Corentin Ségalas

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Born on the 9th March 1993
French Nationality
Professional page

RESEARCH EXPERIENCE

Research Fellow in Statistics *Feb 2023 – Now*
Université de Bordeaux

- Area of research: longitudinal data, functional data, random survival forest, survival outcome prediction, longitudinal outcome prediction.

Research Fellow in Statistics *Jan 2022 – Nov 2022*
Université Paris-Cité

- Area of research: causal inference, observational data, personalized medicine, machine learning, individualized treatment regime, dynamic treatment regime.

Research Fellow in Medical Statistics *Jan 2020 – Dec 2021*
London School of Hygiene and Tropical Medicine

- Area of research: pharmaco-epidemiology, high dimension, machine learning, causal inference, confounding, propensity score, missing data, electronic health record data.

PhD in Biostatistics *Oct 2016 – Dec 2019*
Université de Bordeaux & Bordeaux Population Health Research Center

- Area of research: dementia, neuro-degenerative diseases, longitudinal data, non-linear mixed models, changepoint models, hypothesis test, observational data.

EDUCATION

MSc – Statistics *Sept 2014 – Jun 2016*
Université de Bordeaux

BSc – Mathematics *Sept 2011 – Jun 2014*
Université de Bordeaux

ORAL COMMUNICATIONS

Annual French Biometric Societies Conference, Toulouse *Nov 2023*
Robustness to missing data: a comparison between linear mixed models and functional principal component analysis

Bordeaux Public Health Data Science Network Conference, Bordeaux *July 2023*
Longitudinal data analysis with dropout: mixed models or functional principal component analysis?

Annual French Statistical Society Conference, Brussels *July 2023*
Propensity score matching after multiple imputation when a confounder has missing data

Annual ISCB Conference, Lyon *July 2021*
Multiple imputation in propensity score matching: obtaining correct confidence intervals

Annual French Biometric Society Young Researcher Conference, Paris *Oct 2020*
Inference for random changepoint models: application to the pre-dementia cognitive decline, Daniel Schwartz Award talk

Annual IWSM Conference, Bilbao *July 2020*
A semi-latent class model for estimating the time of differentiation of cognitive decline between cases and controls

Annual ISCB Converence, Leuven *July 2019*
Inferential methods for random changepoint models

IBS Channel Network Conference, Rothamstead Research *July 2019*
Curvilinear bivariate mixed model with random changepoint to compare times of change between cognitive markers in Alzheimer's disease

IBS Conference, Barcelona *July 2018*
Testing the Existence of a Random Changepoint in a Mixed Model

Annual French Statistical Society Conference, Paris *May 2018*
Testing the Existence of a Random Changepoint in a Mixed Model

Annual French Biometric Societies Conference, Bordeaux *Oct 2017*
Testing the Existence of a Random Changepoint in a Mixed Model

SCIENTIFIC PUBLICATIONS

2023

- Bouvier F, Peyrot E, Balendran A, **Ségalas C**, Roberts I, Petit F, Porcher R. Do machine learning methods lead to similar individualized treatment rules? A comparison study on real data. *arXiv preprint.*
  https://doi.org/10.48550/arXiv.2308.03398

- **Segalas C**, Leyrat C, Carpenter JR, Williamson E. Propensity score matching after multiple imputation when a confounder has missing data. *Statistics in Medicine.*
  https://doi.org/10.1002/sim.9658

2021

- **Segalas C**, Leyrat C, Willamson E. Pulling Unmeasured Confounding Out by your Bootstraps: Too Good to be True?, *Journal of Statistical Research.*
  https://doi.org/10.3329/jsr.v55i2.58806

- Mulot M, **Segalas C**, Leyrat C, Besançon L. Re: Subramanian and Kumar. Vaccination rates and COVID-19 cases, *European Journal of Epidemiology.*
  https://doi.org/10.1007/s10654-021-00817-6

2020

- Besançon L, Peiffer-Smadja N, **Segalas C**, Jiang H, Masuzzo P, Smout C, Billy E, Deforet M, Leyrat C. Open science saves lives: Lessons from the COVID-19 pandemic, *BMC Medical Research Methodology.*
  https://doi.org/10.1186/s12874-021-01304-y

- **Segalas C**, Jacqmin-Gadda H. A semi-latent class model for estimating the time of differentiation of cognitive decline between cases and controls. *Proceedings of the 35th International Workshop on Statistical Modelling.*

- **Segalas C**, Helmer C, Jacqmin-Gadda H. A curvilinear bivariate random changepoint model to assess temporal order of markers. *Statistical Methods in Medical Research.* https://doi.org/10.1177/0962280219898719

- Gosse P, **Segalas C**, Rubin S, Boulestreau R, Jacqmin-Gadda H, Leffondre K, Combe C, Cremer A. Long term evolution of renal function in essential hypertensive patients with no baseline proteinuria. *Journal of Human Hypertension.* https://doi.org/10.1038/s41371-019-0245-4

2019

- **Segalas C**, Amieva H, Jacqmin-Gadda H. A hypothesis testing procedure for random Changepoint mixed models. *Statistics in Medicine.* https://doi.org/10.1002/sim.8195

GRANT & AWARDS

Daniel Schwartz PhD Award *2020*
French Biometrics Society

PhD Grant *2016*
Université de Bordeaux

TEACHING EXPERIENCE

Université de Bordeaux *2023-2024*

- MSc in Public Health Data Science
  Introduction to machine learning: CART and Random Forests (6h)

Université Paris-Cité *2022-2023*

- MSc in Biotechnology
  Introduction to Statistical inference (3h)

London School of Hygiene and Tropical Medicine *2021-2022*

- MSc in Health Data Science
  Linear and logistic regression (9h)

London School of Hygiene and Tropical Medicine *2020-2021*

- MSc in Health Data Science
  Linear and logistic regression (9h)

Université de Bordeaux *2018-2019*

- MSc in Epidemiology
  Introduction to R and RStudio (3h)
- MSc in Public Health
  Linear regression models (14h)
  Hypothesis testing (16h)

- MSc in Psychology
  Multidimensional data analysis (32h)

Université de Bordeaux *2017-2018*

- BSc in Psychology
  Introduction to data analysis (24h)
- MSc in Psychology
  Multidimensional data analysis (8h)

SCIENTIFIC SOCIETIES MEMBERSHIP

Société Française de Statistique

Société Française de Biométrie

OTHER EXPERIENCE