# Harlan Campbell, PhD.

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#### **EDUCATION**

University of British Columbia, PhD - Statistics Sept, 2015 - June, 2019

Supervisor: Prof. Paul Gustafson

Simon Fraser University, Master of Science - Statistics Sept, 2009 - Dec, 2011

Supervisor: Prof. Charmaine Dean

McGill University, Bachelor of Science - Mathematics Sept, 2004 - Dec, 2008

Minor concentration in music

#### **EMPLOYMENT**

Postdoctoral Research Fellow July, 2019 -

Funding provided by ReCoDID (EU Horizon 2020, CIHR) and the WHO

EMMES Canada CRO – Statistician July, 2012 - Oct, 2017

Providing statistical services as a partner to clinicians and scientists

Cardiome Pharma – Statistics Intern Sept - Dec, 2011

**Independent Environmental Consulting** 

Clients include: Taking Root (2015 - 2017)

SFU Glaciology Research (2015) Culex Environmental (2011 - 2012)

## **TEACHING**

Instructor – UBC Dept. of Statistics Jan - May, 2018

Teaching (and coordinator) of STAT 306 for 145 undergraduates (all sections)

**Graduate Teaching Assistant** – UBC Dept. of Statistics 2017 - 2018

Teaching, grading, and coordinating labs for SCIE 300 and STAT 404

**Graduate Teaching Assistant** – SFU Dept. of Statistics and Actuarial Science 2009 - 2010

Teaching and grading for various courses

## RESEARCH

#### **Statistics Publications**

1. The world of research has gone berserk: modeling the consequences of requiring "greater statistical stringency" for scientific publication, H Campbell and P Gustafson, accepted to The American Statistician, special issue on Statistical Inference in the 21st Century, 73.sup1 (2019): 358 - 373, link

- 2. 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
- 3. The validity and efficiency of hypothesis testing in observational studies with time-varying exposures, H Campbell and P Gustafson, Observational Studies, (2018), link
- 4. Conditional equivalence testing: an alternative remedy to publication bias, H Campbell and P Gustafson, PLoS ONE 13(4): e0195145 (2018). link
- 5. 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
- 6. The consequences of proportional-hazards based model selection, H Campbell and CB Dean, Statistics in Medicine, 33.6, (2014): 1042-1056. link
- 7. 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**

- 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
- 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

#### **Working Papers**

- 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. pre-print
- 2. 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, submitted to the British Journal of Mathematical and Statistical Psychology, 2019. pre-print
- 3. The consequences of checking for overdispersion and zero-inflation, H Campbell, in preparation for submission to Methods in Ecology and Evolution. working draft
- Equivalence testing for standardized effects in linear regression, H Campbell, in preparation for submission to British Journal of Mathematical and Statistical Psychology. working draft
- 5. Measurement Error in Individual Participant Data Meta-Analysis a Bayesian framework for continuous outcome data, H Campbell and P Gustafson, working draft.
- 6. Improving Registered Reports: the case for incorporating conditional equivalence testing, H Campbell and P Gustafson, in preparation for submission to Nature Human Behaviour.

#### **Conference Presentations**

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.

# **SERVICE & AWARDS**

#### Leadership:

Organizer of the Constance van Eeden seminar (2017 and 2018) link

#### **Peer Review:**

Statistical Methods & Applications

Journal of Applied Statistics

Canadian Journal of Diabetes

**Obesity Reviews** 

Journal of Statistical Computation and Simulation

Journal of Statistical Education

#### Awards:

2019 Marshall Prize from UBC Statistics for "great distinction according to the professional and academic criteria" link

Personal website: https://harlanhappydog.github.io/