

Corentin Ségalas

corentin.segalas@u-bordeaux.fr

Born on the 9th March 1993

French Nationality

Professional page

RESEARCH EXPERIENCE

Research Fellow in Statistics

Université de Bordeaux

Feb 2023 – Now

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

Research Fellow in Statistics

Université Paris-Cité

Jan 2022 – Nov 2022

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

Research Fellow in Medical Statistics

London School of Hygiene and Tropical Medicine

Jan 2020 – Dec 2021

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

PhD in Biostatistics

Université de Bordeaux & Bordeaux Population Health Research Center

Oct 2016 – Dec 2019

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

EDUCATION

MSc – Statistics

Université de Bordeaux

Sept 2014 – Jun 2016

BSc – Mathematics

Université de Bordeaux

Sept 2011 – Jun 2014

ORAL COMMUNICATIONS

Annual French Biometric Societies Conference, Toulouse

Robustness to missing data: a comparison between linear mixed models and functional principal component analysis

Nov 2023

Bordeaux Public Health Data Science Network Conference, Bordeaux

Longitudinal data analysis with dropout: mixed models or functional principal component analysis?

July 2023

Annual French Statistical Society Conference, Brussels

Propensity score matching after multiple imputation when a confounder has missing data

July 2023

Annual ISCB Conference , Lyon	July 2021
<i>Multiple imputation in propensity score matching: obtaining correct confidence intervals</i>	
Annual French Biometric Society Young Researcher Conference , Paris	Oct 2020
<i>Inference for random changepoint models: application to the pre-dementia cognitive decline, Daniel Schwartz Award talk</i>	
Annual IWSM Conference , Bilbao	July 2020
<i>A semi-latent class model for estimating the time of differentiation of cognitive decline between cases and controls</i>	
Annual ISCB Conference , Leuven	July 2019
<i>Inferential methods for random changepoint models</i>	
IBS Channel Network Conference , Rothamstead Research	July 2019
<i>Curvilinear bivariate mixed model with random changepoint to compare times of change between cognitive markers in Alzheimer's disease</i>	
IBS Conference , Barcelona	July 2018
<i>Testing the Existence of a Random Changepoint in a Mixed Model</i>	
Annual French Statistical Society Conference , Paris	May 2018
<i>Testing the Existence of a Random Changepoint in a Mixed Model</i>	
Annual French Biometric Societies Conference , Bordeaux	Oct 2017
<i>Testing the Existence of a Random Changepoint in a Mixed Model</i>	

SCIENTIFIC PUBLICATIONS

PREPRINTS

- **Ségalas C**, Helmer C, Genuer R, Proust-Lima C. [Functional principal component analysis as an alternative to mixed-effect models for describing sparse repeated measures in presence of missing data](#). *arXiv preprint*.

PEER-REVIEWED

- 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](#), *Statistics in Medicine*, 2024.
- Thurin N, Jové J, Lassalle R, Rouyer R, Lamarque S, Bosco-Levy P, **Ségalas C**, Schneeweiss S, Blin P, Droz-Perroteau C. [Strong instrumental variables biased propensity scores in comparative effectiveness research: A case study in oncology](#), *Journal of Clinical Epidemiology*, 2023.
- **Ségalas C**, Leyrat C, Carpenter JR, Williamson E. [Propensity score matching after multiple imputation when a confounder has missing data](#), *Statistics in Medicine*, 2023.
- **Ségalas C**, Leyrat C, Williamson E. [Pulling Unmeasured Confounding Out by your Bootstraps: Too Good to be True?](#), *Journal of Statistical Research*, 2022.
- Mulot M, **Ségalas C**, Leyrat C, Besançon L. [Re : Subramanian and Kumar. Vaccination rates and COVID-19 cases](#), *European Journal of Epidemiology*, 2021.
- Besançon L, Peiffer-Smadja N, **Ségalas 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*, 2020.

- **Ségalas C**, Helmer C, Jacqmin-Gadda H. *A curvilinear bivariate random changepoint model to assess temporal order of markers* *Statistical Methods in Medical Research*, 2020.
- Gosse P, **Ségalas 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*, 2020.
- **Ségalas C**, Amieva H, Jacqmin-Gadda H. *A hypothesis testing procedure for random Changepoint mixed models*, *Statistics in Medicine*, 2019.

PROCEEDINGS

- **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*, 2020.

GRANT & AWARDS

Daniel Schwartz PhD Award <i>French Biometrics Society</i>	2020
PhD Grant <i>Université de Bordeaux</i>	2016

TEACHING EXPERIENCE

Université de Bordeaux	2023-2024
<ul style="list-style-type: none"> • MSc in Public Health Data Science <i>Introduction to machine learning: CART and Random Forests (6h)</i> 	
Université Paris-Cité	2022-2023
<ul style="list-style-type: none"> • MSc in Biotechnology <i>Introduction to Statistical inference (3h)</i> 	
London School of Hygiene and Tropical Medicine	2021-2022
<ul style="list-style-type: none"> • MSc in Health Data Science <i>Linear and logistic regression (9h)</i> 	
London School of Hygiene and Tropical Medicine	2020-2021
<ul style="list-style-type: none"> • MSc in Health Data Science <i>Linear and logistic regression (9h)</i> 	
Université de Bordeaux	2018-2019
<ul style="list-style-type: none"> • MSc in Epidemiology <i>Introduction to R and RStudio (3h)</i> • MSc in Public Health <i>Linear regression models (14h)</i> <i>Hypothesis testing (16h)</i> • MSc in Psychology <i>Multidimensional data analysis (32h)</i> 	

- 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