOYMENT

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| July, 2019 -           | <b>University of British Columbia</b> –Postdoctoral Research Fellow<br>Funding from ReCoDID (EU Horizon 2020, CIHR) and the WHO.   |
| July, 2012 - Oct, 2017 | <b>EMMES Canada CRO</b> –Statistician<br>Statistical services as a partner to clinicians and scientists.   |
| 2011 - 2017            | <b>Independent Consulting</b> –Statistics for various clients including:<br>- Taking Root (2015 - 2017)<br>- SFU Glaciology Research (2015)<br>- Culex Environmental (2011 - 2012) |
| Sept - Dec, 2011       | <b>Cardiome Pharma</b> –Statistics Internship<br>Developing tools for data analysis and visualization.   |

## RESEARCH

### Statistics Publications

1. Can we disregard the whole model? Omnibus non-inferiority testing for  $R^2$  in multivariable linear regression and  $\hat{\eta}^2$  in ANOVA, H Campbell and D Lakens, accepted to the British Journal of Mathematical and Statistical Psychology, (2020). [link](#)
2. The world of research has gone berserk: modeling the consequences of requiring “greater statistical stringency” for scientific publication, H Campbell and P Gustafson, The American Statistician, special issue on Statistical Inference in the 21st Century, 73.sup1 (2019): 358 - 373. [link](#)

3. Is it even rainier in North Vancouver? A non-parametric rank-based test for semicontinuous longitudinal data, H Campbell, *Journal of Applied Statistics*, 46:7 (2019): 1155 - 1176. [link](#)
4. The validity and efficiency of hypothesis testing in observational studies with time-varying exposures, H Campbell and P Gustafson, *Observational Studies*, (2018). [link](#)
5. Conditional equivalence testing: an alternative remedy to publication bias, H Campbell and P Gustafson, *PLoS ONE* 13(4): e0195145 (2018). [link](#)
6. Twin data that made a big difference, and that deserve to be better-known and used in teaching, H Campbell, JA Hanley, *Journal of Statistical Education*, 25.3 (2017): 131-136. [link](#)
7. The consequences of proportional-hazards based model selection, H Campbell and CB Dean, *Statistics in Medicine*, 33.6, (2014): 1042-1056. [link](#)
8. Model-based clustering of longitudinal data: application to modeling disease course and gene expression trajectories, A Ciampi, H Campbell, A Dyachenko, B Rich, J McCusker, and MG Cole, *Communications in Statistics-Simulation and Computation*, 41.7 (2012): 992-1005. [link](#)

### Applied Publications

1. Comparison of hemoglobin A1c results based on at-home and in-lab dried blood spot sampling to routine venous blood sampling in-lab in adult patients with type 1 or type 2 diabetes, TG Elliott, KC Dooley, M Zhang, H Campbell, DJS Thompson, *Canadian Journal of Diabetes*, 42.4 (2018): 426-432.e1. [link](#)
2. Sleep assessments for a mild traumatic brain injury trial in a military population, JM Walker, NT James, H Campbell, SH Wilson, S Churchill, LK Weaver, *Undersea and Hyperbaric Medicine Journal*, 43.5, (2016). [link](#)
3. Comparison of reducing epicardial fat by exercise, diet or bariatric surgery weight loss strategies: A systematic review and meta-analysis, S Rabkin and H Campbell, *Obesity Reviews*, 16.5 (2015): 406-415. [link](#)
4. Impact on diabetes care of access to an online patient portal, M Lau, H Campbell, T Tang, DJS Thompson, and T Elliott, *Canadian Journal of Diabetes*, 38.1 (2014): 17-21. [link](#)
5. Modelling factors that affect the presence of larval mosquitoes (diptera: culicidae) in stormwater drainage systems to improve the efficacy of control programmes, MJ Jackson, JL Gow, MJ Evelyn, TJS McMahon, H Campbell, J Sheppard, TJ Howay, D Fladmark, A Thielman, *The Canadian Entomologist*, 145.06 (2013): 674-685. [link](#)
6. An evaluation of the effectiveness of a commercial mechanical trap to reduce abundance of adult nuisance mosquito populations, MJ Jackson, JL Gow, MJ Evelyn, TJS McMahon, TJ Howay, H Campbell, J Blancard, and A Thielman, *Journal of the American Mosquito Control Association*, 28.4 (2012): 292-300. [link](#)

## Preprints

1. What to make of non-inferiority and equivalence testing with a post-specified margin?, H Campbell and P Gustafson, submitted to the Biopharmaceutical Statistics, 2019. [link](#)
2. The consequences of checking for overdispersion and zero-inflation, H Campbell, submitted to Methods in Ecology and Evolution, 2019. [link](#)
3. Equivalence testing for standardized effects in linear regression, H Campbell, in preparation for submission to Advances in Methods and Practices in Psychological Science. [link](#)

## Ongoing Research

1. The Zika Virus Individual Participant Data Consortium: a global initiative to estimate the effects of fetal exposure to Zika virus on adverse fetal, infant, and child health outcomes, Zika Virus Individual Participant Data Consortium, internal review for submission to Lancet Global Health.
2. Measurement error in individual participant data meta-analysis - a Bayesian framework for continuous outcome data, H Campbell and P Gustafson, working draft with ReCoDID team.
3. A critical assessment of the Bayes Factor Registered Reports policy, H Campbell, S Goodman, and P Gustafson, working draft.
4. Evidence over precision? Investigating the meta-analytic value of research studies, H Campbell, TD Stanley, H Doucouliagos, JPA Ioannidis, working draft.
5. Improving Registered Reports: the case for incorporating conditional equivalence testing, H Campbell and P Gustafson, working draft.

## Presentations

### Invited Seminar:

If Journals Embraced Conditional Equivalence Testing, Would Research be Better?

- METRICS, Stanford University, Oct. 18, 2019
- Therapeutics Initiative, University of British Columbia, June 26, 2019
- Department of Statistics and Actuarial Science, University of Waterloo, Jan. 30, 2019
- Mathematics Department, Reed College, Feb. 26, 2019
- Department of Mathematics and Statistics, University of Ottawa, Apr. 17, 2019

Can we disregard the whole model? Omnibus non-inferiority testing for  $R^2$  in multivariable linear regression and  $\hat{\eta}^2$  in ANOVA., H Campbell and D Lakens; The 47th Annual Meeting of the Statistical Society of Canada, Calgary, 2019.

Conditional equivalence testing, H Campbell, P Gustafson; The 46th Annual Meeting of the Statistical Society of Canada, Montreal, 2018. Invited talk.

What to make of non-inferiority and equivalence testing with a post-specified margin?, H Campbell; Joint Statistical Meetings (JSM), Vancouver, 2018.

A non-parametric rank based test for semicontinuous longitudinal data, H Campbell; The 44th Annual Meeting of the Statistical Society of Canada, St. Catharines, 2016.

The consequences of proportional-hazards based model selection, H Campbell, CB Dean; The Society for Clinical Trials 34th Annual Meeting, Boston, 2013.

Survival analysis of British Columbia wildland fires, H Campbell, CB Dean; GEOIDE Forestry Virtual Meeting, 2011.

Data visualization in R, H Campbell, SFU-UBC Joint Graduate Student Workshop in Statistics, Vancouver, 2011.

## TEACHING

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| Jan - May, 2018        | <b>UBC Dept. of Statistics</b> –Instructor<br>Teaching STAT 306 for 145 undergraduates. <a href="#">link</a>                                  |
| Sept, 2015 - May, 2016 | <b>UBC Dept. of Statistics</b> –Teaching Assistant<br>Teaching and grading labs for SCIE 300 and STAT 404.                                    |
| Sept, 2009 - Dec, 2010 | <b>SFU Dept. of Statistics and Actuarial Science</b> –Teaching Assistant<br>Teaching and grading for various courses and statistics workshop. |

## SERVICE & AWARDS

### Leadership:

Organizer of the Constance van Eeden seminar (2017 and 2018). [link](#)

### Peer Review:

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| - PLoS ONE                           | - Journal of Applied Statistics                     |
| - Nature Human Behaviour             | - Canadian Journal of Diabetes                      |
| - Statistical Methods & Applications | - Journal of Statistical Computation and Simulation |
| - Journal of Statistical Education   | - Obesity Reviews                                   |

### Awards:

2019 - Marshall Prize from UBC Statistics for “great distinction according to the professional and academic criteria.” [link](#)

2016 - Statistical Society of Canada Student Travel Award