

## **General information**

Official language of the school: English/French

CIMPA School title: Statistics applied for health

Name and address of the host institution (university or equivalent) and its webpage:  
University of Burundi, Avenue de l'UNESCO n°2, B.P 1550 Bujumbura [www.ub.edu.bi](http://www.ub.edu.bi))

Local coordinator: Prof Karimumuryango Menedore (Dean of Applied Statistics of University of Burundi)

Email: [kmenedore@gmail.com](mailto:kmenedore@gmail.com)/ [menedore.karimumuryango@ub.edu.bi](mailto:menedore.karimumuryango@ub.edu.bi)

External coordinators: Prof. Sophie Dabo-Niang (Université Lille de France) , Prof.Valérie GARES ( INRIA Rennes, France).

Email : [valerie.gares@insa-rennes.fr](mailto:valerie.gares@insa-rennes.fr)

Dates : 14- 25 June 2027

Deadline for registration of CIMPA participants: February 14, 2027

## **Description of the context of the school**

The Institute of Applied Statistics of the University of Burundi (ISTA) is a new training structure created within the University of Burundi in partnership with National Institute of Statistics of Burundi (INSBU), the Higher School of Statistics and Applied Economics of Abidjan (INSEA), Côte d'Ivoire and the Training Institute of the Moeglin Cabinet of Paris in France. It was created by Ministerial Order No. 610/966 of 28 June 2017.

To develop scientific research and innovation, ISTA's Annual Action Plan has regularly organized workshops, research schools, and conferences. It has also developed partnerships and collaborations with numerous academic institutions and researchers, including: Gaston Berger University, Senegal, University of Lille de France; Institute of Mathematics and Physical Sciences (IMSP)(Benin), University of Rennes 1, France and University of Neuchâtel, Joseph KI-ZERBO University, Burkina Faso.

It is in this context that ISTA of the University of Burundi together with the team of researchers from the University of Lille and INRIA Rennes (France), they are organizing this CIMPA School on "Statistics for Health." CIMPA is aimed at teacher-researchers, Master 2 students, doctoral students, and doctors. This school is part of the CIMPA School Partnership Program, whose objective is to teach at the master's level relevant and current topics in mathematics,

statistics, probability, and computer science to help motivated and capable young people to continue their studies.

The following topics will be covered:

Course 1: Descriptive and inferential statistics ;

Course 2: Geographical Information System (GIS) and Statistical analysis ;

Course 3: Time series modeling ;

Course 4: Survival analysis;

Course 5: Statistical learning ;

Course 6: Deep Learning and Transformer models for health

Course 7: Statistical Analysis of Functional Data Applied to Health ;

Course 8: Compartmental modeling in epidemiology

### **Organizing committee and members of the teaching team**

#### **Organizing committee**

Prof. Sophie Dabo-Niang (Université Lille de France), Female

Prof. Léonard Todjihounde, Université d'Abomey Calavi (Bénin), Male

Prof. Valérie GARES (Institut national de recherche en sciences et technologies du numérique (INRIA), Rennes France), Female

Anissa Rabhi, Université Tunis El Manar, UTM.

Prof. Juma Shabani, Directeur de l'Ecole Doctorale (Université du Burundi, Burundi), Male

Prof. Karimumuryango Ménémore (Applied Statistics of University of Burundi), Female

Dr. Remi Servien, INRAE

#### **Scientific committee**

Prof. Sophie Dabo-Niang (Université Lille de France), Female

Prof. Valérie GARES (Institut National des Sciences Appliquées de Rennes, France), Female

Prof. Juma Shabani, Doctoral School, University of Burundi

Prof. Guy Degla, IMSP-Benin

Prof. Amel Benabda, Université Tunis El Manar, UTM.

Prof. Karimumuryango Ménémore, University of Burundi

Dr. Florence MUNEZERO, Université du Burundi

## Program

<b>Week 1</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
08:30-10:00	Course 1	Course 3	Course 5	Course 7	Course 1	Project
<b>10:00-10:30</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>
10:30-12:00	Course 2	Course 4	Course 6	Course 8	Course 2	Project
<b>12:00-13:30</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>
13:30-15:00	Tutorial 1	Tutorial 2	Practical 4	Practical 2	Practical 3	
15:00-16:30	Practical 1	Project	Project	Tutorial 3	Project	

<b>Week 2</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
08:30-10:00	Course 1	Course 3	Course 5	Course 6	Projects presentation	Return of foreign participants
<b>10:00-10:30</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	<b>Coffee Break</b>	
10:30-12:00	Course 7	Course 4	Course 6	Course 8	Projects presentation	
<b>12:00-13:30</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	
13:30-15:00	Practical 8	Practical 4	Practical 5	Practical 6	Panel discussion	
15:00-17:00	Project	Practical 7	Project	Project	Closing	

