Closing day

Impulsion Research network
Public Health Data Science

Tuesday, February 3rd 2026
Bordeaux University
Campus Peixotto, Domaine du Haut-Carré

Keynote speaker:
Professor Stijn VANSTEELANDT
Research Professor at Ghent University, leading international expert in debiased machine learning and causal inference

Showcase of research conducted in the RRI PHDS program:
· Mechanistic modeling and causal inference
· Machine learning solutions for health research
· Development of individual predictions of health outcomes in complex settings

Réseau de Recherche Impulsion
PHDS | Public Health Data Science
Bordeaux Network

université de BORDEAUX

Closing day RRI PHDS
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09h00 Welcome coffee

09h30 · Opening
Antoine PARIENTE, Public Health Department director
Rodolphe THIEBAUT, BPH director and Public Health Graduate
program director
Cécile PROUST-LIMA, RRI PHDS coordinator, Biostat team, BPH

10h00 · Keynote speaker
Stijn Vansteelandt - Research Professor at Ghent University
*Leading international expert in debiased machine learning and causal
inference*

11h00 Coffee break

11h30 Session "Machine learning solutions in health research"

11h30 · Predict breast cancer risk from repeated imaging data using deep neural networks
Virginie RONDEAU

11h50 · Introduction to Reservoir Computing towards challenges in health data processing
Xavier HINAUT

12h10 · Epidemic forecasting: lessons learned from the SARS-CoV-2 pandemic to balance accuracy, feasibility, and impact
Thomas FERTÉ

12h30 · Deconvolution of bulk RNA-seq data to estimate cell population proportions in presence of missing cellular signatures
Kalidou BA

12h50 · On the methodological difficulties of analyzing the association between microbiome data and a continuous outcome
Antonin COLAJANNI

13h10 Lunch

14h10   Session "Mechanistic modeling and causal inference"

14h10 · Integrating large- to high-dimension markers in mechanistic models
Mélanie PRAGUE

14h30 · Network models to decipher the human exposome: application to food exposome patterns in a case-control study on cognitive decline
Ima BERNADA

14h50 · RISE: two-stage rank-based identification of high-dimensional surrogate markers applied to vaccinology
Arthur HUGHES

15h10 · Variational autoencoder for inference of nonlinear mixed effect models based on ordinary differential equations
Aurore LI

15h30   Coffee break

16h00   Session "Development of individual predictions in complex settings"

16h00 · Multi-instance learning with missing modalities for multi-modal retinal image grading
Sébastien RICHARD

16h20 · A two-stage approach for joint modeling of multiple longitudinal markers and competing risk outcomes
Hélène JACQMIN-GADDA

16h40 · Regularized multi-state modeling for covariate selection with interval-censored survival data
Ariane BERCU

17h00 · Dynamic prediction of survival outcomes from longitudinal predictors: the functional dynamic random forests
Corentin SEGALAS

17h20   Closing remarks