

Education

- 2019–2023 **PhD degree in Applied Mathematics**, *Evry Paris-Saclay University/French National Research Institute for Agriculture, Food and the Environment (INRAE)*, Évry-Courcouronnes (France)
- 2016–2019 **MSc degree in Biostatistics**, *National School of Statistics and Information Analysis (ENSAI)*, France
- 2013–2016 **Bachelor Degree in Statistics and Computer Science (LSI)**, *Nazi Boni University (UNB)*, Bobo-Dioulasso (Burkina Faso)

Professional Experiences

- 2023–2025 **Postdoctoral Researcher in Biostatistics**, *French Nuclear Safety and Radiation Protection Authority (ASNR)*, Fontenay-aux-Roses (France)
Research Project: Statistical characterization and validation of a deep learning model for an automated chromosomal aberration detection
- Validate a computer vision algorithm used to detect radiation biomarkers in cells images
 - Model the relationship between counts of biomarkers and radiation exposure dose level
 - Quantify the uncertainties associated to dose prediction
- 2022–2023 **Temporary Teaching and Research Assistant (ATER)**, *Evry Mathematics and Modeling Laboratory (LaMME)*, Évry-Courcouronnes (France)
- Delivered lectures and tutorials in descriptive statistics
 - Led tutorials in linear algebra and conducted oral examinations in analysis
 - Wrote PhD report
- 2019–2023 **PhD candidate in Applied Mathematics**, *Evry Mathematics and Modeling Laboratory (LaMME)*, Évry-Courcouronnes (France)
Thesis title: Integration of complex omics data through Multiscale Gaussian Graphical Models.
Supervisors: Dr. Geneviève Robin, Prof. Christophe Ambrose.
- Developed and evaluated the performances of a statistical approach for multi-scale network inference and programmed R/Python packages for integrative analysis of Omics data
 - Analyzed Omics data and collaborated with bioinformatics and biology teams
 - Delivered tutorials in descriptive statistics, probability, R programming, supervised a master student, and participated in the organization of scientific seminars
- Apr–Sep 2019 **Statistician Intern**, *French Radioprotection and Nuclear Safety Institute (IRSN/LRAcc)*, Fontenay-aux-Roses (France)
Project: Characterization of the inter-individual variation in the response of genes to irradiation.
Supervisors: Dr Gaetan Gruël, Dr Amine Benadjaoud
- Jun–Aug 2018 **Statistician Intern**, *French Radioprotection and Nuclear Safety Institute (IRSN/LRMed)*, Fontenay-aux-Roses (France)
Project: Modelling and clustering of temporal kinetics of transcriptomic and proteomic data to study the response of endothelial cells to irradiation. Supervisors: Dr Olivier Guipaud, Dr Amine Benadjaoud.
- Jul 2017 **Statistician Intern**, *Health Sciences Research Institute (IRSS)*, Bobo-Dioulasso (Burkina Faso)
Project: Design of a data entry form for a questionnaire on the adverse effects of mosquito insecticide spraying in rural areas using EpiData. Supervisor: Mr. Moussa Zongo.

May–Aug 2016 **Statistician Intern, Muraz Center – Methodological Support and Training Team** (Centre Muraz – EAMF), Bobo-Dioulasso (Burkina Faso)
Project: Validation of an areal-based sampling plan in the urban commune of Bobo-Dioulasso.
Supervisors: Dr Serge Somda, Dr Boureima Sangaré.

Skills & Interests

Techniques Network inference, Clustering, Biostatistics, Statistical Omics
Programming Proficient in R and Git, Intermediate level in Python, C++, SAS, SQL
Language English (professional proficiency), French (fluent)
Interests Chess, Running

Publications

Statistical publications

- Sanou E., Ambroise C., Robin G. *Inference of Multiscale Gaussian Graphical Model*, *Computo*, 2023
- Somda SMA, Sanou E, Soubeiga A, Sawadogo MA. *Developing an area-based sampling system in the urban district of Bobo Dioulasso*, *AJAS*, 2019

Biology publications

- Sow et al., Epigenetic Variation in Tree Evolution: a case study in black poplar, 2023
- Lesur et al., A strategy for studying epigenetic diversity in natural populations, 2024
- Rogier et al., Bioinformatics manual for population epigenomics, 2024

Oral Presentations

- 2022 **Young Statisticians' Meeting (RJS)**, Porquerolles, France
Inference of Multiscale Graphical Lasso
- 2021 **52nd meeting of the French Statistical Society**, Remote, France
Multiscale Graphical Lasso

Volunteering

- 2024–present **MathStatBites**, *Institute for Mathematical & Statistical Innovation*, Write statistical articles for the general public.
- 2022–2023 **Young Statisticians Europe**, Editorial Board Member
- 2021–2023 **Young Statisticians Group**, *French Statistical Society (SFdS)*, Organized scientific seminars in statistics/probability.
- 2020 **CARaDOC(Carriers and Doctors)**, *Paris-Saclay University*, France
Organized job fairs for PhD students and postdoctoral researchers.