

# Winter School on Population Heterogeneities

Vienna, Austria, 4-5 December 2023

Populations are inherently heterogeneous, consisting of a number of individuals with different education level, socioeconomic status, labour market participation, and health. These and other characteristics lead to disparities and inequalities both within and across populations. Gaining a comprehensive understanding of demographic and socio-economic inequalities is key for evidence-based policy decisions. Consequently, researchers are facing an increasing demand to effectively integrate these heterogeneities into their analysis and future projections.

The Vienna Institute of Demography (VID) of the Austrian Academy of Sciences (OeAW) is delighted to announce its 2023 Winter School on Population Heterogeneities. It will be held in Vienna, Austria, on 4-5 December 2023 (in person).

**Application Deadline 30 June 2023 (midnight CET)**

**Venue Vienna, Austria**

**[\[Submit your application here\]](#)**

## Course instructors

**Guillaume Marois**



Asian Demographic  
Research Institute,  
Shanghai University,  
International Institute for  
Applied Systems  
Analysis

**Anna Matysiak**



Interdisciplinary Center  
for Labour Market and  
Family Dynamics  
(LabFam), Faculty of  
Economic Sciences,  
University of Warsaw

**Iñaki Permanyer**



Center for Demographic  
Studies (CED-CERCA),  
Universitat Autònoma de  
Barcelona

**Dilek Yildiz**



Vienna Institute of  
Demography (OeAW),  
Austrian Academy of  
Sciences, International  
Institute for Applied  
Systems Analysis

## Course description

The Winter School on Population Heterogeneities is an intensive two-day program designed to enhance students' skills and knowledge in identifying and critically assessing population heterogeneities. It comprises a series of interrelated lecture blocks focusing on the assessment of population heterogeneities in key areas of demographic research such as in healthy survival, migration, and in family demography (details below). An emphasis will be placed on effective research strategies to overcome diverse challenges that may arise when addressing population heterogeneities. In addition, the Winter School will provide technical insights into macro- and micro-level analysis to uncover differences across regions and socioeconomic groups. Major value is placed on interaction between attendees and instructors throughout the course.

By the end of the Winter School, students will have a comprehensive understanding of population heterogeneity and its drivers in different demographic contexts and will be equipped with the skills and knowledge necessary to critically assess data and interpret findings.

The Winter School ties into the theme of this year's Wittgenstein Centre Conference "Exploring Population Heterogeneities" which will take place right after the Winter School (6-7 December 2023). We encourage all applicants to take part in the Conference to further deepen their knowledge.

### **Block 1: Global health inequalities: Levels, trends, and determinants**

**Instructor: Iñaki Permanyer**

**Focus:** The main aim of the talk is to present and discuss some findings of my recent research on global health inequalities. Overall, I will give a broad overview of how key survival and health outcome measures are distributed across and within populations around the world. Inter alia, this includes an analysis of the recent trends in (healthy) longevity and its distribution across countries. In addition, we will also inspect variation in (healthy) length of life within countries and studying the relationships that might exist between the different layers of analysis. For those populations with available data, we will also explore the dynamics of such health measures across and within SES groups. Lastly, if time allows, we will investigate the main drivers of these phenomena over time.

### **Block 2: Socio-economic differentials in family formation and dissolution**

**Instructor: Anna Matysiak**

**Focus:** In this block I will review research about the differences in family formation and dissolution with respect to men's and women's socio-economic status and labour supply. I will refer to main theories in the field, paying special attention to such aspects as financial pressure, economic uncertainty, gender role ideologies and welfare state typologies. I will also discuss most recent research on dynamic changes in the labour market caused by digitalisation on family formation and dissolution. The talk will end with a critical discussion about what we learn from this research about the role of socio-economic and labour market status in the process of family formation and dissolution and in particular how unobserved heterogeneity and selection obscure our understanding of these processes. I will also outline directions for further research.

**Block 3: Microsimulation methods for multidimensional population projection: An overview****Instructor: Guillaume Marois**

**Focus:** Microsimulation is a powerful tool for making population projections, especially when the number of projected dimensions is large. It uses statistical models to project life course transitions at the individual level. This block will begin with an introduction to microsimulation, including basic modelling examples and comparisons with the cohort component method. In the second part, several concrete examples of microsimulation models for multidimensional population projections will be presented. These will include models for forecasting health variables and risk factors, a model for reassessing the impact of changes in education and labour force participation on population aging, and a model for assessing the impact of migration scenarios that consider the heterogeneity of immigrants in terms of educational attainment and labour force integration.

**Block 4: Exploring population heterogeneities across and within countries: A hands-on exercise****Instructor: Dilek Yildiz**

**Focus:** This block will present the Wittgenstein Centre Human Capital Data Explorer which provides past reconstructions and future projections of the global population by age, sex and education. In the first part, different fertility, mortality and migration indicators and future scenarios will be introduced. In the second part, a hands-on exercise in R software will focus on how to extract, visualise and use the datasets from WIC DE. Prior to this session students should download wcde R package (<https://guyabel.github.io/wcde/>).

**Organisation**

The Winter School will be held in person in Vienna. The program will comprise a combination of lectures with ample opportunities for participants to ask questions, small group activities, and hands-on assignments. The group size is limited to 20-30 participants to ensure a conducive learning environment, foster engagement, and allow for active participation of each attendee. It is mandatory for attendees to be present for all sessions to obtain the certificate of completion. Participants must bring their own laptops with them.

**Who should apply**

We welcome applications from PhD students (enrolled in a doctoral program) and early PostDocs/Junior researchers. The Winter School aims to connect scholars interested in identifying and analysing population heterogeneities in various fields of Demography (such as Fertility, Mortality, and Migration) and related disciplines (including Economics, Sociology, or Statistics).

**Tuition and funding**

There is no tuition fee. Applicants can apply for financial support w.r.t. their travel and accommodation expenses, if needed. The availability of financial support is subject to budgetary constraints, and submitting an application does not guarantee that it will be successful.

## How to apply

**[\[Submit your application here\]](#)**

Your application file has to include

- Your academic CV (max. 2 pages)
- A one-to-two-page statement that outlines
  - Your motivation to attend the Winter School and how participating will enhance your professional development
  - A concise summary of your current research plan, and how it relates to the Winter School

Please name your application file beginning with your surname in capital letters and make sure to upload a single pdf-file (for example MYNAME\_winterschool\_vid.pdf).

The application deadline is 30 June 2023. Applicants will be informed of their acceptance by mid-September.

## Organisers

**Alexia Fürnkranz-Prskawetz**, VID/OeAW, IIASA, TU Wien

**Paola Di Giulio**, VID/OeAW

**Inga Freund** VID/OeAW

**Ingrid Setz**, VID/OeAW

**Dilek Yildiz**, IIASA, VID/OeAW

**Krystof Zeman**, VID/OeAW

Should you have questions, please do not hesitate to contact us by e-mail at [winterschool.vid@oeaw.ac.at](mailto:winterschool.vid@oeaw.ac.at).  
We are happy to assist you!